

ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 1

<http://safety.army.mil>

JANUARY 2002



Any mission, any time, any place...

Safety is Readiness

FIRST PRIORITY

Countermeasure

CONTENTS



4



10



7

- 3** **DASAF's Corner**
Safety Is Readiness First Priority
- 4** **Planning: Key to Safe Deployment**
- 7** **Chocking and Securing Unattended Vehicles**
- 8** **Take Proper Precautions When Servicing Split-Ring Rims**
- 10** **Sports Injury Prevention-Key to Combat Readiness**
- 12** **A Cold Night in Saudi Arabia**
- 13** **Accident Briefs**
- 14** **A Few Words About Anthrax**
- 15** **News & Notes**
Surfacing Leaks in the Tanker Fleet (HEMTT Fuel-Line Elbow)
- 16** **Is Your Eyesight Worth Not Wearing Your Safety Glasses?**

Features



BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-6363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3009 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2002 (334-255-2002). Visit our website at <http://safety.army.mil>



DASAF's CORNER

From the Director of Army Safety

Safety Is Readiness First Priority

While some of us were fortunate enough to enjoy the holiday season with family and friends, many of our fellow soldiers continued to hold the torch high and execute real-world missions around the globe. Wherever you were, I hope yours was a safe one. Even with all its hustle and bustle, the holiday season isn't just a time of joy and celebration, it is also a time of somber reflection and a time to contemplate future challenges.

The year 2001 will not soon be forgotten. The indescribable horrific acts of cowardice that wrought violence, destruction, and pain on thousands of innocent people are burned into our memories forever. On September 11th, our hearts broke. But the attacks on our homeland rallied our spirit as Americans, and solidified our determination to do whatever was required to eradicate terrorism and make the world a safer place for all who value freedom and security. The year 2001 marked the beginning of a new kind of war against a new asymmetric enemy. The challenges ahead of us are many.

As an Army, readiness to respond to whatever missions we are asked to do is priority one. In January of each year, we habitually put the final touches on OPORDS and training plans that have been working since the early fall. We continue to refine and begin to execute METL training, attend schools, combat training center (CTC) rotations, and Reserve Component annual training (AT) events—all in an effort to further hone our warfighting skills and improve our readiness. I submit to you, however, that before the first aircraft can pull pitch, the first tank can roll out of the motor pool, or the first parachute canopy can inflate, we must ensure we have fully integrated risk management into our plans. Incorporating risk management into plans and operations significantly enhances readiness by reducing accidental losses. The loss of any soldier, or damage to any piece of Army equipment, seriously impacts our readiness and ultimately our ability to fight and win this war on terrorism.

The fact that we lost 169 soldiers in accidents during FY01 clearly reinforces that we are part of an inherently dangerous profession where soldiers willingly put themselves in harm's way every day to protect our freedom. At some level, we are all leaders. And as leaders, we have a responsibility to identify hazards that could potentially cause our fellow soldiers to be hurt or killed. A leader's ability to concentrate finite resources at the critical place and time to destroy the enemy is crucial to battlefield success. Similarly, our ability as leaders to recognize hazards, and put controls in place to reduce risk, is paramount to winning the war against accidents and preserving resources for warfighting on the battlefield. While eliminating all risk may be impractical, technically and tactically competent leaders making informed decisions at the appropriate level will significantly enhance the Army's readiness.

For a unit to successfully fight as a cohesive combat force, leaders must take the time to ensure safety and risk management are integral parts of all plans and missions. Effective leaders will not allow their subordinates to cut corners, take unnecessary risks, or ignore potential hazards. True leaders will apply the same risk management standard of an informed decision at the appropriate level to both combat and training missions.

Command involves accountability. It's hard enough knowing that you will potentially lose soldiers to enemy fire, but the thought of losing soldiers needlessly because of inattention, indiscipline, or the failure to mitigate risks to the lowest level possible ought to be every leader's worst nightmare.

I challenge each of you to continue to inculcate solid risk management in all that you do, both on and off duty, in garrison and in the field. Our soldiers are counting on you to lead the way. Remember, safety and readiness go hand-in-hand. ☘

— BG James E. Simmons

In today's constantly moving Army, no matter where you find yourself or your unit, a rail load could be in your near future. With the accelerated deployment of troops to support Operation Enduring Freedom, and as troops mobilize to fight in the war on terrorism, deploy to the Joint Readiness Training Center for a brigade's rotation exercise, or participate in emergency humanitarian relief, most units will have to move their equipment by rail.

Thorough planning is essential to guarantee a successful rail load operation:

It takes licensed drivers, trained ground guides, and experienced load teams to execute this dangerous operation. Thorough prior planning is critical in reducing the risk of accidental injury or equipment damage.

Preparation for movement

The first step to any successful operation is to have a plan.

Once you have been tasked to perform a rail load, take charge of that mission from start to finish.

Look at *FM 55-21, Railway Operating and Safety Rules*, and your local publications for initial guidance.

Find out who has done this in the

PLANNING

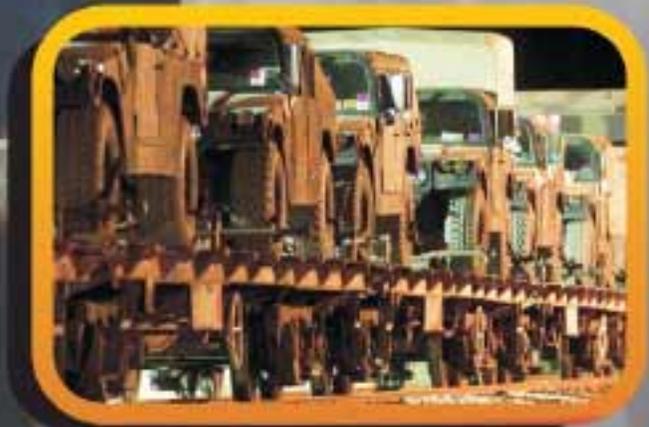
Key to Safe Dep

past within your organization. If no one has, ask other units or the installation transportation and safety offices for assistance. Look for past operations orders and after-action reviews to help you arrange and correct any problems that other units had in the past.

The next step is to find out what needs to be moved and how much equipment is going to be deployed. Finally, find out how much time you have to train personnel prior to the operation. Develop the plan, brief the plan, rehearse the plan, then execute the plan.

Movement to port of embarkation (POE)

The next step to incident-free rail load operations is to acquire trained drivers for the vehicles to be moved and loaded onto the railcars. Do you have qualified and current drivers to accomplish this mission? Have these soldiers ever driven a vehicle on a ramp or onto a narrow railcar? Do they know the proper use of hand and arm signals while they are moving that vehicle into position? If the answer is "No" to any of these questions, then you need to adjust



Deployment

your training plan to accomplish this training prior to the event.

Ground guides are the eyes and ears for those vehicle drivers moving equipment. They must be trained on proper hand and arm signals; *FM 21-60, Visual Signals*, is the manual that provides the guidelines for these signals. Require and enforce the use of ground guides for all vehicle movement around the railhead, not just on the railcars. Never allow a ground guide to walk backwards on the railcars or ground guide from a railcar that contains a moving vehicle.

Actions at POE

The load teams are your final step to a successful load. They must secure the load properly and

be trained on how to complete this mission to standard. Require and enforce that the load team uses the proper personal protective equipment (PPE). At a minimum, this should include Kevlar, reflective vests, and all-leather gloves. Train the teams on proper use of tools, blocking, lashing, and spanners. Inspect tools and tow bars for serviceability before using the equipment. When working with military combat vehicles that have turrets that traverse, ensure the turret is immobilized by using the vehicle's travel locking mechanism with cables that extend to both sides of the gun, or both.

As with any operation, there are inherent risks associated with the mission. In rail load operations, there are no exceptions. General precautions that should be considered are power lines in and around the rail load areas. Ensure that antennas and other objects protruding from military equipment cannot come in contact with overhead electrical power lines.

The weather should be checked at least 48 hours prior to the operation and hourly once the rail load begins. Rain, snow, and sleet could seriously change the procedures that you will use in and around the rail load site. Your continuous risk management steps should take into account the changes in weather.

Medical teams should be coordinated for and pre-positioned in the rail load area. Ensure an evacuation plan is developed and briefed to all personnel involved with the mission. A word of caution: Never tolerate horseplay or sleeping in the rail load area. If you, as a leader, allow this to occur—you are setting yourself up for failure, and that failure could cost a soldier's life. Rail load operations are serious business, take action to mitigate the risk. A successful rail load operation starts with you.

Finally, be a leader. If you are in charge, take charge and do the right thing. Demand performance to standards and take quick, effective action when standards are violated. 🐻

POC: CW4 Anthony M. Kurtz, Risk Management Integration Division, DSN 558-2781 (334-255-2781), kurtza@safetycenter.army.mil

For Successful RAILLOAD Operations:

- Develop and execute your plan; take charge of the mission.
- Ensure all drivers/operators are trained to standard and licensed IAW AR 600-55.
- Ensure drivers and ground guides are trained and proficient on hand and arm signals.
- Pre-inspect all equipment and vehicles prior to deployment. Load teams must be trained on the proper use of tools, blocking, lashing, spanners and tow bars.
- Implement and monitor crew rest (Fighter Management Plan).
- All personnel must enforce the use of PPE during the course of the mission.
- Other considerations include adverse weather, hazardous roads, and local policies.

I recently conducted a review of a motor pool operation and I was shocked with the lack of chocks in use for the vehicles. The motor pool was situated with sloping terrain and only a couple of vehicles had chocks. This creates a significant hazard for personnel, and increases the potential for loss or damage of equipment.

Some important requirements for parking an unoccupied vehicle include properly setting the parking brake. For diesel vehicles: the gear selector should be in the neutral position for standard transmissions, and in park for automatics.



CHOCKING & SECURING UNATTENDED VEHICLES

There have been several soldiers killed in the past by a vehicle that was not properly chocked, and subsequently ran over a soldier or crushed him between two vehicles. For example, in FY 2000, a CUCV was parked but was not chocked or the parking brake set. The unattended vehicle rolled through a parking lot and struck a pole, resulting in \$3800 damage to the vehicle. Luckily, there were no injuries.

Imagine this same event in a busy parking lot with a lot of people! This accident is an example of what can happen when drivers get in a hurry and do not take the time to follow standard procedures.

AR 385-55 is very specific about chocking and setting

parking
brakes
when
leaving

vehicles. Chapter 2-16, Paragraph I states: "All military vehicles will be equipped with chocks and use chocks when parked on inclines or whenever or wherever maintenance is being performed." This is the minimum standard and I recommend units consider chocking their vehicles whenever the driver is out of the cab. This provides increased safety against a rolling vehicle, and forces the driver to walk around the vehicle and pull the chocks prior to departing.

This increased awareness is the same rationale used by the major utility companies which require their vehicle drivers to set out perimeter safety cones around the vehicle before leaving it unattended. Review your unit's SOP today and ensure it meets or exceeds the requirements for chocking and securing unattended vehicles. You just might be preventing your unit's next accident. 

POC: CW5 Tom McGee, Idaho Army National Guard, DSN 422-3970,
thomas.mcgee@id.ngb.army.mil



Take Proper Precautions When Servicing Split-Ring Rims

Since FY95, there have been 25 recorded accidents as a result of performing maintenance on tires with split ring rims. Across the Army, that may not seem significantly high, but one accident is one too many, especially since all of these accidents could have been prevented.

But what if we included the near misses? Near misses are incidents that involved a close call, but no serious injury resulted, so it wasn't reported. The number of accidents would be extremely high if we included the near miss data.

Throughout the Army, split-ring rims have been used on various models of equipment for many years—from the 2½-ton M35 to the 10-ton M978 Heavy Expanded Mobility Tactical Truck (HEMTT). The newer models, such as the family of medium tactical vehicles (FMTVs), use bolt on solid rings. In accordance with OSHA 29 CFR 1910.177, equipment operators and maintenance personnel must be properly trained on the different types and the potential hazards associated with servicing multi-piece rims.



For the last 5 months, I have been assigned to the Risk Management Integration training team. During this time, we have visited seven different Army installations and provided soldiers with risk management training. As part of our training, we conducted safety surveys in several maintenance facilities. In each of these facilities, we noted serious potential hazards associated with soldiers performing tasks as simple as inflating a tire, or as complex as demounting and mounting tires. Some of the potential hazards that were noted include:

- Operators not trained.
- Technical manuals not available.
- Inflation gauge with a 10-foot air hose and clip-on chuck not available or being used.
- Operators using a pickaxe to separate the bead from the rim.
- OSHA-approved tire cage not available.
- Maintenance personnel not trained on servicing multi-piece rims or the training wasn't documented and filed.
- Tires mounted on the equipment were being inflated when the tire had less than 80 percent of air pressure.
- Tire cages bolted to the floor.
- Known standards not being enforced.

How can we eliminate or reduce these hazards? Through leadership! As leaders, we know that our soldiers have to be trained and resourced to safely accomplish any given task under any situation. Who can assist us with this training? Contact your local logistics assistance representative (LAR). They can train or assist you in establishing a multi-



piece rim training program tailored to your operation. Keep in mind, once the training program is established, it might be a good idea to include it as part of the unit's drivers' training program. What resources do we need

to provide soldiers so that they can safely service multi-piece rims? In most cases, the minimum resources to safely service multi-piece rims include:

- Eye protection.
- Hearing protection.
- OSHA approved tire cage (NSN 4910-01-373-0267); larger approved tire cage (NSN 4910-00-025-0623).
- Inflation gauge with 10-foot air hose and clip-on chuck (NSN 4910-00-441-8685).
- Mechanical bead breaker (NSN 4910-01-325-2974).
- Valve stem remover.
- Applicable tire tools.
- Equipment technical manual.
- TM 9-2610-200-14, *Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes*.

Split-ring rims can be extremely dangerous if not properly serviced and maintained by trained personnel. Let's not lose another life or limb as a result of shortcuts taken, standards not enforced, or resources unavailable. 🚫

POC: CW3 David S. Rogers, Risk Management Integration Division, DSN 558-1243 (334-255-1243), rogersd@safetycenter.army.mil

Sports Injury Prevention- Key to Combat Readiness

We all know that physical readiness is a vital part of Army life and critical to combat readiness. Participating in sports and recreational activities, as well as physical training, is the most popular way soldiers can choose to maintain physical and mental fitness, as well as build unit esprit de corps.

Unfortunately, it's not all fun and games. Already this fiscal year, Army men and women have experienced a variety of injuries.

- A soldier twisted his ankle when he caught his ski tip on a root/stump just below the new snowfall.

- Another soldier lost his balance while snowboarding, and tried to break his fall with his hand, resulting in a compound fracture to his upper right arm.

- A battalion was participating in an evening basketball game. One soldier was backpedaling on defense and made contact with another individual, causing a fall. Consequently, this caused a pileup that resulted in the soldier breaking his right femur.

- A soldier was participating in an off-duty recreational football game when he was struck in the jaw by another soldier. He later went to the emergency room for x-rays which revealed he had a broken jaw and dislocated some teeth. The soldier had his jaw wired shut, was hospitalized for two days, and placed on convalescent leave for 14 days.

Sports and recreational accidents rank third behind privately owned vehicle (POV) accidents and combat soldiering as a major cause of accidental injury. Sports injuries vary, but the majority involves the ankles, feet and lower legs.

Most sports activities involve a small element of danger: physical exertion, physical contact, and quick decisions followed by fast action. When soldiers are injured, that directly impacts the Army's ability to accomplish its mission. Can any mission afford this? What can we do to reduce sports injuries?

FM 21-20, Physical Fitness Training, outlines the principles of exercise. These principles are important for developing an effective physical fitness program. A structured program, in conjunction with proper equipment and good leadership, can minimize the risk of soldiers sustaining injuries.

A soldier's main job hinges on his ability to be able to function well in combat. It is the leader's responsibility to make sure his soldiers are prepared at all times. There is no single or simple solution to prevent sports injuries, but they can be reduced. Leaders at all levels must be familiar with the hazards associated with sports activities, and ensure their soldiers follow these guidelines:





	Accident Count %	
Basketball	49	31.01%
Football	28	17.72%
Skiing	12	7.59%
Softball	12	7.59%
Soccer	8	5.06%
Swim	8	5.06%
Bicycle	7	4.43%
Horseback riding/rodeo	7	4.43%
Boating	4	2.53%
Parachuting	4	2.53%
Running	4	2.53%
Volleyball	4	2.53%
Frisbee	2	1.27%
Rappelling	2	1.27%
Skating	2	1.27%
Wt lifting	2	1.27%
Hockey	1	0.63%
Hunting	1	0.63%
Paint Ball	1	0.63%
Other		17.09%
	158	

- **Warm up before participating in any sport.**
- **Master the techniques of the sport.**
- **Stay in good physical shape.**
- **Be adequately equipped.**
- **Know and practice the safety rules of the sport.**

Effective leadership is a critical factor in the success of a good physical training program. We, as leaders, must emphasize the value of physical training, clearly explain the objectives and benefits of the program, and demand that it be accomplished to standard. It is important that the Army stays physically fit and prepared to complete its mission.

Combat readiness is the responsibility of not only the unit leaders, but the entire Army family! We must be fit in body and mind, and ready to fight and win on the battlefield! 🖱️

A Cold Night in Saudi Arabia

I was assigned to a CH-47 Chinook Helicopter Company in Saudi Arabia in support of Desert Shield/Desert Storm. The Sixth Cavalry arrived in country in December 1990. We knew we were in trouble from the start as the flight attendant gave us blankets from the plane and said, "Don't worry, we'll come back for you." That's when I gave myself up for dead and figured anything else would be a bonus.

Our company (16 Chinooks from Fort Hood) deployed forward the day before the Air War started. Three other flight crews and I remained at the heliport trying to resurrect our broken Chinooks back to life.

The first thing you learn as a Chinook pilot is trusting your crew chief, and they were performing up to par. We brought our four Chinooks back to life and were told to follow our sister company.

Great plan, but we did not have any night vision goggles (NVGs) onboard. Day turned into night, and we followed a sistership (goggle-equipped) into the desert blackness. You get a whole different perspective on your first flight into Saudi Arabia flying unaided following a goggle-equipped aircraft.

Our rally point for the start of the war was along a stretch of road. Little did we know that high-tension lines (helicopter catchers) inhabited the side of the road. Our four Chinooks finally landed in every direction but vertical, but we didn't damage a single one. The next day was the start of the Air War.

As we were flying to rejoin our unit, we noticed a convoy suddenly depart their vehicles and quickly don their protective mask. This was our first test in crew coordination "mopping" procedures. We arrived at our destination 20 kilometers to the south of KKMC, Saudi Arabia, and rejoined our unit later that day. After a few days without a shower, we were ready. Cold water was never a great way to take a shower in the dead of winter, especially in the desert at night. Brrrrrrr!

Thus, the pot belly stove, a 5-gallon metal water can and the Australian shower came to our rescue. This was great. I was looking forward to a nice, hot shower. We placed the water can on the pot belly stove and heated the water before pouring it in the Australian shower. "Life was good."

One of our other tent mates (another pilot) decided that it was time for his shower. He located a water can and placed it on the pot belly stove. The other pilots in the tent were busy flight planning. My cot was about three feet from the stove. About 5 to 10 minutes later, one of our pilots asked, "Does anybody smell gas?"

It did not take long to find the source of the gas vapors. Our dusty and smelly tent mate had gone out into the night, located a 5-gallon gas can, which looked very similar to the 5-gallon metal water can, and placed it on the stove. You can indeed cook gas. We promptly removed it from the stove and thanked God for sparing our lives. A good safety point is to check the writing on the can before use.

As I looked up into the dark along the stove pipe hole in our GP Medium tent, I was thinking about the events of the past day when suddenly I saw a line of sparks like a Fourth of July rocket, followed by an explosion. This was our introduction to the Scud missiles.

Some days, it doesn't pay to get out of bed, I guess. 

POC: Mr. Donald Shipley, Ft. Polk Safety
Office DSN 863-4130 (337-531-4130),
donald.shipley@polk.army.mil



Personnel Injury

■ A PFC collapsed while participating in a demonstration on the obstacle course horizontal ladder. All attempts at reviving the soldier failed. He was transported to the local medical facility where he was pronounced dead. It was later determined he suffered from a preexisting medical condition.

■ A SSG was attempting to place a mobile home on a new site. The soldier's home collapsed on him.

■ Three soldiers returning home from training were fatally injured when their rented private airplane crashed.

■ A SGT lost his finger when he tried to tighten the alternator fan belt while his vehicle was still running. When he pulled his right hand out, his middle finger was caught by the belt, and pinched between the belt and pulley. Soldier was taken to the local hospital, where it was determined that the fingertip was not viable for reattachment. He lost his middle finger to the first knuckle.



POV

■ Three soldiers were traveling on a county road. The driver (PVT) ran off the road and hit a tree. The driver survived, however his passengers, a PFC and another PVT, were killed.

■ A SPC failed to negotiate a curve and overturned his car, killing himself and his passenger, another SPC.

■ While operating a motorcycle, a SSG ran off the road and collided with a guardrail. Soldier was fatally injured.



AMV

■ Two recruiters were en route to pick up a new recruit for induction when another vehicle ran a red light and struck their vehicle in the driver's door. The driver (SSG) was not wearing a seatbelt and was fatally injured. The other recruiter (also a SSG) was wearing a seatbelt and was treated and released.

■ An M978 fuel tanker contacted the main rotor blade of a parked UH-60L aircraft during refueling. Preflight inspection of the aircraft on the following day revealed damage to the main rotor system. Damage was later found on the tanker.



ACV

■ A HEMTT was proceeding in a convoy movement when, for unknown reasons, it was observed to veer off the left-hand side of the road, down an approximately 15-foot embankment. The vehicle came to rest inverted in approximately 3-4 feet of water

(stream). The TC was able to egress, however the driver drowned.

■ The casings of two 25mm rounds exploded while stored on the flooring next to the heater of the M2A2 Bradley Fighting Vehicle (BFV). All three occupant crewmembers sustained injuries and were treated and released. One crewmember sustained a more severe injury to one thumb for which he was hospitalized for surgical treatment.

■ An M88 tracked recovery vehicle and towed M2A2 BFV struck two civilian vehicles while in traffic during convoy movement. The tow bar retaining bolt reportedly dislodged from the left tow bar attachment shoe on the M2A2, and loss of operator control ensued. Eight civilian vehicle occupants sustained injuries; five were treated and released, two were hospitalized with serious, but not life-threatening injuries; one sustained life-threatening head injuries and remains on life-support.



Other

■ During M72A2 Light Anti-Tank WPN (LAW) training, one LAW round was determined to have been a "dud." The round detonated during EOD procedures to destroy it (while emplacing the detonation charge). One soldier died, one soldier sustained serious injuries, and the third soldier sustained minor injuries.

A Few Words About

Anthrax

There is so much information on anthrax available to the public, it is not necessary to restate it here. However, one point that should be made clear is the safety professional's role in an anthrax situation is one of assistance. We must remember our mission of accident prevention. Sending an anthrax-laced letter through the mail is clearly not an accident. We must always be available to assist with providing information and clarify questions that arise concerning this threat.

An excellent web site for finding various types of information on anthrax is the U.S. Army Center for Health Promotion and Preventive Medicine, <http://chppm-www.apgea.army.mil>. Here, you can find fact sheets and medical information, as well as information for the medical community, HQDA messages, PPE guidance, and detailed instructions on mailroom anthrax sampling procedures for individuals who are responsible for such activities. Another good web site for information and links to additional web sites, such as the Centers for Disease Control and Prevention is DENIX, Defense Environmental Network and Information Exchange at <http://www.denix.osd.mil>. You must, however, apply for a password before you can access the DoD menu at this site. 🐾

POC: LTC Heidi Overstreet, USASC Industrial Hygienist, DSN 558-2477 (334-255-2477), overstrh@safetycenter.army.mil



Surfacing Leaks in the Tanker Fleet

One problem we are continuing to see surface on FORSCOM Aviation Resource Management Survey (ARMS) is the HEMTT Tanker (M978) fuel-line elbow being in contact with the V5 valve. There is a problem of compliance with TACOM Safety of Use Message (SOUM) 94-07, partly because an illustration was not provided. Since then, the Army Petroleum Center has obtained a TACOM illustration on how to solve the problem (see below).

The key to the solution is cutting off the bolts at the jam nut, and use metal bands (2 each) to support the pup joint (see illustration). If the bolts have already been cut off, and you do not use the metal bands, the fuel-line elbow over time will drop onto the coupler, or onto the valve itself. This can start chaffing until a groove is worn into the elbow. If uncorrected, it eventually will cause a hole to be worn in the fuel-line elbow, causing a fuel leak and potential fire.

Help us get the word out. Regardless of whether it's an aviation or ground unit in non-compliance, if a leak occurs—it becomes an environmental and a safety issue. Have your maintenance and POL folks ensure compliance with TACOM SOUM 94-07. 

POC: Jim Lupori, U.S. Army
Petroleum Center, DSN 977-6445
(717) 770-6445, jlupori@usapc-emh1.army.mil

Non-compliance with TACOM SOUM 94-07 could lead to this.

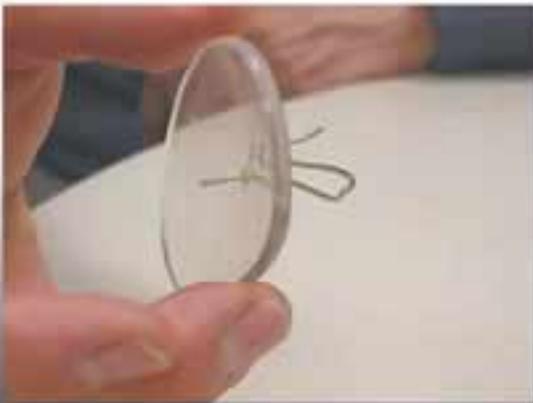
Use metal bands to support the pup joint.

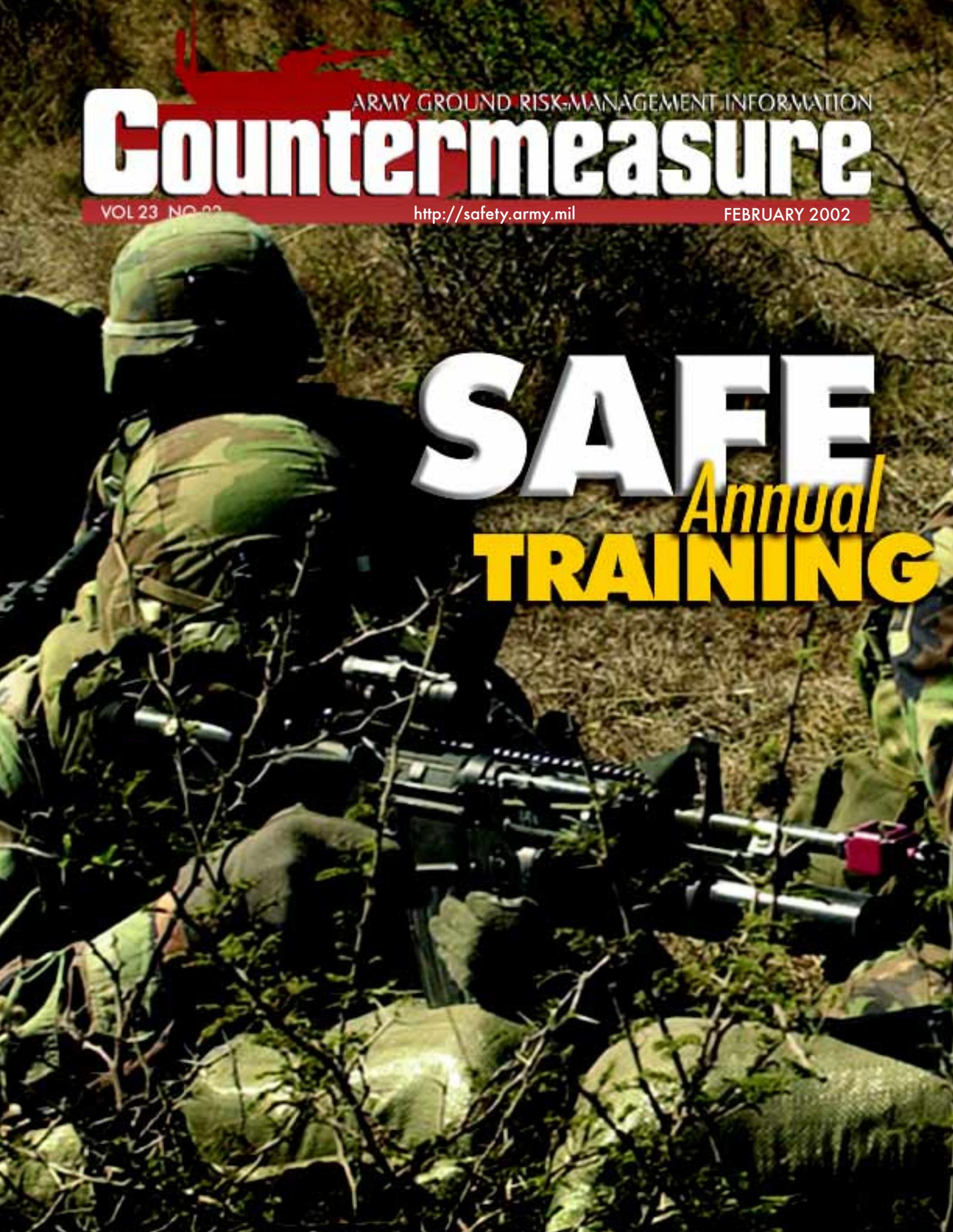


Is Your Eyesight Worth Not Wearing Your **Safety Glasses?**

A Boeing employee began encouraging his 18-year old son, who installs siding on houses, to wear safety glasses. His son was resistant and stated that he did not need them and that he felt he wasn't going to get hurt. On one occasion, his son got aluminum dust in his eyes while cutting gutter material. The father told his son that safety glasses would keep the dust out of his eyes. His son finally gave in and started wearing them.

A week or two later, the son was applying siding with an air-powered staple gun. When he fired a staple, it hit a metal plate behind the siding and it ricocheted back towards his face. One leg of the staple penetrated the safety glass lens. It hit with such force that the frames were cracked. Fortunately, he only received bruising on the eyebrow and cheekbone from the impact. The safety glasses definitely saved his eyesight, and possibly his life!





ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 02

<http://safety.army.mil>

FEBRUARY 2002

SAFE

Annual

TRAINING

Countermeasure

CONTENTS



- 3** **DASAF's Corner**
Thanks For What You Do Every Day
- 4** **Plan Annual Training With Safety In Mind**
- 6** **Written In Blood**
- 8** **Medical Condition? What Medical Condition?**
- 10** **"Get-there-itis" Kills**
- 12** **NCO Corner**
Safety Is Important To Soldiers
- 13** **Training & Risk Management**
Commanders Safety Course Mandatory Before Taking Unit Command
- 14** **Range Safety Begins Before You Get There**
- 16** **Accident Briefs**
- 17** **News & Notes**
Army Knowledge Online Features *Countermeasure*
U.S. Army Safety Center Points of Contact
- 18** **Safety Messages (1QFY02)**
- 20** **Drive to Arrive**



BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 568-2888 (334-255-2888). To submit information for publication, use Fax 334-255-3009 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 568-2002 (334-255-2002). Visit our website at <http://safety.army.mil>



DASAF's CORNER

From the Director of Army Safety

Thanks For What You Do Every Day

On an airplane yesterday, I read an article about a new coach for one of the professional football teams and how much he was going to be paid to turn 50 professional athletes into a winning team. It made me reflect on what leaders do in the Army every day: turn the most dedicated, professional soldiers in the world into successful teams capable of executing the most demanding missions in unbelievably challenging environments and conditions.

One particular example of some great training and leadership that I was privileged to observe last year while serving as the ADC-M of the 1st Cavalry came to mind. It was Bradley Table XII training. The unit, with no officer assigned and a young staff sergeant serving as the platoon sergeant, was from the 2nd Battalion of the famous 7th Cavalry.

I can still feel the chill of the morning air as the four M2s moved forward in the light fog that was hanging in the scrub oaks. The crews quickly engaged the enemy targets with accurate 25mm fire as the platoon advanced by bounding overwatch. The platoon sergeant received a report that there was an enemy strong point to the left front of the unit. He quickly determined that he would have to dismount his infantry to clear the bunker complex in order to continue his advance.

Personally dismounting, the platoon sergeant led his troopers through the wood line while his Bradleys continued to suppress the enemy position with 25mm fire. He lifted and shifted fires as his assault approached the bunker complex. The clearing team, led by another tough young staff sergeant, moved forward while crew-served automatic fire took up suppression fires as the M2s engaged vehicle targets that were now threatening their position.

The platoon soon gained a foothold, assaulted with live grenades and small arms fire, and methodically cleared the bunker facility. Quickly establishing areas of responsibility, the platoon prepared for the counterattack. Lethal small arms and crew-served and anti-tank fires defeated the counterattack, and the platoon remounted the Bradleys to continue the attack.

Once the platoon reached its limit of advance, it received a frag order directing them to move some 7 kilometers cross-county and counterattack into the enemy force that was threatening the company to their north. Emerging from the wood line, the young staff sergeant immediately brought his platoon into the counterattack, advancing quickly and effectively using 25mm and TOW fires to set the conditions for his infantry to assault the final position.

In all, this operation took some 5 hours. I distinctly remember being in awe of the rapid and disciplined movement of the platoon, and the exceptional command and control exhibited by the platoon sergeant. In the AAR, there was little praise for what I had just witnessed. Instead, the sergeant focused on what his troopers needed to do better.

Similar exemplary training is going on every day in units of all types across our Army. Our young leaders are paid far less than any football coach, but their professional dedication and determination are unmatched. Taking the individual skills of each soldier under their command and producing teams capable of executing the most difficult missions imaginable is what they do every day—without the visibility or accolades that winning coaches and football teams get. These professionals do it quietly, and eagerly move out to overcome the next challenge.

I could tie in some observations about safety and risk management into this piece, but instead I would like to pass on my admiration and pride in what you are doing out there every day. It is because of soldiers like each of you that our nation enjoys the freedoms we expect as Americans. You truly make our Army the envy of the world. Thanks for what you do every day. 🇺🇸

Train Hard—Be Safe!

BG James E. Simmons

Well, it's that time of year again. The annual training plan and training calendar have long been submitted and approved, and now it's time to start detailed planning for annual training (AT).

In order for the reader to gain the proper perspective on this issue, understand that Army Reserve (AR) and National Guard (NG) soldiers

do not conduct training like their active duty brethren. Our active duty contemporaries usually train every day. While we adhere to the same tasks, conditions, and standards, our program requires breaking the tasks into blocks lasting about two days, sandwiched around two-to-four week periods of "leave." It is the lack of continuous training time, in a highly technical/tactical skill with no equivalent in the civilian job market, that makes AT no simple task. This is a real challenge for Reserve Commanders.

Each AT session represents a period of intense training.

Leaders need to remind their soldiers that they are accountable for their actions, and

self-disciplined

performance to

standard can have the greatest impact on accident

prevention. Planning with safety in mind is a sure-fire prerequisite to successful training.

PLAN ANNUAL TRAINING

WITH

SAFETY

IN MIND

Command Climate

The first step is to develop a command climate that permeates safety throughout the organization. Make it clear that standards must be adhered to, and that supervisors enforce them. This philosophy has to start from the top, and be executed from both—top down and bottom up.

FM 100-14, *Risk Management*, states that risk management must be integrated into mission planning, preparation and execution. Leaders and staffs must continuously identify hazards and assess both accident and tactical risks, then develop and coordinate control measures. This process applies to AR/NG units as well as active component units.

Supervision

Tough, realistic training conducted to standard is the cornerstone of Army warfighting skills. Our mission demands high-intensity field training in a realistic combat environment, and the potential for accidents is high. As leaders, you've been around long enough to see fenders dented, fingers pinched, and ankles twisted. Unfortunately, some leaders have seen worse—and have attended the funerals that resulted. Supervision is the key to preventing accidents. Simply put, leaders can reduce accidents by consistently enforcing standards in training and discipline.

Rules to remember

Rule No.1: No unnecessary risk should ever be accepted. The leader who has the authority to accept a risk has the responsibility to protect his soldiers and equipment from unnecessary risk. A risk that could be eliminated or reduced and the mission still be accomplished is an unnecessary risk and must not be accepted.

Rule No. 2: Risk decisions must be made at the appropriate level. The leader who's going to have to answer

if things go wrong is the leader who should make the decision to accept or reject the risk. In some cases, that will be a senior officer. In many cases, it will be a first-line leader. Small-unit commanders and first-line leaders are going to make risk decisions in combat; as much as possible, they should make risk decisions in training.

Rule No. 3: The benefits of taking a risk must outweigh the possible cost of the risk. Leaders must understand the risk involved and have a clear picture of the training benefits to be gained from taking the calculated risk.

Advantages of risk management for leaders

- Detect risks before losses.
- Quantify risk.
- Provide risk control alternatives.
- Better decisions.
- Greater integration of safety.
- Increased mission capability.

Risk management is, in reality, a smart decision-making process, a way of thinking through a mission to balance training needs against risks in terms of accident losses. Once understood, it is a way to put more realism into training without paying a price in deaths, injuries, and damaged equipment.

The U.S. Army Reserve Command (USARC) teaches risk management four times annually and the Army Safety Center can assist with risk management instruction on a unit-by-unit basis.

** Editor's note: Starting next month, a new column called "Reserve Component Safety" will be a regular feature in Countermeasure. Individuals in the USAR/USNG are encouraged to submit articles containing any experiences that concern safety.* 

POC: LTC Keith M. Cianfrani, USAR Advisor,
DSN 558-9864 (334-255-9864),
keith.cianfrani@safetycenter.army.mil.

The M1-series tank is designed to kill. It is an equal opportunity killer that doesn't distinguish between friend and foe or between training and combat. This tank can be your best friend if you take care of it and follow its rules. If you don't, it can be your worst enemy. Since 1990, we've had 14 non-combat fatalities and two permanent disabilities that are directly attributable to the tank. The majority of these accidents were caused by crewmen not paying attention to what they were doing, such as drivers being caught by the turret or by a failure to adhere to standards, such as not using the gun travel lock.

Every time we have a fatal or crippling accident, we reevaluate the warnings, standards, procedures, and mechanical interlocks to see if changes could prevent a similar accident. The number of mechanical interlocks and safety features seem to increase daily. We've all seen the numerous safety warnings in the technical manuals. They are not put there to slow you down or make your work harder. Unfortunately, most of them have been put in place because someone was hurt or died; they're "Written in Blood."

This past September, we lost a tank commander in a breech accident. It appears that the accident was caused by the failure to engage any of the four existing mechanical interlocks, any single one of which, if engaged, would have

prevented breech movement. The tank commander failed to follow normal safety procedures highlighted in the tank -10 manual and reinforced repeatedly in training. Bypassing safety interlocks or ignoring standards in a tank can mean death or serious injury. The tank is not forgiving and it doesn't give you a second chance. Recently, a mechanic was permanently disabled in a breech accident because the standards and procedures were also ignored.

Webster's Dictionary defines an accident as "an unforeseen and unplanned event or circumstance" or as "an unfortunate event resulting especially from carelessness or ignorance." About 80 percent of Army accidents, both in peacetime and combat, involve human error. Often accidents cause more losses in soldiers and equipment than the enemy does. All accidents are preventable. We must focus on doing the job correctly, safely, and by the book. We must use safety devices and pay attention to warnings. We must provide leadership that focuses on proper safety control measures and train our subordinates to do the same.

Today's NCO is the front-line trainer and role model for our soldiers and the motivating force to eliminate accident losses. Each hour of each day, an NCO somewhere in the world enforces a standard, provides leadership, and instills the discipline that may prevent a future accident. If the NCO refuses to follow the standards or tells his crew, "Just do as I say, not as I do," he fails in his duty as a leader and more importantly, he fails his crewmembers. Doing

something the right way has got to become second nature; that is why we must "train like we fight." We must train correctly and

Written in Blood

follow the safety procedures outlined in the -10 technical manuals. We must train safety procedures to become second nature and habitual, so whether in a high-stress situation or in the comfort of our own motor pool, we will still operate safely. However, if we ignore the safety features and warnings when we train, we will continue to lose more soldiers to accidents.

Leaders must train and set examples for their soldiers and must always adhere to the standards. According to the U.S. Army Safety Center, there is a dangerous trend appearing. The most common violators that we see from accident investigations are sergeants, staff sergeants, and young officers. For example, in June 2000, during tank gunnery, a lieutenant allowed his driver to drive the tank in an unsafe manner, “power-sliding” around a concrete turn pad. The NCOIC of the range spoke with the lieutenant about the driver’s recklessness and the fact that the lieutenant needed to keep himself at nametag defilade while acting as a tank commander.

The following day, the lieutenant failed to heed the warning of the NCOIC, and his driver once again attempted to power-slide around the turn pad. Unfortunately, the tank slid on some loose gravel, left the road, and rolled 360 degrees. The lieutenant was not at nametag defilade and the tank crushed him as it rolled. What could have prevented this accident? What would a good leader have done? What should the crew have done?

A common phrase that has stood for many years has been “soldiers will focus only on what the commander checks.” Given this, commanders must demonstrate the knowledge for all safety requirements inherent to their command and be tenacious in checking and rechecking for compliance. They must ensure their subordinate leaders possess this same trait. If leaders focus on a safe working environment, everyone will. We must emphasize that safety is everyone’s responsibility. Safety isn’t just following rules; it is knowing where you are and what you’re doing at all times. This is situational awareness (SA) and it’s everyone’s responsibility. SA is not just understanding where you are on the battlefield; it is understanding where you are in the tank and what you are doing. It is knowing where the breach is and where your body is in reference to the breach; it is knowing where all

your crewmembers are when you move the turret. Situational awareness is everyone’s business.

Safety has always been a number one priority in any training event or exercise because the most valuable asset in our Army is the soldier. In the early days of World War II as our nation prepared for the biggest military challenge in its history, General George C. Marshall, Army Chief of Staff, said, “The primary instrument of warfare is the fighting man. All of the weapons with which we arm him are merely tools to enable him to carry out his mission.” This still holds true today. We must continue to find ways to protect our most valuable asset. I challenge each of you to set the example that reinforces the standard, provide leadership and instill discipline that may prevent future accidents to protect our most valuable asset—our soldiers.

The U.S. Army, the Armor Association, the Patton Museum, ARMOR Magazine, and “tankers” and cavalrymen everywhere lost a good friend and stalwart supporter recently when MG (Ret.) Stan Sheridan passed away. Few devoted as much time and effort supporting the Armored Force as this mounted warrior. He served his country in uniform in war and peace for over 32 years, and then kept on serving for 18 years as Director of the U.S. Cavalry Association, Vice President of the U.S. Armor Association, Board of Trustee member of the Patton Museum, Honorary Colonel of the 69th Armor Regiment, and Gold Medallion holder in the Order of Saint George. These are just some of the titles and honors earned by Stan Sheridan.

You know it’s easy to support the Armored Force while one wears the uniform; it’s a form of self-preservation. But General Sheridan, and others like him, who did it and do it while retired, are special men indeed. These men work tirelessly to keep our heritage alive, passing it along to new generations of tankers and cavalrymen. They remember and celebrate fallen comrades and their accomplishments while mentoring and supporting the “new breed.” They deserve our gratitude and respect—there are too few of this ilk. 🇺🇸

FORGE THE THUNDERBOLT!

—MG R. Steven Whitcom, CG, U.S. Army Armor Center (Reprinted with permission from *Armor Magazine*.)

What medical condition?

People often admire the soldier who “guts it out,” and refuses to quit when sick or hurting, or doesn’t tell anyone that something is wrong so that they can deploy, but doing so can be wrong, worse yet—it can be fatal.

Recently, a National Guard soldier in his 40s was mobilized with his unit, and died of a heart attack while training in preparation for a Homeland Defense mission. Nobody in his unit was aware that he might have a problem, because he never said that he might have a problem, and he apparently passed his mobilization physical. What went wrong?

AR 40-501, *Standards of Medical Fitness*, is the guide by which we determine who gets physical exams, and when they get them. The AR also outlines disqualifying medical conditions. AR 40-501 applies to all soldiers, but National Guard soldiers also fall under NGR 40-501, which places some additional requirements on them. Among the extra requirements are more frequent physicals—every 2 years starting at age 38, a level-two cardiac screening with these physicals, and an annual medical certification.

The soldier had taken the age 38 physical as required, but he had failed the Level I cardiac screening, which meant he should have had a Level II screening done. This was never done at an Army facility. The soldier then appears to have missed his next two physicals that were due at age 40 and 42. He did take a mobilization physical, and passed. However, it was not noted that he failed the Level I cardiac screening. Again, a Level II screening was not done. During the soldier readiness processing (SRP) at the training site, no one noticed that the Level I screening had been failed. In addition, every year the soldier had done the annual medical certification, he said that he was in good health, and each was signed by the company commander. None was signed by a doctor or physician’s assistant as required.

Did anything else go wrong? The soldier, aside from missing a couple of physicals, really did have a medical condition. What he never told anybody on

any physical, or on the annual medical certifications, is that he had seen his private doctor for chest pain in the past. In addition, several months before the mobilization physical, he had begun taking medications for blood pressure problems and he had experienced problems with indigestion. Though it may not seem like a big problem, cardiac chest pain often appears like, and is mistaken for, indigestion.

Would any of this have made a difference? Maybe, but we will never really know. Here are the real lessons learned:

- The fact is, National Guard and Reserve soldiers normally do not have the same access to Army medical facilities that active duty soldiers do; therefore, if something is missed, it may stay missed for a long time, and the results of missing something can be catastrophic. Because of this, it is vitally important that when physicals are performed, that they are done completely and in accordance with AR and NGR 40-501. It is also vitally important that all physicals, records, and annual medical certifications are carefully reviewed, and approved by the appropriate authority before a soldier is signed off as qualified.

- As more National Guard soldiers are mobilized, it is vitally important that all active duty medical personnel who may be screening, performing physical on, or treating these soldiers know the additional requirements of NGR 40-501, and carefully review all records for completeness. In addition, they need to remember that because National Guard and Reserve soldiers get most of their medical care through civilian doctors, their military medical records may not have all information about medical conditions, and they may need to take extra time and ask additional questions.

- If you have a medical condition, regardless of whether you are active duty, National Guard or Reserve, you must let medical personnel know, either on a physical, an annual certification, going on sick call, or by just plain telling someone.

The last lesson is extremely important. If you have a medical problem, it does not affect just you, especially if you are deployed or about to deploy. Let's face it, soldiers are being sent worldwide, often to remote places, often with minimal medical support.

As an example, let's say you have some condition and are taking pills to control it. You haven't told anyone, but you deploy to a basecamp in Kosovo, Bosnia, or Afghanistan. You run out of pills, and the Aid Station doesn't have them or a substitute, because they are not on the packing list for the Aid Station medical equipment sets. The next thing you know, you are on patrol, haven't taken the pills, the condition gets out of control, and you collapse.

Not only have you put yourself at risk (and by doing so, you put your family at risk), you have also put both your unit and the mission at risk, because now they must stop to evacuate you. If someone has to launch a ground or air MEDEVAC mission to pick you up, you have also put those crews at risk. You could even put a total stranger at risk, because the MEDEVAC mission picking you up cannot respond to a soldier hurt somewhere else at the same time...all because you didn't tell someone.

The example above may seem extreme, but it happens. If you reveal a medical condition, it is really simple risk management; the worst thing is that you may not deploy. On the other hand, it may be possible to take steps so that you can deploy. For example, if it is known that you need an unusual medication, extra supplies of that medication can be obtained. If you have a condition that could be a problem at a remote base camp, it might not be a problem at a camp with a hospital unit. There are many other potential solutions, but only if someone knows from the start there is a problem. 🚚

POC: LTC Robert Noback, USASC Command Surgeon, DSN 558-2763 (334-255-2763), robert.noback@safetycenter.army.mil

'Get-there-itis'

No one is immune to 'get-there-itis'. The desire to get home is a powerful thing. Don't let emotions influence unsafe decisions.

Kills

Eight more hours, I kept thinking!
Eight more hours of this place!
Restlessness and signs of impatience slowly crept through my body. That big day finally arrived. I was ready—payday was yesterday, so I had plenty of money in my pocket and a brand new car. I was headed home after my annual training. It was time to have fun and blow off some steam. Whether you are an active soldier or a reservist, we've all been there. Only one thing, we are the lucky ones who survived.

Now, let me tell you how it started. We were almost at the end of the field training exercise (FTX) and everything was going well. Twenty-seven long days of sleeping under the stars, and at last, it was time to pack up and head home.

My platoon sergeant called the squad together and told us how well we had performed our tasks. Then the word came down that the field training had been extended for three more days. Thirty long days and nights!

Then it dawned on me that I was scheduled to pull company charge of quarters (CQ) the next day after coming in from the field. From that point on, everything went downhill.

We arrived back at garrison after those final three days had passed. I thought I would have one evening of rest before pulling my duty. Nope! Another soldier had misplaced his weapon, so we were placed on lockdown. No one was allowed to leave the area until that weapon was recovered. You guessed it. There went my free night of rest!

Five hours later, the armoror realized that he made a mistake on his inventory. I was furious! I only had a couple of hours to sleep before it was time to go to work.

The next day, we cleaned weapons, washed vehicles, cleaned TA-50, then I reported for my CQ briefing at 1600. I had hoped the sergeant would let me get some sleep that night while on duty. Wrong again!

It was a busy night. Soldiers kept me awake all night by coming in and going out at all hours.

That didn't matter. All that mattered was that in a few short hours, I was going home; home to my family and to party.

The moment came. I was finally on my way! Only nine hours to my destination. I thought I could handle it. I thought I could drive nine hours with no problems. Man! I was wrong yet again.

The big "F" word set in. I'm talking about fatigue. When fatigue hits you, it hits like a ton of bricks. I kept telling myself I could make it by thinking about all the partying I was going to do when I got there. And that's when it happened.

I was crossing the Mississippi River Bridge when I zoned out. It's a type of experience that you can never imagine. There I was, driving in my sleep. Then all of a sudden I woke up, panicked, and stopped on the middle of the bridge with traffic backed up. You know, I haven't been the same since. How did I get there? When did I get there?

You see, I was lucky because it could have been worse. As of that day, every time I cross a bridge, I live that nightmare over and over again, all because I didn't take the time to get some rest before starting out on my trip. The majority of the time, when it comes to crossing a high bridge, I take an alternate route.

Now, let's talk about driver fatigue and inattention. The National Highway Traffic Safety Administration (NHTSA) data indicates that in recent years, there have been about 56,000 accidents annually in which driver drowsiness/fatigue was cited by police. An annual average of roughly 40,000 nonfatal injuries and 1,550 fatalities result from these accidents.

It is widely believed that these statistics underreport the extent of these types of accidents. These statistics also do not deal with incidents caused by driver inattention, which is also believed to be a larger problem.

CHECK IF ANY OF THE FOLLOWING APPLY

- ❑ Snore loudly
- ❑ You or others have observed that you stop breathing or gasp for breath during sleep
- ❑ Feel sleepy or doze off while watching TV, reading, driving or engaged in daily activities
- ❑ Have difficulty sleeping 3 nights a week or more (e.g., trouble falling asleep, wake frequently during the night, wake too early and cannot get back to sleep or wake unrefreshed)
- ❑ Feel unpleasant, tingling, creeping feelings or nervousness in your legs when trying to sleep
- ❑ Interruptions to your sleep (e.g., nighttime heartburn, bad dreams, pain, discomfort, noise, sleep difficulties of family members, light or temperature)

Sleep is essential to your health, safety and quality of life. If you are not getting enough sleep or you are having difficulty sleeping, talk with your doctor and get help. Most sleep problems and sleep disorders can be diagnosed and are treatable in safe and effective ways. The web site to National Sleep Foundation is <http://www.sleepfoundation.org/>.

Some misconceptions of fatigue include:

- *Coffee overcomes the effects of drowsiness while driving.*

False. Stimulants are no substitute for sleep. Drinks containing caffeine, such as coffee or cola can help you feel more alert, but the effects last only a short time. You are still likely to have micro-sleep, or brief lapses that last 4 to 5 seconds.

- *I can tell when I'm going to fall asleep.*

False. If you are like most people, you believe you can control your sleep. In a test, nearly 80 percent of people said they could predict when they were about to fall asleep. They were wrong. The truth is, sleep is not voluntary. When you're drowsy, you can fall asleep and not even know it.

- *I'm a safe driver, so it doesn't matter if I'm sleepy.*

False. Alert drivers are safer. Even the safest drivers can use poor judgment when they're sleepy.

- *I can't take naps.*

False. Scientific tests show that naps can help promote alertness. If you think you can't nap, pull over and relax for 15 minutes anyway. You may be surprised at how easily you fall asleep once you give yourself a chance.

- *I get plenty of sleep.*

False. The average person needs 7 to 8 hours of sleep a night. If you don't get this amount, then you probably don't get enough sleep and you may be building up a sleep debt. Ask yourself, "Do I feel rested?"

- *Being sleepy makes you misperceive things.*

True. Have you ever driven at night and seen something you thought was an animal, but it turned out to be a paper bag or leaf blowing across the road? That's only one of the many ways sleepy drivers misjudge their surroundings.

The next time you go on annual training or a weekend trip, take the time to get plenty of rest before going out on the road. That rest can be a lifesaver for you and other drivers. 🚗

—Courtesy of Michael Brown, TRADOC Safety Office,
brownmt@monroe.army.mil



Safety is Important to Soldiers

A word to NCOs: YOU are the one who knows where the accidents are going to happen. You know how familiar soldiers are with their equipment. You know how familiar they are with each other. You know when they're getting tired or frustrated. You also know the other sections or units and how they work.

Here are some suggestions for taking the lead in safety:

- **Don't make light of safety requirements.** We've all seen NCOs who abide by safety requirements only when someone important is watching. As soon as that person leaves, soldiers get a wink and off they go—without safety glasses, hearing protection, or safety belts. Your soldiers believe what YOU tell them. Are your words—or your actions—telling your soldiers that safety isn't important?

- **Take time to do things safely—that means by the book.** When it's time to leave the field, everybody's in a big rush. We all know how that goes. Slow your folks down. Don't be in such a hurry that somebody gets hurt or something gets damaged. Getting back 30 minutes earlier isn't worth the cost of a wrecked vehicle or injured soldier.

- **Have a plan.** When you want to get things done quickly, the best way to accomplish it is not with speed of movement, but with organization. Make sure your soldiers study the plan: who is going to accomplish what tasks and how, who is going to help, and what equipment goes where.

- **Use the buddy system.** This old standby puts the soldier who really knows what he or she is doing on a task with the one who is new. Make your soldiers feel responsible for each other. Watching out for someone's safety somehow makes us more aware of potential danger than just watching out for number one, and it prepares newer soldiers to be safety-conscious NCOs.

- **Don't let your soldier play stupid.** Believe it or not, many injuries occur while we're having fun. Having a successful and safe AT period or drill weekend, then getting hurt playing ball or going out afterward is stupid. Don't let your "guard" down while you and your soldiers are having fun.

- **Speak up.** Have you been waiting for someone to give you the authority to take charge regarding the safety of your soldiers? Go for it. If you think an act is unsafe, question it. If you know it is unsafe, stop it. Your soldiers will never forget you; nor will they forget the message that you're sending—that safety is important to soldiers. 🇺🇸

POC: MSG Edwin Romero, Risk Management Integration Division, 558-3901 (334-255-3901), edwin.romero@safetycenter.army.mil



COMMANDERS SAFETY COURSE MANDATORY BEFORE TAKING UNIT COMMAND

A new Commanders Safety Course for officers selected to command will become a pre-command requirement once it comes online within the next three months. Completing the Commanders Safety Course will give commanders the tools they can use to build their unit safety programs through all levels of command.

Officers selected for battalion and brigade command will also be required to complete the course before beginning the Pre-Command Course at Fort Leavenworth, KS.

"This program is also for the young lieutenant who has not had any safety training and he's saddled with being a collateral duty safety officer," said Dwight McLemore, TRADOC Safety Office. "He can learn how to do his additional duty job really fast, and he meets the precommand requirement, too."

But it's much more than a safety course, according to Lt. Col. Steven Foley, who is Schools Division Chief within the Individual Training Directorate, Deputy Chief of Staff for TRADOC.

"The Army leadership said let's give the commanders, command sergeants major and first sergeants the tools and knowledge to implement and manage a unit safety program and incorporate risk management in everything they do," he said.

Risk management is the first tool. According to Foley, this program helps identify hazards as well as control measures to minimize risk involved in unit and individual actions and duties.

The second one is the Unit Safety Program. It uses an example of an outstanding unit safety program from the 2nd Airborne Brigade, Fort Bragg, NC, which was approved by the Forces Command Inspector General. Students will be able to build their own unit safety program using data gathered from an enormous Army safety program reference list.

The last tool is a resource navigator, a portal through the U.S. Army Safety Center, Fort Rucker, AL. The navigator contains the URL (Uniformed Resource Locator) links to "just about every safety issue that we can identify," Foley said.

"That means if I'm writing a risk management assessment for a road movement, I look up controls and hazards for that activity. If some other guy elsewhere is using the tool at the same time, thinks up hazards that I didn't think of, my computer will be automatically updated with those hazards," Foley explained.

That happens because the tool is collecting and storing data not only internally to the local area network, but also externally in a large data bank that will be part of this program.

Users will be able to take those tools with them after completing the course, by either downloading from the Reimer Digital Library or by requesting a CD-Rom from the Army Training Support Center at Fort Eustis, VA.

The Commander's Safety Course was created as a result of a directive from Gen. Eric K. Shinseki, Army Chief of Staff, to the Army Safety Center and TRADOC. He wanted a course that could help commanders identify and reduce needless accidents and deaths of our soldiers. He also wanted a course that would qualify an officer, sergeant major, or first sergeant to perform safety program duties, and invigorate risk management training and programs within the institutional and operational Army.

"The Commanders Safety Course can do that," Foley said. "The tools in the course make it a really effective, adaptable resource. Other Army courses can be based on this format. It's so powerful that simply naming it Commanders Safety Course does not do it justice."

Every officer, noncommissioned officer and warrant officer will add to their professionalism by completing the Commanders Safety Course.

Editor's Notes: (1) The U.S. Army Safety Center is the proponent for this course. Dr. Brenda Miller developed the Program of Instruction and TRADOC built upon that to develop the distance learning product. (2) The risk management portion of the course is being considered for addition to the Sergeants Major and First Sergeants Courses. 

POC: Jim Caldwell, TRADOC News Service, DSN 680-3461, jim.caldwell@monroe.army.mil

RANGE SAFETY

BEGINS BEFORE YOU GET THERE

As an Infantryman, I have been involved with Ranges in one capacity or another for 19 years. Throughout my career, I have picked up a few things that have been effective for me. I wish I could say that I came up with them all on my own, but I was fortunate enough to have served with excellent soldiers, and I have shamelessly stolen all of their good ideas. I would like to pass them on to you in hope that it might help you run a safer, more effective range.

First and foremost, you must go through the range certification process at your installation to ensure that you are up to speed on everything particular to your installation, the range, and the weapon(s) systems you are using.

● **Talk to range control.** These are the smart folks when it comes to range operations; they do it full time. Normally, we only deal with them when we pick up the range packet or when we are trying to clear the range at the end of training. Don't just do the minimum coordination required

to get the range up and running, take the time to talk to range control cadre members who manage that particular range. You will find that the majority of these guys take pride in what they are doing and have a genuine desire to help you operate a successful range. Don't ignore the guys in civilian clothes. We often tend to look right past these guys. You are costing yourself the opportunity to learn something. I will use Mr. White as my example. He works at Fort Campbell, KY, and has been involved with the ranges there longer than any of you have been wearing green. If you can't learn something from somebody with that kind of experience, then you aren't trying hard enough.



● **Learn from others.** Talk to units who have run that range recently. Find out what kind of problems they encountered. If things went well, see if you can incorporate their plan into your training. If they produced a chicken noodle hoagie, find out what happened and implement countermeasures to ensure it doesn't happen to you. I was in one unit where it was a requirement to contact the last unit that had fired on that range. Makes sense to me.

● **Plan, plan, plan.** Work your pre-range checklist. It is really embarrassing when the range is "hot" and the unit is ready to go, but they have to sit in the bleachers and cool their heels while you send the HMMVW back to the billets to get the critical item that you forgot to bring. (Been there, done that, had the one-way conversation with the boss later on!) If you have a good plan, it will help you to conduct a smooth operation, without having to vigorously exit your own 'fourth point of contact' at the last minute.

● **Haste is not the same thing as efficiency.** If you are trying to get an 8-hour range done in 4 hours, then you are taking shortcuts somewhere, and you are setting yourself and your unit up for failure. Do it right and do it in a controlled manner. Do not inhibit safety or training due to time management issues.

● **Brief and rehearse your range detail.** Everybody from line safeties to the ammunition point detail should know exactly what they are doing before the unit is lined up ready to shoot. Just because you know what you want them to do and how you want them to do it does not necessarily mean that they know it, unless you adequately communicated it to them. Osmosis has limited effectiveness in a range setting. Proper briefings and rehearsals will save you time and headaches once you get there.

● **Prepare and rehearse your range safety briefing.** Put your briefing together and use cue cards, flip charts, or whatever else you need to provide a comprehensive safety briefing. "Hip shots" have the potential to omit vital information that the firers need to have.

● **Be prepared for emergencies.** Have primary and alternate range control/CASEVAC frequencies memorized, written down, and set

on your radios. Have back-up communications available. Talk to your on-range medic and make sure that he/she is on the ball and has the minimum amount of medical knowledge and supplies to deal with any possible emergency that may arise.

Obviously, you hope you will have no need for a medical response during your range, but hope is not a course of action, and you want to be able to keep a bad situation from getting worse in case you have an accident.

● **Do the prep work.** You should be competent in all aspects of every weapons system that you will be using on the range. You do need to have the appropriate FMs and TMs available on the range, but it shouldn't be the first time that you have opened the manuals. If you are conducting a range with weapons that you do not use on a regular basis, consider talking to a unit that does.

● **Conducting a demolitions range?** Why not pick up the phone and talk to the engineers, EOD and/or the Special Forces guys and get some hot tips on how to do it right? Small arms range? Run down the street and talk to the Grunts. You may even be able to talk some of these guys into coming down to your unit and conducting classes for you. Teamwork is not just a concept, and it should not stop at your front door.

● **Train soldiers on the basics.** A good marksmanship program will begin long before the soldiers arrive on the range. The appropriate 23-series field manual and the Common Tasks Training book (CTT book) will get you started in the right direction. It's sort of like driving a car. You wouldn't take someone out to road test before they had received classes and written testing, would you? Think about it.

Here's the bottom line. If your range is properly executed, then safety and realistic training should be able to coexist, with one reinforcing the other. That should be your goal. 

Mission First, Safety Always.

POC: MSG Sean M. O'Brian, Risk Management Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil

Information based on preliminary reports of ground accidents.



Personnel Injury

Class A

■ A 20-year old PVT had been fishing with friends when he decided to go into the water. His body was recovered the next day.

■ At 0630, a 21-year old PVT fell from the 3rd floor balcony of his barracks building resulting in fatal injuries.

■ A SSG was participating in a parachute freefall competition when he landed off the DZ and sustained critical injuries (permanent total disability).

Class C

■ During a field exercise, a SGT injured his arm when he climbed up the left side of the LMTV to adjust a camouflage net. He was placed on 14 days restriction. The soldier should not have been working alone.

■ A SGT injured his fingers when he lost his grip removing a transfer to an M998. The transfer had transmission fluid on it and caused it to slip and fall against the body frame, injuring his fingers. The soldier should not have been working alone.

■ Under icy conditions and limited visibility, a SSG attempted to dismount the tank with three points of contact, he slipped off the front deck and struck his elbow against the light housing.

■ A SGT sprained his right ankle while participating in a battalion live fire exercise. He was bounding forward during the dry fire phase and his foot got caught inside an old tire track hidden by dense vegetation. He missed three days of work and is still awaiting possible surgery.



POV

Class A

■ At 2030, a 45-year old MAJ was en route to drill training when he was involved in a one-car accident resulting in fatal injuries.

■ At 0445, a 28-year old SGT lost control of his vehicle and struck a telephone pole, resulting in fatal injuries.

■ At 1520, a 22-year old SPC was returning from drill when another vehicle crossed the centerline and struck his vehicle head-on. The SPC was killed instantly. The other driver is suspected of being DUI.



AMV

Class C

■ A PFC was a passenger in the rear of a 2½-ton truck heading back to the rear area. The driver drifted off the road for only a short distance and encountered three bumps in a row. When the truck ran over them, it caused the bed and the passengers in it to take three very hard jolts, injuring the PFC's back.

■ While in a convoy, an inexperienced PFC driver was injured when her M997 HMMWV Ambulance slid off the shoulder of the road and rolled 1½ times. This was her first winter field training exercise. Damage cost was \$25,000.

■ A SPC sprained his arm when he drove an M1097 HMMWV Van off the road and it overturned.



ACV

Class C

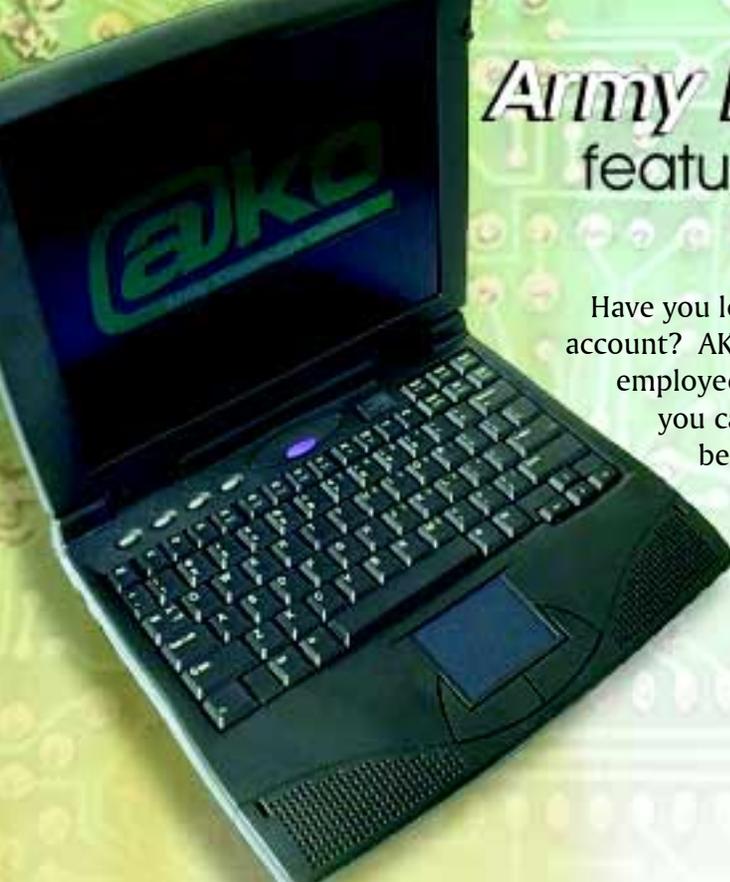
■ While traveling down a southern tank trail, the crew noticed flames coming from the engine compartment. The crew stopped the tank and discharged the fixed fire extinguisher system. The crew then waited for the installation fire department. According to a company maintenance chief, the fire was caused by a fan breaking apart inside the engine, cutting multiple fuel and oil lines which sprayed the flammable POL products onto the hot engine.

The driver fell asleep at the wheel and his assistant driver was also asleep during the accident. The unit had been on the road for over 10 hours and at work over 13 hours. The assistant driver was not licensed to drive. Fortunately, both were wearing seatbelts and helmets.

■ The driver (SPC) of an M915 rammed the back of a stopped truck, which caused that truck to hit the one in front of it. All drivers were briefed on the mission, route, and dusty road conditions expected along the convoy route. At several points, the soldier lost visibility of the truck in front of him, but managed to catch up. After driving for approximately 30 minutes, the driver lost visual contact again when he rounded a corner and was immediately engulfed in a thick dust cloud. Sun on the windshield, coupled with the "brown out" condition caused him to lose visibility for about three seconds, which resulted in the collision. No one was injured. The SPC was licensed and wearing his seatbelt.

Army Knowledge Online

features **Countermeasure**



Have you logged on to your Army Knowledge Online (AKO) account? AKO is the Army's portal for soldiers and civilian employees worldwide. Along with all its other useful features, you can now get Countermeasure, Flightfax, and other benefits from the U.S. Army Safety Center website right there on AKO. Here's how:

1. Log on to AKO.
2. Scroll down the left column to **SPECIAL STAFF**.
3. Click on **SAFETY**.
4. Click on the Safety drop down. You're there! Spread the word.

U.S. Army Safety Center

Points of Contact

DSN 558-xxxx Commercial (334) 255-xxxx

Director of Army Safety: BG James E. Simmons, 2029
Deputy Commander: COL John Warren, 3075
Sergeant Major: SGM David Griffith, 3575
Director of Operations: COL Michael Powell, 2461
Deputy Director of Operations: LTC Scott Ciluffo, 2461
Operations: LTC Joseph Sette, 2194
Ground Accident Investigation Chief: LTC Darryl Bowman, 3562
Aviation Accident Investigation Chief: LTC William McInnis, 9552
National Guard Liaison: Vacant
Army Reserve Liaison: LTC Keith Cianfrani, 9864
Command Surgeon: LTC Robert Noback, 2763
Industrial Hygiene: LTC Heidi Overstreet, 2477
Legal: LTC Cindy Henry, 2924
Training: LTC Mark Robinson, 1253
Research & Analysis: MAJ Bryan Sperling, 1496
Countermeasure: Paula Allman, 2688
Flightfax: Judy Wilson, 9855
Public Affairs Officer: Jane Wise, 1129
Media and Marketing: John Hooks, 3014
Publications Distribution: Sharrel Forehand, 2062
Web Master: Jason Harlow, 2101
Help Desk: Reta Dyson, 1390
<http://safety.army.mil>
e-mail addresses: first.lastname@safetycenter.army.mil



Safety Messages

Recap of selected 1QFY02 safety messages

The following is a listing of selected safety of use messages (SOUMs) and ground precautionary messages (GPMs) issued by Army

Tank-Automotive Command (TACOM) and Communications and Electronics Command (CECOM) for 1QFY02. Complete copies are available on the Army Electronic Product Support Bulletin Board via the Internet web site at <http://aeprs.ria.army.mil>.

● **SOUM-02-001**, R261521ZOct01, subject: Operational, 115-Ton Barge Derrick, BD Series 6800, NSN 1935-01-434-6826. Reference: DTG121343ZMar01, subject: SOUM-01-011, "DEADLINE" NSN 1935-01-434-6826, 115-Ton Barge Derrick, BD Series 6800. Referenced DEADLINE SOUM is now revised to Operational to allow in port crane operations; effective immediately, the 115-ton barge derrick, BD 6800 series is prohibited from stern towing. POC: Henry Ballard, DSN 786-7159 (586-574-7159), ballardh@tacom.army.mil.

● **GPM-02-001**, 111440ZOct01, subject: Revised GPM-02-001, Remove and replace a fuel line adapter fitting for Bradley Fighting Vehicle (BFV) 600 horsepower engine, NSN 4730-01-303-1160. Vehicles affected: BFV variants: M2A2, NSN 2350-01-248-7619, LIN F40375; M2A2-ODS, NSN

2350-01-405-9886, LIN F40375; M2A3, NSN 2350-01-436-0005, LIN F60564; M3A2, NSN 2350-01-248-7620, LIN F60530; M3A2-ODS, NSN 2350-01-405-9887, LIN F60530; M3A3, NSN 2350-01-436-0007, LIN F90796; M6 Linebacker, NSN 2350-01-448-0368, LIN C00384; M7 BFIST NSN 2350-01-432-1526, LIN F86571. Summary: The current brass fuel line adapter fitting, NSN 4730-01-303-1160, can fail. If the current fuel line adapter fitting fails, there is a danger of fuel spraying over the engine, which could cause a fire. POC: Brian Smerdon, DSN 786-7696 (810-574-7696), smerdonb@tacom.army.mil.

● **GPM-02-002**, 171245ZOct01, subject: Item affected, NSN 3810-01-448-2619, all vehicles affected with model number AT422T, LIN C36586, NSN 3810-01-448-2619. Summary: During the past 18 months, TACOM has received field reports of a catastrophic failure of the steering gear box on the newly fielded all terrain crane (ATEC). POC: David J. Rinke, DSN 786-7296 (586-574-7296), rinked@tacom.army.mil.

● **GPM-02-003**, 181247ZOct01, subject: Goodyear AT2A tire used on the following HEMTT vehicles: M977, LIN T39518, LIN T59278; M978, LIN T58161, LIN T87243; M983, LIN T88677; M984 and

M984A1, LIN T63093; M985, LIN T39654, LIN T39586, M985E1, LIN T41721. Summary: Replaced by TACOM GPM 02-004 in its entirety.

● **GPM-02-004**, 251151ZOct01, subject: Goodyear AT2A tire used on the following HEMTT vehicles: M977, LIN T39518, LIN T59278; M978, LIN T58161, LIN 87243; M983, LIN T88677; M984 and M984A1, LIN T63093; M985, LIN 39654, LIN T39586; M985E1, LIN T41721. Summary: TACOM has identified a manufacturer's defect in certain production run Goodyear tires model AT2A, size 16.00R20, NSN 2610-01-126-1576. These tires are used on the HEMTT family of vehicles. A small number of the tires will develop cracking after mounting, inflating, and flexing the tire. This cracking appears after a load is applied to the tire, the vehicle is put in motion, and the sidewall is flexed. Cracking will occur from the outside of the tire and move inward. POC: Anderson Coleman, DSN 786-4258, colemaan@tacom.army.mil.

● **GPM-02-005**, 260917ZOct01, subject: HET M1070 Truck Tractor, NSN 2320-01-318-9902, LIN T59048. Summary: Investigation of a recent engine compartment fire on a M1070 HET has identified that incorrect routing of fuel and hydraulic lines may have

contributed to the fire. POC: Michael R. Decker, DSN 786-7438 (586-574-7438), deckerm@tacom.army.mil.

● **GPM-02-006**, 051440ZNov01, subject: Hull Network Distribution Box (HNB), NSN 6110-01-422-2562, for all Abrams Tanks M1A1, NSN 2350-01-087-1095, T13168, M1A2/M1A2 SEP, NSN 2350-01-328-5964, T13305 and all FMS tanks. Summary: Vehicles equipped with pulse jet system (PJS) are to be equipped with an HNB, NSN 6110-01-422-2562, part number 12387900. Failure to do so will render the NBC sponson warning indicator inactive, putting the crew in a hazardous condition. Previously, the supply system would issue an unmodified HNB, 6110-01-344-0469, part number 12345531-2, if a modified HNB, NSN 6110-01-422-2562, was not available. TACOM CBU has changed the provisioning and requisitioning data to ensure that an unmodified HNB will not be issued when a modified HNB is requisitioned. POC: Michael Calleja, DSN 786-8540 (586-574-8540), callejam@tacom.army.mil.

● **GPM-02-007**, 15Nov01, subject: Commercial 100-Round Magazine for Use in M249 Squad Automatic Weapon (SAW), NSN 1005-01-127-7510, LIN M09009 (AR Role) and NSN 1005-01-451-6769, LIN M39263 (LMG Role). Summary: A quantity of 2000 each commercially available

100-round double drum magazines (C-MAG) were purchased and provided free issue to some high priority units for use in the M249 SAW. More of these magazines may be purchased as test results, funding, and requirements become known. POC: Mark Johnson, DSN 793-1918 (309-782-1918), johnsonm@ria.army.mil.

● **GPM-02-008**, 14Nov01, subject: Kiowa Helicopter XM296 Machine Gun, NSN 1005-01-338-4766. Summary: The headspace check for the XM296 machine gun will be modified to alert maintenance personnel to possible gun problems when headspace and timing requires consecutive adjustment. POC: Gary Mau, DSN 793-1935.

● **GPM-02-009**, 071504ZNov01 subject: Hull Network Distribution Box (HNB), NSN 6110-01-422-2562, for all Abrams Tanks M1A1, NSN 2350-01-087-1095, T13168, M1A2/M1A2 SEP, NSN 2350-01-328-5964, T13305 and all FMS tanks. Summary: M1A1 tanks equipped with pulse jet system (PJS) are to be equipped with a modified hull network box (HNB), NSN 6110-01-422-2562, part number 12387900. Failure to do so will render the NBC sponson warning indicator inactive putting the crew in a hazardous condition. Previously, the supply system would issue an unmodified HNB, 6110-01-344-0469, part number 12345531-2, if a

modified HNB, NSN 6110-01-422-2562, was not available. TACOM has changed the provisioning and requisitioning data to ensure that an unmodified HNB will not be issued when a modified HNB is requisitioned. POC: Michael Calleja, DSN 786-8540 (586-574-8540), callejam@tacom.army.mil.

● **GPM-02-010**, 28Dec01, subject: M109A6, Paladin Automatic Fire Control System (AFCS) Computer Unit (ACU), NSN 7021-01-440-2127. Summary: One Paladin AFCS ACU experienced an internal wiring problem. This occurred when the leads on the adjacent servo circuit card assembly (CCA) pierced the tape wrapped wiring harness within the ACU. This failure resulted in uncontrolled gun tube oscillation. POC: Kevin Ellis, DSN 880-2047 (973-724-2047), kellis@pica.army.mil.

● **GPM-02-011**, 28Dec01, subject: Kiowa Warrior Helicopter OH-58D Ejector Rack, NSN 1095-01-301-7705. Summary: Talley Defense Systems delivered 10 Kiowa Warrior ejector racks containing cylinder caps with no final protective finish. Without final protective finish, the cap will corrode internally which could result in the rack not functioning properly. Failure of a rack to function during an in-flight emergency could result in a catastrophic event. POC: Scott Johnson, DSN 793-2364.

COMING soon to a theater near you!

DRIVE TO ARRIVE

Several talented country music artists have joined up in the Army's campaign to prevent soldier deaths in POV accidents. In movie theaters across the Army and Air Force Exchange Systems (AAFES) worldwide, military moviegoers will soon be treated to short public service video clips while waiting for the main feature to begin.

Country artists Joe Diffie, Collin Raye, Tammy Cochran, Charlie Robison and Travis Tritt are featured in the "Drive to Arrive" high resolution videos, produced by the U.S. Army Safety Center. Watch for them at your local AAFES theater next time you take in a flick, and *"Drive to Arrive."*



Collin Raye



Tammy Cochran



Charlie Robison



Joe Diffie



Travis Tritt



ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 3

<http://safety.army.mil>

MARCH 2002

FATIGUE...



A Soldier's ENEMY

Countermeasure

CONTENTS



4



14



8

- 3** **DASAF's Corner**
The Number One Killer of Soldiers
- 4** **Fatigue...A Soldier's Enemy**
- 6** **GSA Vehicles Are Top Accident Producers**
- 7** **Ground Guiding Army Vehicles**
- 8** **Stop, Look, Listen, and LIVE!**
- 10** **Kevlar Helmet Tested Safe To Wear**
- 12** **POV**
Check Your Six
- 13** **Reserve Component Safety**
Drill Weekend Safety
- 14** **NCO Corner**
Enforcing Standards Saves Lives
- 16** **An Electrifying Experience**
- 18** **Plan Ahead For Summer Hazards**
- 19** **Maintenance Advisory**
on Army Space Heater
- 20** **POV Toolbox**



U.S. ARMY SAFETY CENTER

BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4005, 6th Avenue, Fort Rucker, AL 36352-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 568-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3003 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 568-2062 (334-266-2062). Visit our website at <http://safety.army.mil>



DASAF's CORNER

From the Director of Army Safety

The Number One Killer of Soldiers...

...isn't the bad guys we're fighting in our proclaimed war on terrorism. We are losing soldiers to an enemy we face every day, right here at home. Privately owned vehicle (POV) accidents have taken the lives of 36 soldiers during the first four months of this fiscal year—a far greater number than have been killed in combat during Operation Enduring Freedom.

Although, compared to FY00, we closed out FY01 with an 11 percent decrease in POV fatalities, we still lost 99 soldiers in POV accidents. Each year, from FY92 through FY01, POV accidents have accounted for approximately 60 to 65 percent of the total Army accident fatalities. We can, we must, do better!

The Army's senior leadership is adamant that the Army redouble its efforts in attacking POV accidents. The Sergeant Major of the Army is working with the NCO Corps to help commanders significantly reduce these losses. A 20-percent reduction from last year is an achievable goal. However, we must always be mindful that selection of a number is simply one metric for measuring safety performance; *never* lose sight of the fact that numbers represent lives lost. The loss of even one soldier is one too many. Losing soldiers in preventable POV accidents is totally unacceptable.

Most of the POV accidents this fiscal year have been caused by the usual traffic hazards: speed, fatigue, and failure to wear seatbelts/helmets. Analysis continues to reveal that soldiers constantly underestimate their personal risk and overestimate their personal ability, causing errors relating to speed and fatigue.

FY01 data reveals that Army POV fatalities were 37 percent lower than the nation's demographically similar population. Male drivers under the age of 25 are the most likely age group to become involved in fatal accidents. A significant difference between the Army and the general public is that we, as Army leaders, can exert more control over soldier behavior. We have plenty of opportunities and authority to strongly influence the behavior and risk decisions of our young, most-at-risk soldiers. If we aren't doing that, then we should be.

POV accident prevention involves continual senior leader and NCO involvement. Division commanders must be briefed by the chain of command—from squad leader to battalion commander—on each POV fatality and ensure that the information is shared with other local commanders. Leadership at all levels must take an active role in promoting safety awareness and risk management as the primary factors in preventing POV accidents and fatalities.

NCOs should know where every soldier is going while on leave, what he or she will be doing, and when every soldier will be returning to the unit. Make traffic safety a discussion topic at meetings. Jumpstart the dialogue with one of the five new videos from the "*Drive to Arrive*" POV Accident Prevention Campaign. These videos are now available to download at our website, <http://safety.army.mil>, and will be available in VHS format at <http://afishp6.afis.osd.mil/dodimagery/davis/>.

POV accident prevention also requires that we—general and private alike—exhibit the individual self-discipline to obey traffic laws and all post-specific guidance regarding POV operation every day, every time we slide behind the wheel. Let's make "*Drive to Arrive*" more than a slogan. Let's put it into practice and help enhance combat readiness by neutralizing the threat that has been the number one killer of soldiers for far too long. ✪

Train Hard—Be Safe!

BG James E. Simmons

A soldier drowned when the M985 Heavy Expanded Mobility Tactical Truck (HEMTT) he was driving rolled over into a streambed. The truck was part of a 73-vehicle convoy conducting a night tactical road march. As part of the support element, his platoon was deployed to support a cavalry squadron movement to the unit maintenance collection point (UMCP) as the squadron began a 14-day training exercise.

The night was characterized by light precipitation, with 6 percent moon illumination and 2-mile visibility. The unit was using night vision goggles (NVGs).

This was a movement that should have proceeded without incident or injury. However, the following significant events contributed to the accident: continuous operations throughout the day without rest, insufficient leader supervision, lack of risk management implementation, and no continuous risk assessment.

What happened?

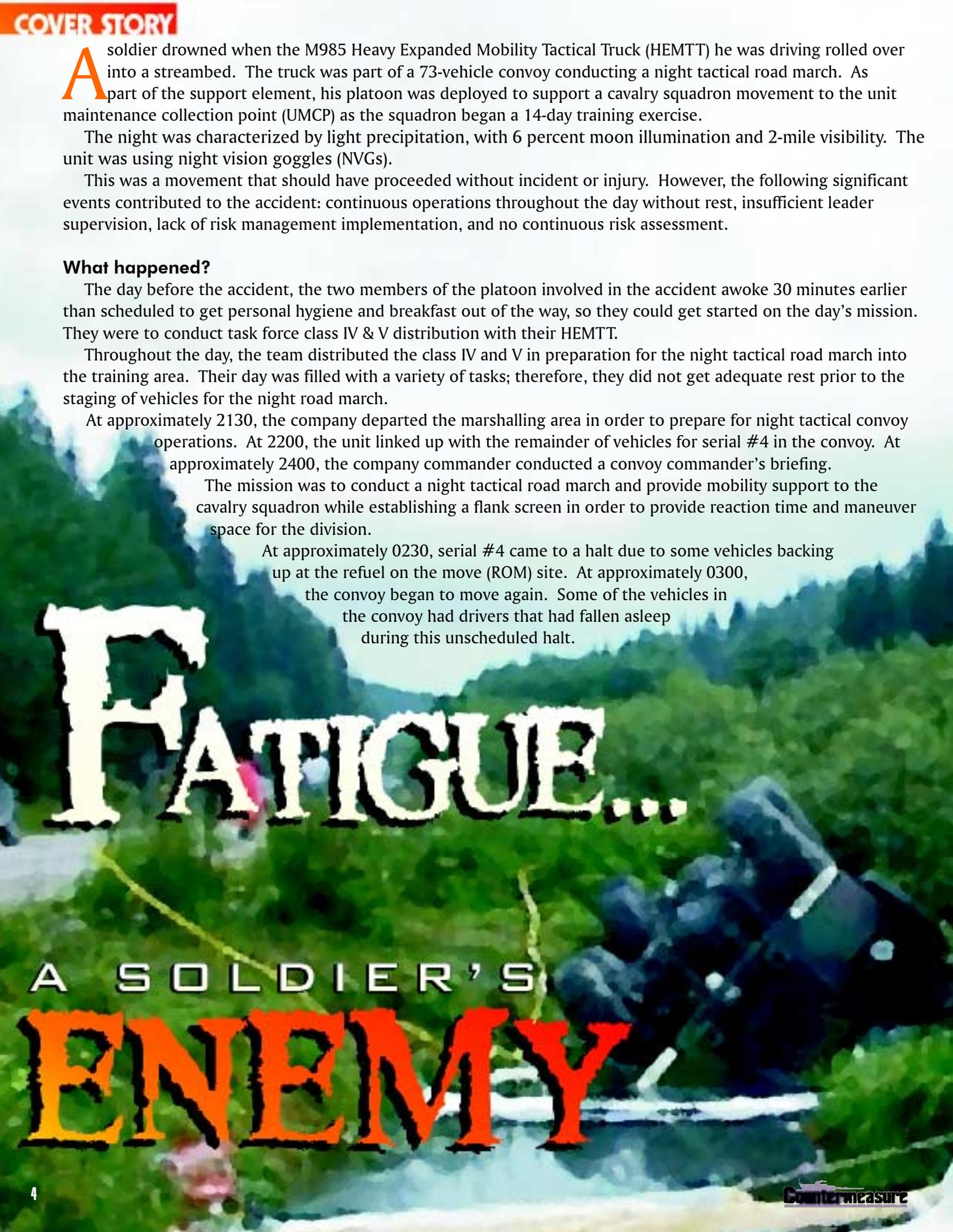
The day before the accident, the two members of the platoon involved in the accident awoke 30 minutes earlier than scheduled to get personal hygiene and breakfast out of the way, so they could get started on the day's mission. They were to conduct task force class IV & V distribution with their HEMTT.

Throughout the day, the team distributed the class IV and V in preparation for the night tactical road march into the training area. Their day was filled with a variety of tasks; therefore, they did not get adequate rest prior to the staging of vehicles for the night road march.

At approximately 2130, the company departed the marshalling area in order to prepare for night tactical convoy operations. At 2200, the unit linked up with the remainder of vehicles for serial #4 in the convoy. At approximately 2400, the company commander conducted a convoy commander's briefing.

The mission was to conduct a night tactical road march and provide mobility support to the cavalry squadron while establishing a flank screen in order to provide reaction time and maneuver space for the division.

At approximately 0230, serial #4 came to a halt due to some vehicles backing up at the refuel on the move (ROM) site. At approximately 0300, the convoy began to move again. Some of the vehicles in the convoy had drivers that had fallen asleep during this unscheduled halt.



FATIGUE...

A SOLDIER'S

ENEMY

This caused distance gaps between the vehicles in the convoy. Shortly after serial #4 started rolling again, the fifth vehicle in serial #4 unexpectedly traveled to the left side of the tank trail, down an unimproved shoulder, and came to rest in a 160-degree inverted position in a 4-foot deep stream of free-flowing water. The vehicle sustained minimal damage; however, the driver received fatal injuries when he was knocked unconscious and subsequently drowned. The senior occupant of the vehicle received minor injuries.

Why did it happen?

The company commander delegated risk management down through the squad leaders to ensure soldiers got enough rest prior to missions. However, they did not continually reassess the risks throughout the day due to continuous operations. As a result of conducting the day's class IV and V distribution, the soldiers did not conform to the established guidance on rest. The compounding effects of no sleep throughout the duty day, coupled with the added challenge of night driving under NVG conditions, were the formula for this tragedy.

Countermeasures

- Leaders must enforce use of safety equipment.
- Leaders must enforce rest plans.
- Reduce size of convoy to a manageable size. 

POC: Ground Systems and Accident Investigation Division,
DSN 558-3562 (334-255-3562)



MISSION:
Conduct night tactical road march

HAZARDS

- **Driver fatigue**
- **Continuous operations**
- **Night convoy**
- **Improper use of seatbelt restraint system**

RESULTS

- **1 fatality**

CONTROLS

- **Implement and supervise rest plan**
- **Reduce size of serial**
- **Enforce use of safety equipment**

GSA Vehicles Are Top Accident Producers

In the past 4 years, General Service Administration (GSA) vehicles have had the highest accident rate of all vehicles driven in the Army. Since 1998, accidents involving GSA vehicles have resulted in 7 fatalities, 1,075 accidents, and damage and injury costs of \$7,643,151. These statistics have a direct impact on the readiness and effectiveness of our Army. Identified below are some things leaders and soldiers can do to make our Army safer.

Top accident causes

- Driving too fast for weather/road conditions.
- Following too closely.
- Animals running out in front of the vehicle.
- Improper backing; not checking to the rear of vehicle.
- Misjudging clearance.

Risk management for leaders

- Ensure the drivers receive proper training.
- Use safety briefings to emphasize driving attentiveness, controlling speed, braking ability and following distances.
- Control hazards through advance planning; continually reassess risks throughout the mission.

Risk management for individuals

- Wear seatbelts.
- Read the operator's manual; know the vehicle's capabilities.
- Know the mission and the route.
- Pay attention to the road conditions.
- Give full attention to driving the vehicle.
- Don't use cell phones while operating a vehicle.
- Don't exceed the speed limit.
- Don't risk life or injury when fatigued.

Vehicle operators are responsible for executing risk controls to standard. They must continuously assess variable hazards such as fatigue, equipment, serviceability, and the environment. Vehicle operators must also obey all laws, drive defensively, use good driving skills, follow all safety procedures, and be familiar with their vehicle, understanding its capabilities and limitations.

A critical task for all operations is minimizing risk. A thorough risk assessment should be conducted before operation of any vehicle—even GSAs. Every military plan must make risk mitigation a priority...it is an inherent part of every mission, and a basic responsibility of leadership.

Fortunately, GSA accidents are on the decline this fiscal year. With continued attention to quality driver training, professionalism, and seatbelt use, we can make a significant difference in the upcoming year. *Be Safe and Drive to Arrive!* 🚗

POC: MAJ Donald Graham, Ground Systems and Accident Investigation Division, DSN 558-9525 (334-255-9525),
donald.graham@safetycenter.army.mil

Risk Management



Army vehicles are awkward, noisy, oversized equipment that can be very dangerous to move around. In some vehicles, drivers cannot see to their far left or right, much less to the rear of the vehicle.

Ground guides will be used IAW AR 385-55, *Prevention of Motor Vehicle Accidents*. We don't know how many accidents have been prevented by the use of ground guides because accidents that don't happen don't get reported. However, a review of accidents in which ground guides should have been used but weren't, or were used incorrectly, makes it clear that—

- Ground guides are essential.
- To be of value, ground guides must know what they're doing. Their own lives, as well as the lives of others, depend on their knowing *when* to ground guide, as well as *how* to ground guide.

AR 385-55, Para 2-18, states that wheeled vehicles will normally require one ground guide; however, two or more ground guides (one in front and one in the rear) will be used when backing a wheeled vehicle when vision is restricted.

Drivers should take all directions and signals from the front ground guide. If at any time the driver cannot see the front ground guide, or the front guide cannot see the rear guide, the vehicle should be stopped at once. Both guides should always remain a safe distance from the vehicle (keep at least 10 yards between themselves and their vehicles) and never walk or stand directly in front of or behind the vehicle being moved. A few years ago, an accident was reported where a soldier was walking backward while ground guiding a vehicle. When he stumbled and fell, the vehicle ran over him before the driver could stop.

Prevention is the key. One way to prevent problems is to train all ground guides in the proper methods and signals to use when ground guiding vehicles, and to ensure that no soldier is used to ground guide a vehicle until he has received the proper training. Only through command emphasis and NCO supervision can these accidents be prevented. 

POC: MSG Timothy Sprucebank, Senior Wheel Vehicle SME, Ground Systems and Accident Investigation Division, DSN 558-3774 (334-255-3774), timothy.sprucebank@safetycenter.army.mil

GROUND GUIDING ARMY VEHICLES



Stop, Look, Listen, and LIVE!

In the past 2 years, three soldiers were killed at railroad crossings. Additionally, 2 civilians were killed and 21 injured in train accidents as a result of Army operations, costing the Army almost \$7 million.

- Two soldiers were killed when their M977 Heavy Expanded Mobility Tactical Truck (HEMTT) was struck by a train while crossing an unguarded off-post railroad crossing during a daylight road movement of three vehicles.
- The second fatal accident occurred during daylight hours when a M1075 Palletized Load System (PLS) stalled between a guarded railroad crossing. The train was unable to stop in time to avoid hitting the vehicle. The assistant driver escaped with minor injuries; however, the driver was not so fortunate. He was killed upon impact. In addition, 2 civilians on the train were killed and 21 others were injured.

These accidents may have been avoided by knowing some important facts:

A typical freight train traveling at a speed of just 30 mph needs 3,500 feet to stop. That's well over a half mile, and is 41 times the distance required to stop an automobile traveling at the same speed.

Motor vehicle drivers must obey traffic rules and warning signs. Remember that a train always has the right-of-way. In most cases, the train engineer is virtually helpless. The best he can do is blow the whistle and lay on the brakes, but usually he can't stop in time.

Trucks carrying hazardous materials must stop at ALL grade crossings. Drivers should come to a gradual stop to minimize the possibility of causing

another driver to have an accident. Wherever possible, they should reroute away from grade crossings or use grade crossings equipped with flashing lights and gates. And never change gears while crossing the tracks.

In Europe, Class 2 vehicles and vehicles with trailers are required by law to stop immediately after passing the single stripe sign post when the railroad crossing is closed or a train is approaching. This requirement enables faster moving vehicles to pass slower vehicles before reaching the crossing.

FM 21-305, *Manual for the Wheeled Vehicle Driver*, can help with your Driver's Training Program.

To move safely through a railroad crossing, develop the following habits:

- Identify all warning signs, signals, and protective devices.
- Before crossing the tracks, look both ways and listen for approaching trains.
- After a train has passed, be sure no other train is approaching from either direction before starting across.
- Never stop on railroad tracks. In traffic, make sure there is room to clear the tracks before starting to cross.
- Do not rely on mechanical equipment (flashing lights) to be sure the way is safe to cross.
- Never take familiar crossings for granted or assume that no train is coming.
- Be particularly alert for trains after dark where gates or flashing lights do not protect crossings. Frequently, drivers drive into the sides of trains at such crossings.
- Stop your vehicle between 15 and 50 feet from a railroad crossing when transporting hazardous materials or passengers (in a vehicle designed to transport 16 or more persons including the driver).
- When driving a bus, open your forward door, it will help you see or hear an approaching train.

Remember, do your part—**STOP, LOOK, LISTEN & LIVE!**

For more information on teaching railroad safety, check out the Federal Railroad Administration (FRA) safety website at www.fra.dot.gov/s/edu/index.htm and Operation Lifesaver website at <http://www.oli.org/>.

POC: James "Al" Brown, POV Safety Manager,
DSN 558-3421 (334-255-3421),
james.brown@safetycenter.army.mil

Always Expect a Train!



Mission:

Deploy to training area

Hazards

- Unguarded railroad crossings
- Train horns cannot be heard from inside HEMTT cabs

Results

- 2 fatalities

Controls

- Stop, look, and listen at all railroad crossings
- Vehicle commanders make sure drivers pay attention
- March unit OIC positioned to positively control march element

Mission:

Deliver storage units to Ammo Supply Point

Hazards

- High speed train system
- Driver unfamiliar with route

Results

- 3 fatalities: 1 mil, 2 civ
- 21 injuries: 1 mil, 20 civ
- Cost: \$5-7M

Controls

- Stop, look, and listen at all railroad crossings
- Qualified & licensed assistant drivers
- Risk management - route orientation & maps



Kevlar Helmet Tested Safe to Wear

In 1999, motor vehicle-related trauma in the U.S. resulted in more than 42,000 deaths and over 3 million injured motorists. Head injuries are a leading cause of fatal and severe injuries in soldiers operating or riding in Army motor vehicles (AMVs). A recent study of hospital discharge records from military facilities notes that motor vehicle crashes are the second-most common cause of head injury in the military population (second only to falls).

Concerns have resurfaced recently about wearing the Kevlar helmet while operating or riding in AMVs in a non-tactical setting. One of the main concerns has been that some people think it isn't safe because

they feel that the weight of the helmet will cause neck injuries, and that it won't protect against head injuries because it wasn't designed for it.

To answer these concerns, the Army Safety Center and the U.S. Army Aeromedical Research Laboratory (USAARL) decided to look into the issue by reviewing all Class A-C AMV accidents for the last 10 years. What was found might surprise you.

Kevlar helmets are heavy...

Not really! When a number of aviation helmets, commercial motorcycle-type helmets, and the Kevlar were all weighed, the average weight was 3.003 pounds. The Kevlar weighs 3.2 pounds—not much different.



Kevlar helmets aren't crash helmets and won't protect your head...

In 1995, USAARL was asked by the Safety Center to do some tests to see if the Kevlar would protect against blunt head injury. In these experiments, it was shown that using the Kevlar helmet could lead to a 29 percent decrease in head injuries in typical ground vehicle accidents.

Yeah, but that is just experimental...

True, but when real accidents were analyzed, data proved that use of the Kevlar helmet was associated with a decrease in vehicle passenger head injuries. Statistical tests showed that the association—basically that the Kevlar helmets were protective—wasn't just a fluke. The bottom line is that real life showed the 1995 experiment was accurate.

Okay, but the extra weight will cause neck injury...

This is where it gets more interesting. In the 1995 USAARL experiments, it was estimated that there would be a 10 percent increase in neck injuries.

We told you so...

However, when the 1991-2001 accidents were analyzed, researchers found no statistically significant association between Kevlar helmet usage and sustained neck injury in U.S. Army motor vehicle accidents. Again, this was confirmed by statistical tests. The bottom line is that real life showed the 1995 experiments to overestimate the risk of neck injury.

Okay, so they don't seem to be associated with neck injuries in an accident, but what about all the neck strains from not being used to the extra weight?

If you wanted to get a better score for push-ups on a PT test, you would practice by doing more push-ups. The extra push-ups might hurt till you got stronger and used to them, but for

most people, wearing the Kevlar helmet is no different—you'll get used to it if you wear it.

So what you are saying is...

The evidence from real-world analysis shows that Kevlar helmets appear to protect against head injury, and are not necessarily associated with neck injuries in motor vehicle accidents.

Wearing a Kevlar helmet in an AMV in a non-tactical situation really is like preparing for anything else; we always say "train as you fight." You would have to wear the helmet if you were in Bosnia, Kosovo, or Afghanistan. Would you rather get used to it on a convoy in a training environment, or while deployed? OJT isn't always the best thing.

Editor's Note: This article is about four wheeled tactical vehicles, not motorcycles or non-tactical vehicles like sedans or vans. The Personnel Armored System, Ground Tactical (PASGT), or 'Kevlar helmet,' is not intended to be a substitute for the mandatory DOT-approved motorcycle helmet.

The DOT-approved motorcycle helmet is still required when Army personnel ride a motorcycle, whether it is an Army motorcycle or personal motorcycle...both on and off post. Additionally, civilian personnel riding motorcycles on Army installations are required to wear a DOT/Snell Foundation-approved motorcycle helmet at all times, regardless of local or state laws. Incidentally, USAARL continues its testing of the Modular Integrated Communications Helmet (MICH) helmet which could potentially take the place of a standard motorcycle helmet for selected military motorcycle operations. 🏍️

POCs: Joanna L. Greig, MHS, USAARL, DSN 558-6989, joanna.greig@se.amedd.army.mil and LTC Robert Noback, USASC Command Surgeon, DSN 558-2763, robert.noback@safetycenter.army.mil



Check Your Six

The U.S. Army Air Corp pilots first coined the phrase “check your six” during World War II. Enemy aircraft were visually located relative to the nose of Army aircraft. Thus, an aircraft located off the nose of a plane would be called out as being at the 12 o’clock position. Enemy aircraft positioned to the left would be at the 9 o’clock and to the right would be at 3 o’clock.

The most dangerous position for enemy aircraft to be located would be in the 6 o’clock position or at the rear. From this position, enemy aircraft are the most difficult for pilots to see, and when observed they are the most difficult to bring down as most aircraft have few or no weapons that can direct fire to the rear. Therefore, it was incumbent that pilots watch for enemy aircraft approaching from the rear in order to warn their fellow pilots to “check your six.”

What does this information have to do with driving a car or other vehicle? My own recent experience brings three examples to mind. In the past six months while driving, there were occasions where “checking my six” with my rearview mirror helped me to spot trouble about to happen.

My first experience occurred about six months ago while driving home on a four-lane highway. A pickup truck in front of me in the right lane slowed down for a red light. I was able to slow down and stop in the left lane. At the time, I “checked my six” in the rearview mirror and saw another pickup truck approaching in the right lane at a high rate of speed.

My first thought was that the driver in the right lane would be killed. I tried to move to the left, but there was a vehicle in the left turn lane. Without attempting to slow down, the oncoming truck traveling between 45 and 55 mph passed between me and the vehicle in the right hand lane without hitting either one of us. If he had hit us from the rear, there could have been serious injury or potentially a post-crash fire. The other driver and I looked at each other and just shrugged, and drove away feeling that we had cheated death.

The next incident happened at a major intersection on a four-lane highway when the traffic light turned red. The car in the right lane stopped, and I began braking in the left lane while “checking my six.”

In my rearview mirror, I saw three empty dump trucks approaching at high speed. It was a few minutes after 5 p.m. on a Friday afternoon, and they were probably in a hurry to get their trucks back to

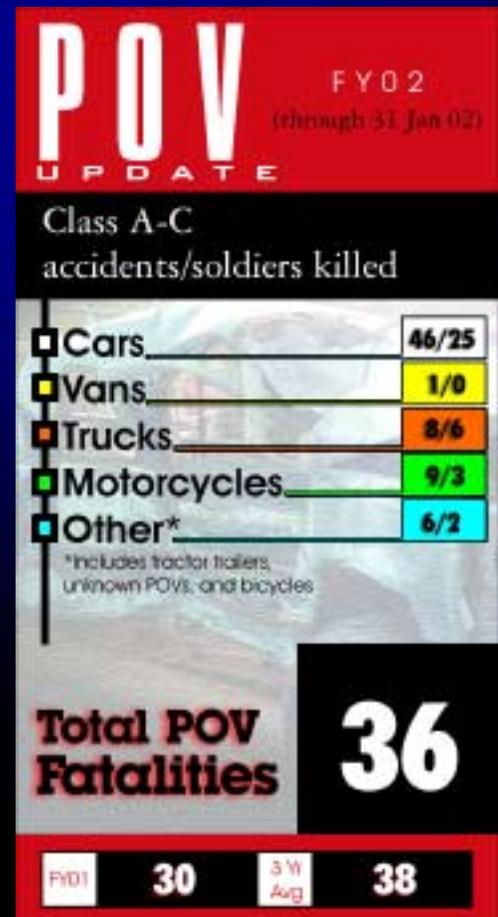
the yard and go home. It was obvious to me they were not going to be able to stop in time. My first inclination was to pull into the intersection and take my chances with the traffic coming from the right and left.

Before I could react, two of the trucks were able to stop, but the third could not, and he passed me on the left by going through the empty left turn lane and missing the traffic in the intersection. It would have been interesting—yet deadly—had another vehicle been in the left turn lane.

The third incident happened on the same highway approaching a different traffic light. As I was in the process of stopping, I “checked my six” and saw a flatbed truck loaded with 40-foot long pipe approaching from the rear. Even though the driver did not appear to be going too fast to stop, I moved over to the left lane to give him extra room.

Sure enough, he needed it. As he approached the intersection, his trailer began to “crow hop” from braking, and he continued through the red light and the intersection dumping his load of pipe on the road in the process.

My advice to drivers is to remain alert and to “check your six” often. Also, check your 9 and 3 o’clock positions if you are one of the first vehicles to enter an intersection after the light turns green. Someone may be running a red light. Stay alert and “check your six!” 



POC: Dick Lovely, Training Division, DSN 558-3712 (334-255-3712), richard.lovely@safetycenter.army.mil

It's been at least a month since your last drill weekend. It's always a busy Saturday morning trying to get the day organized. There is accountability of the soldiers, finalizing pay and personnel files, training briefings and staff meetings. So what role does safety play?

Unit leaders must include safety and risk management in all aspects of a drill weekend. This begins with the drive to drill on Friday evening or Saturday morning. Some unit members travel long distances in hazardous conditions to attend drill. Commanders must be aware of this and tailor training schedules

risk assessment should take place at least one month prior and updated as necessary. A thorough review of the training schedule should take place at the start of every drill weekend. Commanders need to stress safety and insist the unit not take unnecessary risks.

Commanders are required to have a safety council meeting at least once a quarter, which will be conducted during a drill weekend. This is a valuable tool to assist in unit safety management. All council members should adjust their schedules to attend these meetings.

Inactive duty training (IDT) or drill weekends



Drill Weekend Safety

if possible to ensure that they do not put their soldiers at unnecessary risk. This does not imply that training should be changed; rather, consideration should be given to adjusting the schedule in inclement weather conditions, or when conditions like fatigue result from night training.

First-line supervisors must enforce the safety policies of the unit commander. They must bear in mind that certain tasks have not been performed in at least 30 days and hazards could exist. A review of the standards is always a good idea. A unit wide and/or section safety brief should be conducted as well. A

are extremely busy. Commanders, leaders, and supervisors must all practice good risk management and not attempt to over task or overwork their soldiers. They must look ahead and be aware of the hazards during drill, after work, and the fact that soldiers travel long distances to return home. Risk management must be included in every aspect of the drill weekend and encouraged in all aspects of off-duty periods. 🚫

POC: LTC Keith M. Cianfrani, USAR Advisor,
DSN 558-9864 (334-255-9864),
keith.cianfrani@safetycenter.army.mil

Enforcing Standards Saves Lives

It's an NCO's responsibility to enforce standards. NCOs not only enforce the standards, they themselves perform to standard.

A prime contributor to maintenance accidents is poor supervision, or no supervision. Almost without exception, accidents and injuries occurring in maintenance shops reflect a supervisor's failure to enforce standards: the removal of machine guards, failure to use proper personal protective equipment, failure to follow procedures, and improper attitudes toward safe work practices.

Even when mechanics and operators have been trained to standard, they still require supervision and motivation. Refresher training is a good idea. In some cases, it is required and it just makes sense. A "just-get-the-job-done-fast" attitude will usually produce a job that is neither "done" nor "fast." Subsequently, the unit is not prepared for the mission. NCOs have the responsibility to prevent or eliminate these situations.

Familiarity should breed compliance

Experience has shown that most motor pool accidents are caused by improper or unsafe work practices. NCOs must insist on strict

compliance with safe work procedures, no matter how routine the task.

Familiarity, however, leads to complacency. Unfortunately, some soldiers abandon safety precautions on jobs that seem simple. On-the-spot correction of unsafe work practices can tighten up an operation that has gotten loose, and teach newly assigned soldiers that performance standards will be met. The quality of supervision has a direct influence on the attitudes of the soldiers in the unit.

The NCO who lets his soldiers operate equipment without guards or a grinder without eye protection, for instance, not only has he set a poor example for those soldiers, he has left those soldiers undefended and vulnerable to injury. They are now waiting for an accident to happen.

Protecting the worker

In addition, injured soldiers lose time from work simply because they failed to use protective equipment. Face shields, safety goggles, steel-toed boots, hearing protection, gloves, and respirators can be as important as weapons and ammo in carrying out a mission. NCOs have the responsibility not only to provide their soldiers with personal protective equipment, but also to ensure they use the right gear for the job. This equipment should be serviceable and Army approved. With units having impact credit cards, some items that are bought or used are not authorized. Commercial off the shelf (COTS) items are sometimes a quick way to replenish items; however, leaders must ensure the Army approves these items before purchasing.





Everyday discipline leads to mission accomplishment

Although it's impossible for an NCO to be physically present in all places at all times, a leader's presence can be imposed on every activity. That presence comes in attitude and example. NCOs must treat even the smallest error as substandard, because when workers get away with sloppy habits, they become complacent. Worse yet, bad habits do not correct themselves. Minor mistakes, combined with small lapses in judgment, can lead to serious accidents. By refusing to look the other way, NCOs have the power to prevent accidents even when they aren't there.

NCOs set the example by quality training, consistently enforcing standards, instilling discipline, and by providing subordinates with positive mentoring. There can be no greater responsibility. 

POC: MSG Timothy Sprucebank, Senior Wheel Vehicle SME, Ground Systems and Accident Investigation Division, DSN 558-3774 (334-255-3774), timothy.sprucebank@safetycenter.army.mil

Keeping soldiers safe

Safe, by-the-book performance keeps units ready to do their missions. To keep your unit ready, enforce the following common, everyday practices in your work areas:

- **Ban the use of any unapproved cleaning solvents, and keep them in closed containers in a well-ventilated area. See that spills are cleaned up immediately.**

- **Insist that soldiers use the right tool for the job. Never allow use of makeshift maintenance stands such as bricks, jacks, or blocks of wood.**

- **Ban the wearing of jewelry of any kind for soldiers working in, on, or around vehicles or other equipment. Ensure ID tags are secured on soldiers working around moving equipment, especially vehicle engines. Never allow loose clothing.**

- **Ensure that soldiers wear their protective gear while on the job. This includes hearing and eye protection.**

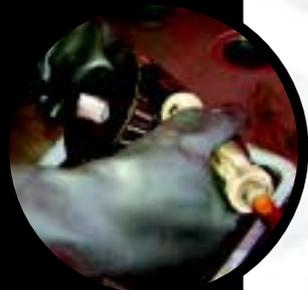
- **Separate high-noise operations from normal shop operations whenever possible. Ensure workers in high-noise areas have adequate hearing protection.**

- **Place fire extinguishers where they are easily accessible, and ensure they are marked so they can be seen.**

- **Ensure that power-tool cords are checked for worn spots or cuts. Watch for damaged or modified tools that allow soldiers to take dangerous shortcuts.**

- **Ensure grease pits are kept covered or guarded by a chain barrier at all times.**

- **Whenever possible, have soldiers operate engines outdoors. If work must be done indoors, ensure use of exhaust extension hoses (preferably, powered local exhaust hoses) to vent exhaust fumes outside.**



AN ELECTRIFYING EXPERIENCE

An M2A2 Bradley Fighting Vehicle (BFV) was operating as part of a multi-national peacekeeping force. The company's logistic package (LOGPAC) was operating in an unfamiliar area without prior reconnaissance. Low-hanging power lines and a radio antenna that was not tied down came into contact with one another resulting in the Bradley Commander (BC) being electrocuted. He suffered burns to the left and right hand, the left hip, and the left ear. There were no other injuries to any other personnel and no damage to the BFV, the antenna, or the power lines.

INSTALLATION ACCIDENT INVESTIGATIONS

Written by accident investigators to provide major lessons learned from recent installation accident investigations.

What happened?

The M2A2 Bradley was part of a forward deployed infantry battalion performing a multi-national peacekeeping mission. This unit had been deployed for six months and was very familiar with the mission that was being conducted. During the six months, the unit had performed LOGPAC in the same location that was located on a concrete hardstand. During this particular mission, the unit was required to perform LOGPAC in a different location that had not been reconnoitered or used previously.

Upon arriving at the selected LOGPAC site, the 1SG did not have adequate time to completely organize and emplace the fuel truck or 5-ton truck carrying class 1 before the company began arriving on-site. The first platoon on-site consisted of four BFVs and a fire support team vehicle (FISTV).

The first BFV refueled without incident and then moved to the vicinity of the 5-ton truck to receive class 1 and water. The gunner of the BFV dismounted and ground guided the vehicle near the 5-ton truck where the driver stopped, lowered the ramp, and shut the vehicle down. The ground guide then walked to the 5-ton truck to get class 1.

The unit 1SG noticed that the BFV was parked directly under power lines and that the center FM antenna of the vehicle was in contact with the power lines. The 1SG attempted to signal the BC that the antenna was touching the power lines, however, when the BC saw the 1SG gesturing towards the antenna, the BC turned and grasped the antenna with his left hand.

The BC was electrocuted when he touched the antenna. The BC's body went rigid and he was unable to release the antenna. The 1SG had the driver start the vehicle, raise the ramp and back the vehicle up until the antenna lost contact with the power line.

Soldiers in the platoon reacted immediately to the medical emergency. The BC was lowered from the BFV hatch where he was then treated by two medics who were on the scene. The BC was evacuated by ground in the 1SG's vehicle to a pre-established Casualty Collection Point (CCP). A 9-line MEDEVAC call was made while the vehicle was en route to the CCP. The BC

was then transferred to a MEDEVAC helicopter and transported to a medical facility. The BC was further evacuated to a U.S. based treatment facility.

Why did this happen?

The LOGPAC site was established in haste without regard to safe operations. The LOGPAC site that was used had not been reconnoitered prior to actual occupation, which would have identified the hazard of the low-hanging power lines. Additionally, the LOGPAC site was not adequately assessed upon arrival; the senior man in charge of establishing the LOGPAC did not conduct a safety site survey or provide guidance for the placement of the LOGPAC vehicles.

The BC being ultimately responsible for his Bradley, allowed the vehicle to be parked under low-hanging power lines. Additionally, the BC, knowing that touching an antenna that is in contact with power lines can cause electrocution, reached out and touched the antenna anyway. (The BC knew the standard, but ignored it—AKA indiscipline!)

Countermeasures

- Conduct a reconnaissance of LOGPAC areas to ensure suitability for refueling, rearming, and resupply. Identify potential hazards and inform units prior to execution of the operation.
- Integrate safety into mission planning and mission success. Slow the mission speed if necessary to maintain a safe environment. Take the time to establish a safe LOGPAC site and have the unit wait until this is accomplished prior to execution.
- Always remain aware of your surroundings and identify potential hazards on the ground or overhead.
- Emphasize the dangers of power lines to vehicles and the importance of tying vehicle antennas down. 

POC: SFC Bennie Cagle, Ground Systems and Accident Investigation Division, DSN 558-2381 (334-255-2381), bennie.cagle@safetycenter.army.mil

Spring is here and summer is not too far away. Now is the time, before the thermometer climbs into the nineties, to prepare for the hazards that accompany summer activities.

Without planning for the risk, heat injuries can take a sudden toll. The typical heat casualty is usually involved in high physical activity, such as mission-oriented protective posture (MOPP) training, patrolling, road marches, land navigation, PT/unit runs, or is in a hot field environment. The most serious heat injuries are heat exhaustion and heat stroke, but don't forget heat cramps and sunburn.

Soldiers and leaders must train, not only to endure the heat, but to recognize its associated problems. If leaders don't recognize these symptoms, their soldiers are subject to heat injury and can "fall out" at an alarming rate. These injuries can be avoided by acclimatization, proper intake of fluids, modification of uniform wear, careful scheduling of training, and monitoring the Wet Bulb Globe Temperature. Guidance is given in GTA 05-08-012, Individual Safety Card.

For the boaters among us, now is the time to make sure your boat is ready for the coming summer months. Check the steering cables, throttle cables, cut-off switch, fuel lines, and all the other components. If something is questionable, replace it. Saving a dollar now will seem very minimal when you and your family are stranded dead in the water miles from shore.

Don't forget to check your personal flotation devices (PFDs). Kids grow! Just because they wore a life jacket last year doesn't mean it will fit this year. Be a responsible parent and make them wear their PFDs. Check all PFDs to ensure straps are serviceable and there are no rips and/or tears in the material. Be a good and responsible captain—when you run a boat, everything that happens on or about that boat is, by law, your responsibility. Incidentally, make sure you, your family, and friends are ready

too. Take that boating class—know the rules and boat smart from the start.

Sports and recreation injuries account for a large portion of reportable ground accidents, lost workdays, and hospital visits. They mean paperwork for us, added work for co-workers who pick up the load, and major pain for you—the soldier. Most of these injuries can be avoided with a little forethought and a lot more common sense.

There are many spring and summer activities that have risks associated with them. Take your time and use your head. If you ride a motorcycle, do it smart. Wear all of your protective gear (it is an Army requirement), and always assume no one can see you.

For all those lawn and gardening activities, start off easy. Make sure your tools are sharp, serviceable, and in good working order. It may have been some time since you last operated a piece of equipment. Re-familiarize yourself with it before you use it. If it has an operator's manual—read it! If home improvements are on the checklist, make sure the weather and the tools are going to cooperate. Don't use that aluminum ladder to clean out the gutters in a lightning storm.

Lastly, storm season is approaching. Be prepared. Stock up now on food and supplies. When a hurricane is 50 miles off shore or a funnel cloud is forming, you need to be taking shelter, not going to the grocery store or home improvement store for supplies.

These are just a few things to think about as we prepare for summer activities. We know the dangers, challenges, and the great opportunity for fun that exists for us during this season. Let's plan ahead and be prepared for the hazards of summer. 🏠

**POC: Paula Allman, Managing Editor,
Countermeasure, DSN 558-2688 (334-255-2688),
paula.allman@safetycenter.army.mil**

Plan Ahead For Summer Hazards

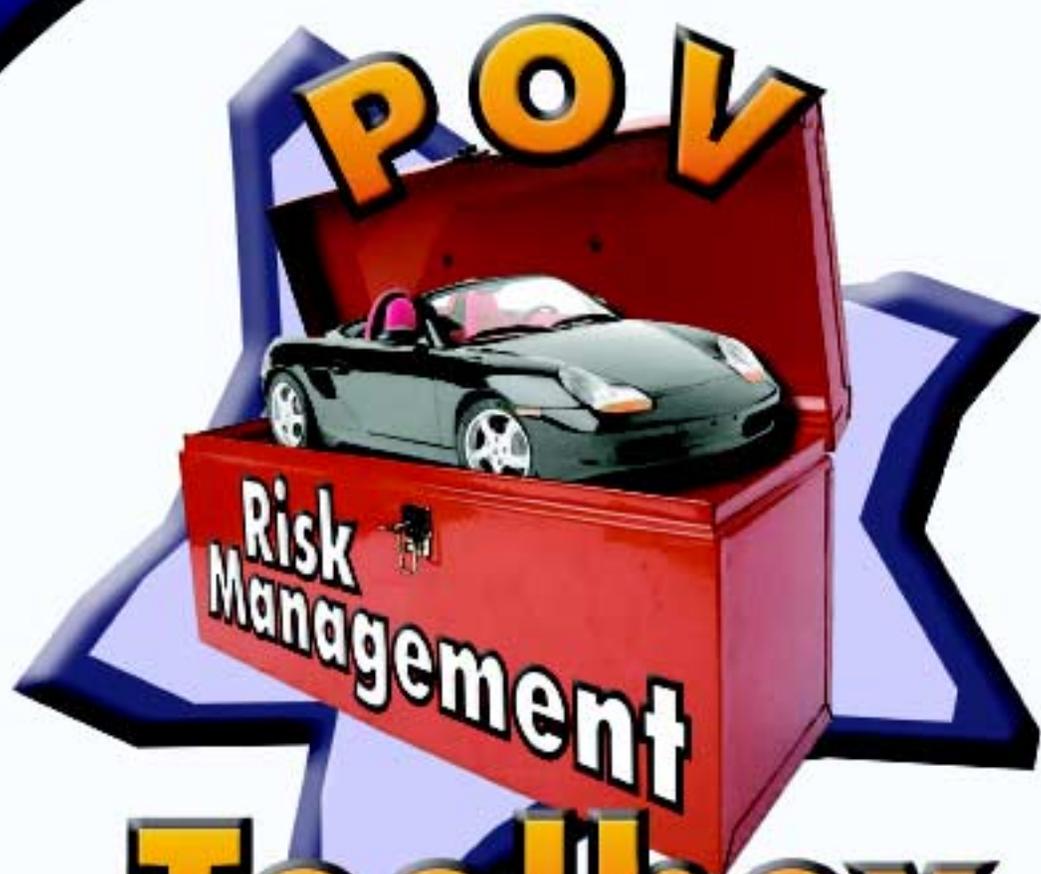
Maintenance Advisory on Army Space Heater

During recent Army deployments, there were several problems reported with Army space heaters that have been in long-term storage. The models in question are H-120, NSN 4520-01-367-2739 and H-120-1, NSN 4520-01-439-1682, LIN: H00586.

It is recommended that users inspect their heaters for the following potential problems. The references provided are from TM 9-4520-258-14, Change 2, and pertain to the troubleshooting and repair of the reported problem:

REPORTED PROBLEM	SYMPTOM	SOLUTION
LOOSE/STRIPPED FITTINGS.	DAMAGED THREADS/TUBES NOT PROPERLY ALIGNED CAUSING FUEL LEAKS.	TIGHTEN OR REPLACE AS REQUIRED. (PAGE 4-166, PARA 4-35)
HEATER WOULD NOT FUNCTION.	FUEL SUPPLY AND RETURN LINES REVERSED AT THE FUEL TANK.	RECONNECT FUEL LINES TO PROPER CONFIGURATION. (PAGE 4-166, PARA 4-35)
HEATERS SHIPPED WITH FUEL SELECTOR IN THE "EXTERNAL MODE."	UNIT WILL NOT OPERATE DUE TO INAPPROPRIATE FUEL VALVE SETTING.	SWITCH SELECTOR TO PROPER SETTING. (PAGE 1-6, PARA 1.9.B.8)
BROKEN CB2 CIRCUIT BREAKERS.	CIRCUIT BREAKER THREADED MOUNTS BREAK.	CHECK THAT BREAKER IS SECURELY MOUNTED TO THE PANEL. (PAGE 4-94, PARA 4-24)
FLAME OUTS.	BURNER STOPS/HEATER SHUTS OFF.	CHECK SPARK GAP. CLEAN FUEL FILTER. MAKE SURE THERE IS NO DIRT IN NOZZLE. MAKE SURE NO WATER OR DIRT IN FUEL FILTER. (PAGE 4-34, TABLE 4-2)
NO FUEL PRESSURE.	PRESSURE GAUGE READS NO PRESSURE.	CHECK FUEL FILTER. CHECK FUEL COUPLING FOR INSTALLATION OF PINS. CHECK FUEL PUMP. CHECK FOR LOOSE OR STRIPPED FITTINGS ON SUCTION SIDE OF PUMP. (PAGE 4-35, TABLE 4-2)
BAD REMOTE THERMOSTAT.	NO LED INDICATOR/ HEATER DOES RESPOND.	REPLACE REMOTE THERMOSTAT. (PAGE 4-59, PARA 4-16)
LOOSE BLOWER FAN.	HEATER FAN RATTLES AND DOESN'T ROTATE.	TIGHTEN OR REPLACE SET SCREW. (PAGE 4-144, PARA 4-31)
BAD THERMOSTATS.	HEATER WON'T CYCLE PROPERLY/WON'T OPERATE.	INSPECT FOR FAULTY THERMOSTAT, LOOSE TERMINAL OR BROKEN WIRE. (PAGE 4-124, PARA 4-28)
BROKEN FUEL COUPLER.	NO FUEL PRESSURE.	INSPECT COUPLER AND REPLACE AS REQUIRED. MAKE SURE PUMP TURNS FREELY. (PAGE 4-136, PARA 4-30)
BAD IGNITION TRANSFORMER.	BURNER DOESN'T OPERATE.	REPLACE TRANSFORMER. (PAGE 4-148, PARA 4-32)
HEATER WON'T RUN BELOW 15 DEGREES F.	FAILED DURING OPERATION.	CHECK SPARK GAP. MAKE SURE THERE IS NO WATER IN FUEL LINE THAT MAY FREEZE. CLEAN FUEL FILTER. (PAGE 4-34, PARA 5-21)

If you have problems with these items, contact your local CECOM power/environmental logistics assistant representative or Mr. Gregory Wesley at DSN 992-0522, gregory.wesley@mail1.monmouth.army.mil.



Toolbox

PRIVATELY OWNED VEHICLE
RISK MANAGEMENT TOOLBOX

For Commanders, Leaders,
Non-Commissioned Officers
& Individuals

**Get
Your
Copy!**

<http://safety.army.mil>



ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 4

<http://safety.army.mil>

APRIL 2002



BEAT
the
HEAT

SPECIAL HOT WEATHER ISSUE

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3 DASAF's Corner**
Decision Making at the Appropriate Level
- 4 Managing Heat Stress**
- 6 You Can Drink TOO Much Water**
- 7 Fluid Replacement Guidelines**
- 8 Protect Your Skin**
- 9 Boating Safety**
- 10 Boat Smart From the Start**
- 12 NCO Corner**
Sergeant's Time
- 13 POV**
Only a Few Seconds
- 14 Investigators' Forum**
Stick to the Plan
- 16 Training & Risk Management**
Mobile Training Teams Come to You...the Price is Right
- 17 Accident Briefs**
- 18 News & Notes**
Small Unit Guide,
AAFES Recalls Dehumidifiers,
Printer Recall
- 19 Bicycle and Helmet Safety**



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

BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3003 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



Decision Making at the Appropriate Level

The Army's risk management standard is making an informed decision at the appropriate level of authority. In some cases, we aren't meeting that standard. Units are doing a good job of identifying and assessing hazards, but young leaders—whose experience level is not as extensive as it should be for making medium or high-risk decisions—are sometimes making those risk decisions.

When I was the Assistant Division Commander (Maneuver), 1st Cavalry Division, Fort Hood, Texas, the CG asked me to take a look at risk management in the division. I took scenarios from the risk management chain teaching CD and asked several lieutenants to identify and assess the hazards, determine the level of risk—low, medium, high, or extremely high—and identify who had approval authority for the mission. Most of the lieutenants felt that they or their company commander had approval authority.

I swore the lieutenants to secrecy and gave the same scenarios to battalion and brigade commanders the following day. Battalion and brigade commanders identified and assessed the hazards and determined the risk level. They felt that the risk decision should be elevated to at least the battalion level for approval.

It's obvious that a disconnect existed with the risk decision authority between the lieutenants and the battalion/brigade commanders. Clearly, leaders at the platoon/company level should be given the opportunity to grow and the flexibility to make decisions so they can learn. But at the same time, they must know what their right and left boundaries are. Senior leaders must be involved in supporting and mentoring the platoon and company commanders, and deciding how far to let them go before reining them in.

The intent should not be to micromanage young leaders and stifle their learning and growth process. If the battalion's commander and command sergeant major takes the role of senior observer-controller, they can allow the learning, but STOP the process before the accident! In FY01, we had 10 Class A aviation accidents. Only one of those accidents had the battalion commander present during the planning, preparation, and execution of the training.

I have submitted my personal philosophy to you before and I do so again: ***Units that participate in tough, realistic training—with technically and tactically proficient leaders present—have significantly fewer accidents.***

Two key points to consider: First, if your unit's SOP isn't specific on who has approval authority for each level of risk, then it may need revision. Junior leaders should not have to decide if they have risk decision authority. Spelling out clearly in the SOP who has decision authority for low-, medium-, high-, and extremely-high risk missions is one means of making sure everybody knows their boundaries. Whether it's through the SOP or some other educational process, make sure the risk decision approval authority is clear.

Second, you may want to consider adding an extra step to your SOP. Once the risk decision level is reached, informing the next level in the chain of approval gives an extra look at the process.

Clearly defined risk decision approval authority for each level of leadership will help us ensure that we have combat-ready battalions capable of going out and conducting tough, realistic training without hurting or killing soldiers before crossing the line of departure. If we practice it every day, during every training mission, once we get into actual combat conditions, risk management will be an integral part of how we think and maneuver our way through situations as conditions change instantaneously.

Sometimes it's tough finding the right balance between mentoring/supporting and what some might perceive as micromanaging. It's not necessary to always be loved as a commander, but it's vital to always be respected for technical and tactical proficiency and competence. I challenge each of our commanders to set the professional example of being involved—by word and deed—because each young leader you mentor during the planning, preparation, and execution of missions is your investment in the future of our Army. 🇺🇸

Train Hard—Be Safe!

BG James E. Simmons

All heat injuries are preventable, but in order to prevent heat injuries, it is important to understand them. Heat stress is caused by the interaction of three main variables: the mission, the environment, and the soldier. Each has several variables of their own; together, they can set the stage for causing or preventing a heat injury.

Failing to consider the variables while planning, performing a risk assessment, or determining risk management steps will result in heat injuries.

Mission

How hard are the soldiers going to have to work; e.g., working in an air-conditioned office, building fighting positions at JRTC, or perhaps breaking track in a maintenance bay? What kind of uniform is required (sleeves up, full battle rattle, or MOPP gear)? What kinds of loads will they have to deal with (full ruck, patients on litters, or weapon and Kevlar only)?

Environment

This is the first thing most people think of. Unfortunately, it is often the only thing. How hot is it? How humid is it? Is there a lot of direct sun or is there a lot of cloud cover? Is there any wind or is it calm? What is the terrain like—grassy, jungle, desert, flat, or hilly?

Soldier

Are soldiers acclimatized? Are they able to get adequate rest? How about nutrition and hydration? Are the soldiers fit for the mission? Are any ill or on medications? Finally, have any had prior heat injuries?

Control measures

If you can't answer these questions, you won't be able to take the proper risk mitigation steps and prevent heat injuries. Successful prevention of heat casualties is more important to the unit than their treatment. So, what risk mitigation steps can be taken?

1. Monitor your soldiers! This is probably the most important step. If one soldier becomes a heat casualty, then it means that other soldiers are at risk. If soldiers appear to be dragging, the unit should be evaluated quickly! There's a good chance that they are more than just tired. Make sure special attention is given to soldiers who are ill, taking medications, or have had a prior heat injury.

2. Acclimatization. It takes up to two weeks to become acclimatized. When deployed, leaders must take this process into account when planning missions.

Managing

HEAT

STRESS

HEAT INJURY PREVENTION CHART

Hot-Weather Injuries

Sunburn

Cause

- Repeated exposures to hot environment (even on cloudy days).
- Depletion of body fluids.

Symptoms

- Skin is red and hot.
- Victim may experience headache or nausea.
- Blurred vision.

First-Aid

- Use sunscreen.
- Cover the body part that is being burned.
- Seek medical treatment if there is pain or blistering.

Heat cramps

Cause

- Heavy loss of salt through excessive sweating.
- Vomiting, diarrhea, or urination can make this, and all dehydration injuries, much worse.

Symptoms

- Painful muscle cramps.
- Pale, wet skin; dizziness; extreme thirst.

First-Aid

- Move the victim to shade and loosen clothing.
- Massage affected muscle.
- Frequent intake of water: a cup (8 oz) every 15-20 minutes, not to exceed 1 1/2 quarts per hour.
- Thirst is not an adequate indicator of dehydration.
- If cramps persist, dissolve 1/4 teaspoon table salt in one quart of water, and have the victim slowly drink at least one quart of the salt solution.

Heat exhaustion

Cause

- Prolonged exposure to hot conditions.
- Excessive salt depletion and dehydration.

Symptoms

- Profuse sweating, headache, tingling sensation in the extremities, weakness, loss of appetite, dizziness, nausea, cramps, chills, and rapid breathing.
- Skin is pale, cold, moist, and clammy. Victim might faint.

First-Aid

- Lay victim flat in a cool, shady spot.
- Elevate feet and loosen clothing.
- Pour water on victim and fan to cool.
- If conscious, have the victim drink at least one canteen full of cool water with the salt solution.
- If soldiers do not recover after an hour, evacuate to the nearest aid station or medical facility.
- It may be hard to distinguish between heat exhaustion and heat stroke, if in doubt, assume the worst and start treating the casualty as if it were heat stroke.

Heat stroke

Cause

- Prolonged exposure to high temperatures and failure of the body's cooling mechanism (when the body's temperature rises rapidly, the sweating mechanism fails and the body is unable to cool down).

Symptoms

- Mental confusion or disorientation.
- Throbbing headache; flushed, dry skin; nausea; and elevated body temperature.
- Lack of sweating in the heat.

First-Aid

- **This is the most serious hot weather injury! Heat stroke is a medical emergency and can lead to death! Get the soldier to a medical facility as soon as possible!**
- Start first-aid immediately. Move the victim to shade and cool with ice packs.
- If packs are not available, soak or douse victim with cool water. Do not immerse in ice water.
- Fan body and elevate feet.
- Do not try to give water to an unconscious victim.
- If medics or combat lifesavers are present, start intravenous (IV) fluids.
- Ensure cooling process is continued during transport to medical facility.

Comprehensive information about heat injury and prevention can be found at: <http://usachppm.apgea.army.mil/heat/>

3. Fluid intake. Soldiers should drink adequate fluids before, during, and after the operation or training exercise. During training, fluid intake should be at regular planned intervals to replace the water and salt lost through sweating (see Fluid Replacement Guidelines on page 7).

Remember, hydration is an ongoing process. Waiting until you've already begun exerting yourself to begin proper hydration is like jumping out of an airplane and saying, "Well, I really ought to put on a parachute." Sorry—it's too late.

4. Physical conditioning. Infections, fever, recent illness, overweight, fatigue, drugs (cold medication), older age, and previous heat injuries may increase the risk of heat stress.

5. Work schedules. If the tactical situation allows, heavy work and activities that require strenuous physical exertion (road marches/calisthenics) should be scheduled either for early morning or late evening. Avoid working in the direct sun whenever possible.

6. Loose-fitting clothing. Wear lightweight clothing that allows circulation of air and enhances the cooling evaporation of sweat. If the tactical situation allows, commanders need to consider permitting unblousing of boots, unbuttoning of BDU shirts, or other measures. Removal of BDU

shirts should be done with caution, as this may increase the risk of sunburn.

7. Wet bulb globe temperature (WBGT). The WBGT index is the best means of evaluating environmental heat. Commanders and NCOs must monitor the heat index, and if tactically possible, modify activities and monitor soldiers accordingly.

8. Recognize the early signs of heat injuries, perform first-aid, and have a good, workable, and rehearsed evacuation plan (see Heat Injury Prevention Chart on page 5).

Bottom line: Although commanders and supervisors are responsible for heat injury prevention, every soldier can also do his or her part. The buddy system becomes even more important—each soldier should be an extra set of eyes and ears for the supervisors and commanders. As mentioned, all heat injuries are preventable, but like everything else, a team effort is always the best way to "beat the heat."

Editor's note: Comprehensive information about heat injury and prevention can be found at: <http://usachppm.apgea.army.mil/heat/>.

POC: LTC Robert Noback, Command Surgeon,
DSN 558-2763 (334-255-2763),
robert.noback@safetycenter.army.mil

You Can Drink Too Much Water

The flip side of dehydration is overhydration—or simply, drinking too much water too quickly. When sodium is lost through sweating and water is drunk as the replacement fluid over a period of hours, the sodium left in the blood can become diluted.

This can cause a condition called "hyponatremia," which can lead to damage in certain kinds of tissues in the body. Changes are most noticeable in the nervous system where seizures, coma, and even death can occur.

Recognizing overhydration or hyponatremia is challenging because the symptoms may resemble those of heat stroke or heat exhaustion. Early symptoms can include confusion, nausea, fatigue, muscle cramps, and weakness. More serious symptoms include vomiting, muscle twitching, delirium, seizures, and coma. The main difference between heat stroke and heat exhaustion, when compared to overhydration, is that overhydration doesn't cause the victim's temperature to rise. Because overhydration can be deadly, the final diagnosis must be made at a medical facility where the victim can be properly treated.

If all of this talk about hydration and sodium balance sounds intimidating, relax. To protect yourself, drink one canteen (one quart) of water per hour when working in the heat. You can drink a bit less if you're not exerting yourself as hard or if the heat stress, as measured by the wet bulb globe thermometer (WBGT), is light. If in doubt, check with The Surgeon General's water consumption guidelines outlined on page 7.

FLUID REPLACEMENT GUIDELINES FOR WARM-WEATHER TRAINING

(Applies to Average Acclimated Soldier Wearing BDU, Hot-Weather)

Heat Category	WBGT Index °F	Easy Work		Moderate Work		Hard Work	
		Work/Rest*	Water Per Hour	Work/Rest*	Water Per Hour	Work/Rest*	Water Per Hour
1	78-81.9	No limit	½ qt	No limit	¾ qt	40/20 min	¾ qt
2 (Green)	82-84.9	No limit	½ qt	50/10 min	¾ qt	30/30 min	1 qt
3 (Yellow)	85-87.9	No limit	¾ qt	40/20 min	¾ qt	30/30 min	1 qt
4 (Red)	88-89.9	No limit	¾ qt	30/30 min	¾ qt	20/40 min	1 qt
5 (Black)	>90	50/10 min	1 qt	20/40 min	1 qt	10/50 min	1 qt

* Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.

Note 1: The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of work in the specified heat category. Individual water needs will vary \pm ¼ quart per hour.

Note 2: CAUTION: Hourly fluid intake should not exceed 1½ quarts. Daily fluid intake should not exceed 12 quarts.

Note 3: Wearing MOPP gear or body armor adds 10°F to WBGT Index.

Examples:

Easy Work	Moderate Work	Hard Work
<ul style="list-style-type: none"> • Walking hard surface at 2.5 mph, <30-pound load • Weapons maintenance • Manual of arms • Marksmanship training • Drill and ceremony 	<ul style="list-style-type: none"> • Walking hard surface at 3.5 mph, <40-pound load • Walking loose sand at 2.5 mph, no load • Calisthenics • Patrolling • Individual movement techniques; i.e., low crawl, high crawl • Defensive position construction • Field assaults 	<ul style="list-style-type: none"> • Walking hard surface at 3.5 mph, >40-pound load • Walking loose sand at 2.5 mph with load

Note: Soldiers who are overweight, dieting, or past heat casualties are more prone to heat injuries. As a result, their activities must be closely monitored.

PROTECT YOUR SKIN

If all sunburns were reported, they would probably be the most common heat injury. The simple fact is that sunburn is just that—a burn, and really no different than any other thermal

burn. In the worst cases, you can experience severe blistering. If a large area is burned, you can get fever, infections, and wind up in shock.

A soldier with a minor burn could have serious consequences, especially if the burn made it hard to use or wear required equipment. Let's face it, trying to carry a ruck with a burn on the shoulders and back isn't really going to be much fun.

UVA vs. UVB

Sunburn is caused by exposure to ultraviolet (UV) light. The UV light from the sun that reaches the earth is either UVA or UVB. UVA has a longer wavelength than UVB; UVB is the more dangerous of the two. The amount of UVB that reaches the surface of the earth is variable and depends on many factors; for example, exposure increases with higher altitude and being closer to the equator. Sand and snow reflect light, thus increasing exposure.

On the other hand, ordinary window glass filters out almost all UVB, as will smoke and smog. For the tanning enthusiast, sunlamps and tanning beds are mainly UVA, but there is still some UVB, so they are not completely safe.

It's no surprise, but the lighter your skin, the more likely you are to burn. If you have naturally blonde or red hair, you are more at risk. Some medications may also increase your risk, as can some colognes, perfumes, and soaps.

Aside from sunburns, you can run into other problems. Long-term exposure to sunlight ages the skin prematurely and can lead to wrinkled, mottled, or discolored skin. Actinic keratoses, which are pre-cancerous, are much more common. Every year, there are about 400,000 new cases of basal cell skin cancer, 80,000 new cases of squamous skin cell cancer, and 25,000 new cases of malignant melanoma. Although basal cell is usually cured by removing the cancer, squamous cell and malignant melanoma can spread—there are around 6,000 deaths each year from malignant melanoma alone.

Obviously, the best way to avoid sunburn is to

avoid exposure. No, that doesn't mean you can't go outside. Like anything else, you can take some preventive steps.

- **Cover up.** If you can prevent the sun's rays from getting to your skin, it is harder to get burned. Be careful, it is possible to get burned through some light fabrics.

- **Limit exposure.** Hitting the beach for 8 hours a day after a winter at Fort Drum probably isn't a real good idea. Work up gradually. Start with not more than 30 minutes and work up from there. If you do go outside in most of the U.S. and similar latitudes, UVB is increased between 10 AM and 3 PM. Don't think you're safe in a pool. Often the water just cools the skin enough so that you don't notice you are getting a burn. And don't let an overcast day fool you—clouds aren't much protection either.

- **Use sunscreen.** All sunscreens are not created equal and all suntan lotions aren't sunscreens—you have to read the labels. Look for 5 percent para-aminobenzoic acid (PABA). Sunscreens with PABA should be put on 30 to 60 minutes before going into the sun so that it will have time to bind to the skin, so it doesn't wash off with swimming or through perspiration. Look for a sunscreen with an SPF of at least 15, though some common sense is in order. Remember, the higher the SPF number, the better the protection. An SPF 15 is probably fine to use if you are mowing your lawn on a cloudy day, but not near enough for a full day of volleyball at the beach. If you are allergic to PABA, there are other sunscreens; look for anthranilate or cinnamate; another is benzophenone, but this works better for UVA. Zinc or titanium oxide creams can also be used.

If you do get a burn, get out of the sun! Cold water compresses are one of the best first-aid measures to relieve pain. Over-the-counter steroid creams aren't really useful, but analgesic ointments or sprays may be. Be careful, these can sometimes cause allergic reactions.

There are a lot of folk-remedies for sunburn, whether they work or not is a topic for debate. One thing about them is certain, however, if the skin is broken or if there is blistering, don't put things you don't know about on the burn! When in doubt, check with the medical folks.

Sunburn is preventable. You only have one skin, and it has to last a lifetime—protect it! 🧢

POC: LTC Robert Noback, Command Surgeon,
DSN 558-2763 (334-255-2763),
robert.noback@safetycenter.army.mil

BOATING SAFETY

As leaders, we perform POV inspections before a long holiday to ensure our soldiers' vehicles are in proper operational order and have all the required safety devices. However, we seldom inspect our soldiers' personal watercraft (PWC) with the same enthusiasm.

If your soldiers own any type of PWC, make sure it is also inspected and ready for the coming summer months. Set a day aside to have them bring in their boat for inspection. Ensure all required safety devices are installed and working properly. A sample checklist to assist you in your inspection is provided to the right.

You can check with your post outdoor recreation office regarding their boat rental policy. Inform your soldiers that when renting boats, they must have the required safety equipment mandated by that state to operate the boat on the state's waterways. Most of the time, rental equipment is in pretty good serviceable condition, so inform your soldiers to look at it for any obvious problems before signing it out. This will help them enjoy the day on the water without complications.

Contact your local state marine office for any additional watercraft laws or requirements for the area your soldiers will be boating. Some states may require individuals to have a boater's safety class and card to operate a watercraft. For more information, check out these web sites: <http://www.boatinglaws.com> and www.safeboatingcouncil.org/. 

POC: MSG Windley L. LaBorte, Risk Management Integration Division, DSN 558-3530 (334-255-3530), windley.laborde@safetycenter.army.mil

BOAT INSPECTION CHECKLIST

NAME: _____ DATE: _____

BOAT REGISTRATION: _____ STATE ISSUED: _____

OPERATORS LICENSE NUMBER: _____

STATE ISSUED: _____ EXP DATE: _____

TRAILER CHECKLIST

	YES	NO
• Trailer Condition	_____	_____
• Trailer Lighting (Operational)	_____	_____
• Rollers (Serviceable & Operational)	_____	_____
• Tires (Serviceable)	_____	_____
• Trailer Hitch (Serviceable)	_____	_____
• Safety Chairs	_____	_____

BOAT CHECKLIST

• State Numbering Display	_____	_____
• State Registration	_____	_____
• Personal Flotation Devices (PFDs)	_____	_____
• Throwable PFD	_____	_____
• Visual Distress Signals	_____	_____
• Fire Extinguisher	_____	_____
• Ventilation	_____	_____
• Backfire Flame Arresters	_____	_____
• Sound Producing Signaling Device	_____	_____
• Navigational Lights (Operational)	_____	_____

NOTE: This is just an example of a boater's checklist. Check with your state marine office and see if your state requires any special equipment for safe boat operation.



BOAT SMART FROM THE START

Before you know it, summer will be here and everyone will be taking their boats out on the water. There will be all kinds of boats—bass boats, speed boats, sail boats, canoes, kayaks, and jet skis—all have become an increasingly popular recreation activity. Unfortunately, soldiers continue to be hurt and killed in boating accidents caused by collisions, falling overboard, capsizing, swamping, and grounding.

Operating a boat is more complicated than driving a car, so the potential for hazards increase. Victims of most boating accidents drown because they found themselves in the water unprepared. Once in the water, a personal flotation device (PFD) is the boater's first and best line of defense against drowning. Many PFDs tend to be bulky and hot, and are therefore disregarded by the boater who is more interested in his macho image than in his safety. Wearing a PFD can mean the difference between rescue and drowning.

Most recreation boat drowning accidents occur close to a shoreline, where other people are available to help. The PFD could keep the boater in a floating position until rescued.

Alcohol is prominent in recreational boating accidents. Operating a boat while intoxicated is illegal and dangerous. Most states define impairment at .10% blood alcohol content (BAC). However, even lower levels of blood alcohol may affect a person's balance, vision, or judgment. This can be especially dangerous when on the water. Alcohol also tends to encourage risk-taking and dulls the recognition of foolish behavior. Mixing alcohol, boats, and water is a lethal cocktail. The following is a good example:

A soldier, his fiancé, and several other friends were at a lake picnicking and drinking beer. Some played in the water near the shore while others rode across the lake in a 4-man inflatable raft. A group of men rode first, followed by women and children.

Several times during the afternoon, the soldier was asked if he wanted to ride. He declined each time, explaining that he could not swim. The soldier had recently attended a safety briefing that included the hazards of swimming and drinking and other water safety hazards. He had also completed water

safety instruction and had participated in rafting operations during Ranger Camp.

Late in the afternoon, the soldier was asked once again if he wanted to ride in the raft. His fiancé decided to go, so the soldier finally agreed to go along. He, his fiancé, and three other men got into the 4-man raft and paddled across the lake (about 300 meters) to the swimming area and turned around to come back.

They were more than halfway back when they passed three women on air mattresses. Two of the men started flirting and splashing the women, then they started jumping from the raft to the air mattresses.

The soldier became nervous, and his fiancé started trying to paddle toward shore. The raft, however, began to go in a circle because one of the jumpers had returned and was hanging onto the side.

The other jumper then returned and tried to climb into the raft. The raft flipped over, throwing the three remaining passengers—including the soldier and his fiancé—into the water.

The soldier grabbed his fiancé, but couldn't hold on. He went under water and didn't resurface. His body was recovered 4 days later.

How did it happen?

When planning their picnic, these soldiers and their friends never gave safety a thought. They spent the afternoon drinking beer, and they had no safety equipment aboard the raft. During the entire afternoon, the whole group went without life jackets, and they continually overloaded the raft. In addition, the horseplay that ended up upsetting the raft led directly to the soldier's death.

After consuming several beers, the soldier let alcohol override his initial good judgment. Since he had paddled that same type of raft in Ranger Camp, he thought he could handle a ride across the lake and back.

How can we prevent it?

Sometimes it seems that it's absolutely impossible to keep soldiers safe. We brief them on the hazards; we give them all the information we have to help them help themselves, and they don't use it. It's these times that we seem to be fighting the "lessons we refuse to learn." Soldiers don't go out with the intention of having an accident. Accidents occur

Wearing a PFD can mean the difference between rescue and drowning.

Leaders need to continually stress—

◦**Water safety during the summer season. Place special emphasis on the hazards of water activities and the possible consequences of horseplay.**

◦**The importance of safety equipment such as life jackets, especially for weak or nonswimmers. In addition, stress the importance of not overloading any equipment.**

◦**The hazards of mixing alcohol with recreational water activities. The mixture can end up being anything but fun.**

◦**That soldiers are their brothers' keepers and they must take care of each other and take care not to put others in danger through thoughtless actions.**

when victims are not familiar with the hazards and controls, or when they are ignored. The risk-management process helps one to identify hazards and take steps to eliminate risk. This process is commonly used in military operations, but can also be applied to recreational water-related activities as well.

So, what can leaders do?

Don't give up. Leaders must implement risk management on every mission, on and off duty. Just because you don't look at a day on the water as a "mission," you can still use this tool for your protection, as well as the protection of your family and friends.

Apply risk management to boating

1. Identify the hazards. Hazards are dangerous conditions that could be encountered while performing a task or mission. For example, what are the hazards in taking a boat out? Hazards could include: cold water, strong currents, high wind and waves, and unseen debris in the water. Reviewing other facts such as boat capabilities, operator and passenger skills, and condition of equipment can identify other hazards.

2. Assess the hazards. Each identified hazard must be assessed to determine the probability of it causing a problem and the severity of the consequences should such a problem occur. For example: calm, warm water, a sturdy boat, and a seasoned crew indicate minimal risk with few controls needed. However, a strong current, cold water and high waves, coupled with a leaky boat

and inexperienced boaters indicate a much higher risk. Such conditions increase the likelihood and severity of an adverse outcome, resulting in losing directional control, getting lost, colliding, swamping, capsizing, hypothermia, or drowning. The hazard with the highest risk determines the risk for the operation: low, medium, high, or extremely high.

3. Develop controls and make a decision.

Controls for low risk may be as simple as conducting a short safety briefing and ensuring everyone is wearing PFDs. More strenuous controls would need to be enforced for high-risk operations. The boat operator would provide each person with guidance on what hazards to look for and instructions on what to do to deal with them.

If the operator's instructions are on target and are effectively implemented, then the risk should be acceptably low enough to have a safe boating experience.

4. Implement controls. The controls established are put into effect by the boat operator.

5. Supervise. Supervision goes beyond ensuring that people do what is expected of them. It includes following up during and after an action to ensure that all went according to plan, reevaluating the plan or making adjustments as required to accommodate unforeseen hazards, and incorporating lessons learned for future use.

Have a safe summer! 

POC: MSG Windley L. Laborte, Risk Management Integration Division, DSN 558-3530 (334-255-3530), windley.laborte@safetycenter.army.mil

Sergeant's Time

As a Field Artillery soldier, I was introduced to "Sergeant's Time" in 1990 at Fort Sill, OK. Up until then, I had no idea what Sergeant's Time really was. Let me explain.

Sergeant's Time is when sergeants (section chiefs) were given a scheduled time, normally once a week during the first four hours of the day, to train his soldiers for wartime. That training could consist of first-aid, combat training, weapons qualification, aircraft or enemy recognition, or time on unit equipment, landlines, and so forth.

Many soldiers, like myself, thought this was a waste of time—especially once the information and training material became redundant.

After training at Fort Sill, I was deployed to Germany. As a sergeant, I was put into a section chief slot and required to train my soldiers during Sergeant's Time. Since I had already received training on most of the subjects in the Soldier's Manual at Fort Sill, I was excited about my opportunity to train others what I had learned.

Soon I began to think as many other Section Chiefs did, that we didn't need to teach a subject that we had already trained on. But, we did it anyway. We trained the same subjects over and over, and over again. At times, it did become a bit boring to my soldiers. As for me, I knew the subjects well enough that I could instruct without the manual.

I attempted to make the training more interesting by doing such things as going into a neighboring community for map reading, playing card games with the deck aircraft/vehicle recognition cards, and so on. We continued to present the material through the TASK, STANDARD, and PERFORM method prescribed in the Soldier's Manual.

Yet, it still seemed that we all tried to get out of Sergeant's Time when it came around, or just tried to get through those four hours as painless as possible.

Several months later, on 19 December 1991, our company (B Btry, 2nd/20th Bde, FA) was deployed to Saudi Arabia in support of Operation Desert Shield, which soon escalated into Desert Storm or the Persian Gulf War. There was no time for any Sergeant's Time training. It was during this deployment that I realized that Sergeant's Time was a lifesaver.

A soldier was injured while lighting a submerging tank heater*. As many know, this type of equipment

is dangerous if you don't know what you're doing...as this soldier found out when he attempted to light the heater and was thrown to the ground when the tank exploded.

There was no fire, but the impact of the explosion was enough to knock the soldier out cold. Nearby soldiers came to his rescue and began CPR (first-aid training from Sergeant's Time). Without stopping to ask for help or to read instructions, they provided immediate help to the soldier, then got medical assistance. Luckily, it wasn't fatal, he was just bruised.

It was later attested by the soldiers who were first on the scene of the accident, that it was the training they had received during Sergeant's Time that prepared them for what they had to do during an emergency. They said they never thought about what they should do, they just did it. They were confident in their abilities because they had practiced it countless times before, until it was literally drilled into their heads and became second nature to them.

If it wasn't for Sergeant's Time (peacetime training), many soldiers would not have been prepared for wartime reaction. Sergeant's Time wasn't just for the soldiers, it was for the trainers as well. I should know, because those were my soldiers who provided first-aid to me—the injured soldier.

***Author's note: A submerging tank is a Heater Immersion (old type), NSN 4540-00-2666835, that was used to heat water. We used it to heat our MREs (Meals-Ready-to-Eat). It consisted of a 36-inch galvanized trashcan that was filled with water and equipped with a heating element that had to be manually lit. As fuel dripped from the heater to another part of the system, you used a match to light it, much like lighting a gas furnace pilot light, however, a bit more dangerous, as I personally found out.** 🐾

POC: SFC Edwin D. Robinson, HQ 1/134th FA, OANG, 2825 Dublin-Granville Road, Columbus, Ohio 43235-2789, DSN 346-7097 (614-336-7097), edwin.robinson@oh.ngh.army.m



Only A Few Seconds

It only takes an average of three seconds to fasten your seatbelt. Three seconds are a very small part of the 86,400 seconds in a day. If buckling up can make a difference between being carried to a hospital or walking away from an accident, then I'll take a few seconds to hear and feel that reassuring "click."

About two years ago, I witnessed a single vehicle accident in which the driver lost control and rolled his vehicle. Both passengers, who were not wearing seatbelts, were ejected from the vehicle during the course of the accident. I arrived at the first victim at almost the same time as a police officer. The officer was so shocked and revolted by what he saw that he had to turn and walk away from the casualty. Think about that. If you are hurt so badly that you shake up a cop, you have achieved a whole new level of hurt. Cops tend to be tough folks.

Those of you who have had medical training should know the first two things you do with any casualty is to establish an airway and stop the bleeding. I could not establish an airway, because at some point during the accident sequence, the victim had suffered major trauma to his lower throat and chest.

I could not stop the bleeding because he was bleeding from

everywhere. I knew he was dying, and so did he. The only first-aid I could really give was to hold his hand and talk to him as he died. When the ambulance arrived, it was more of body recovery than a medical evacuation.

Tough love, people! Do what you have to do to get your soldiers to wear their seatbelts. It will save their lives. Many people think that wearing a seatbelt is not "cool." If that is true, then every racecar driver on the planet is "uncool."

If you establish and enforce seatbelt use as the standard among your soldiers, then you will complement and re-enforce everything that the Army, federal, and state regulations are trying to accomplish, and it won't matter if it is "cool" or not. It is really not that hard: If you are in a vehicle, then you should be wearing a seatbelt. No exceptions.

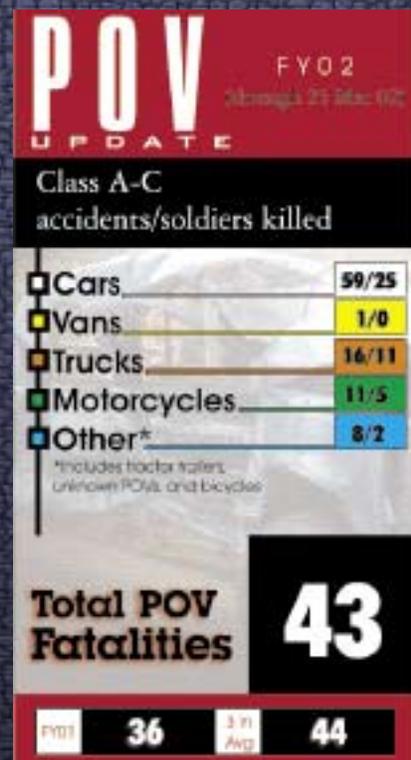
I would also like to take a moment and talk about sport utility vehicles and pick-up trucks. There are no seatbelts in the cargo areas of these vehicles, so if you have passengers back there and you have an accident, they become human projectiles. I have to be honest here; I have ridden in the back of pick-up trucks before and I have had friends ride in the back of my pick-up. Now I know better.

Think you are a tough guy and can hold yourself in

the vehicle in the event of a crash? Let me throw some simple physics at you. If the truck is going 30 mph and runs into something, you will be subjected to about 15Gs. That is 15 times the force of gravity. This means that if you weigh 180 pounds, your effective weight during the accident will be 2,700 pounds. Tell you what, head down to the gym tonight and see if you can curl 2,700 pounds. Think you can do it? Cargo areas are for cargo, not people.

Privately owned vehicles (POVs) are the number one killer of our soldiers. You are our first line of defense; let's make it stop. 🚗

POC: MSG Sean M. O'Brian, Risk Management Integration Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil



"Drive to Arrive" Videos Are Here! Military moviegoers can now see the new "Drive to Arrive" POV country music video clips at their local Army and Air Force Exchange Systems (AAFES) theater. You can preview the videos on our web site at <http://army.safety.mil/>.

Stick To The Plan

A soldier was shot and seriously injured while conducting night live-fire training. This training was not uncommon—it was training that every soldier performs annually. The following is a summary of the events and causal factors that led to this unfortunate, but preventable accident.

The exercise was planned a year out. A range reconnaissance was done approximately six months prior and then the concept was completed. The range OIC submitted his plan and risk assessment with a risk management worksheet to the commander. After minor modifications, the company commander approved the concept and considered it right on target to the unit's required training tasks. The company commander looked forward to watching his teams execute live-fire scenarios...what combat arms leader wouldn't?

Since the training included night maneuver live-fire, a high-risk training event, the commander submitted the training plan to the battalion commander for approval. After reviewing the risk management worksheet, both commanders discussed the associated risks and controls that the unit was to implement to mitigate those risks. For example, the company commander was to be present on the range; Kevlars and flak vests were to be worn; pneumatic machine guns would provide an enemy signature for the teams to orient on; and the range OIC was to conduct a talk-through, dry-fire walk-through, and blank-fire run-through prior to every live-fire scenario.

Considering the experience of the soldiers involved in the training, these controls seemed adequate to both commanders. The battalion commander, who was the appropriate authority,

made an informed decision and approved the plan.

That's when the plan started to unravel

First, the battalion commander was pulled away from visiting the training by a change of command ceremony. He then directed the company commander to attend another military event. This left the training and the supervision of the range up to the A-Team commander.

This should have presented no problem since the training was properly planned and the associated risks were being dealt with through rehearsals and on-site safeties. The A-Team commander only had to follow the plan.

The company conducted an airborne insertion into the training area, followed by a 10-mile forced march to the range. When all teams had closed on the range, the range OIC gathered the team commanders together for a recon of the range complex. The team members grabbed a few winks and conducted mission preparations.

Following the leader recon, the OIC provided each team time to walk through the range to share information from the recon. These recons began prior to dusk and continued into the night until all teams had an opportunity to take their turn downrange. *(Editor's note: The A-Team involved in the accident conducted their recon during darkness.)*

The following morning, training began as scheduled. The teams conducted talk-throughs, walk-throughs, blank-fire run-throughs, and finally live-fire run-throughs. Two safeties and the range OIC escorted all teams. The day's events went as planned.

Prior to the night portion of the training, the range OIC gathered the detachment

MISSION: CONDUCT MOVEMENT TO CONTACT, RAID AND HASTY DEFENSE

Hazards

- Modified the accepted plan.
- No risk management implementation.
- Improper rehearsals.

Controls

- Conduct proper rehearsals.
- Conduct risk management IAW FM 100-14.
- Leaders supervise actions.

commanders together and they decided to forego the night walk-throughs and blank-fire run-throughs. The rationale was they had gone downrange already and did not need to spend any more time on what they already knew.

They also decided to alter the scenario a little bit for the night fire to make it more manageable. Unlike during the day, the snipers moved with the A-Team and provided illumination with star clusters, instead of being stationary in a support-by-fire position. The snipers also did not have any live ammo for their rifles, and the pneumatic machine gun position which provided a signature and aiming point was not used. Neither the battalion commander nor the company commander was informed of these changes.

What went wrong?

Night live-fire began at 2000, and the accident team began their mission preparations by drawing ammo and moving into the bleachers for the OIC's safety brief. Once this was completed, the range safety officer discussed weapons safety. The team conducted one more internal safety brief and moved into position to begin the night live-fire event.

At approximately 2200, the team crossed the road in a file and moved with members approximately 2-3 meters apart. Soon, the team was completely across the road and the point man was abreast the target area (located at his two o'clock). The range OIC raised two-

silhouette targets. The team reacted by yelling "contact front" and turned to the right front, got down in either the prone position or the kneeling position, and engaged the target.

Once the targets were down, the team commander ordered "cease-fire" and "continue movement." The team got up and turned to move out when the number two man told the point man to get up and move out. When the point man did not respond, the number two man noticed that something was wrong. The point man had been shot.

Lessons learned

Now as we look back on how this accident occurred, we have to consider the risks associated with night maneuver live-fire training. These risks were addressed on the risk management worksheet and controls were implemented to ensure the range's safe operation.

The worksheet identified one hazard as "being shot by a fellow assaulter." The controls that were to be implemented to reduce this hazard included conducting talk/walk/blank-fire/run throughs prior to live fire. By assuming the range recon and admin walk-throughs were adequate for tactical walk-throughs and dry-fire run-throughs, the leaders did not meet the risk acceptance authority's intent for the conduct of the range.

Summary

Proper risk management was conducted. Hazards were identified and controls were approved and implemented. Unfortunately, they were then inappropriately removed. This accident is an example of how modifying a sound plan without approval by the appropriate authority can lead to unacceptable risks—risks that lead to disaster. 🐼

POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)



RESULT - 1 SERIOUSLY INJURED

MOBILE TRAINING TEAMS COME TO YOU... AND THE PRICE IS RIGHT!

Do your soldiers need training on risk management and other important safety-related force protection issues? If your answer is "Yes," then we have the courses for you!

The NCO and Junior Officer Professional Development Mobile Training Team (MTT) is a group of officers and senior NCOs that travel around the world to Army locations to teach soldiers on the following topics: the Army Safety Program, Unit Safety Programs, Accident Investigation and Reporting, Risk Management, Weapons and Range Safety, Tactical Safety, Army Motor Vehicle Safety, Occupational Safety and Health, and Privately Owned Vehicle Safety. This is great training for those

leaders that are down on the ground doing the Army's business day in and day out.

The first course is a 5-day session consisting of 45 hours of instruction. The target audience is NCOs. Homework and multiple practical exercises will be given, and you will be expected to complete a Standard Army Safety and Occupational Health Inspection (SASOHI) survey, as well as complete a 50-question exam.

Upon completion of the course, the soldier will not only receive a U.S. Army Safety Center Certificate and three hours of college credit, he/she will also obtain a greater knowledge of the Army Safety Program. The course is accredited by the American Council on Education and accredited through Texas A & M University.

The second course that we offer is geared toward young officers and warrant officer technicians. This 25-hour course is focused on hazards identification, risk management, the Army Safety Program, and leader responsibilities. This course will also go through a SASOHI survey and will typically run for 3 days from Tuesday to Thursday.

The best part about these two courses is that it is free training to all command levels, to include Active Army and Reserve Component personnel. The Safety Center will provide these services at no monetary cost to corps, division, or brigade-sized units and installations. The only cost to the unit is a commitment of time and selected personnel for 3 days or a single week, based on the course selected.

The goal is to have at least 40 personnel attend the training. The Safety Center will do everything possible to accommodate the unit's training schedule and any other issues that the unit may have. For more information, visit our website at <http://safety.army.mil> and select the On-Site Training icon or give me a call and we can go over your questions in more detail.

POC: CW4 Anthony Kurtz, MTT Team Chief,
DSN 558-2908 (334-255-2908),
anthony.kurtz@safetycenter.army.mil



NCOPD

- NCOs taking skills back to unit
- Hands-on training in workplace
 - 5 day (45 hours)
 - 3 hours of college credit

3,132
Trained
as of 21 Mar 02

JOPD

- Risk Management at Captain & Lieutenant level
 - Risk Management application and responsibilities
 - 3 day on-site

443
Trained
as of 21 Mar 02



Personnel Injury

Class A

■ A SPC was struck and pinned by a large piece of derelict machinery as he was attempting to dismember it with a cutting torch and clear it from the premises. Soldier was MEDEVAC'd for treatment and surgery, but his injuries proved to be fatal. (Pending investigation).

■ A SSG was participating in Special Weapons Technical Group (SWTG) Phase IV Robin Sage when he was fatally injured.

■ Local law enforcement opened fire on two soldiers conducting/enacting a special operations training scenario. One soldier died and the other sustained serious injuries.

Class B

■ While working on an addition to his house, a CW3 cut off his small finger with a circular saw.

■ A SSG was operating a paper shredder with his spouse and child present. The soldier's 6-year old son attempted to feed paper into the shredder to help his Dad, when his right hand was caught by the feeder mechanism. The child had to have four fingers amputated.

■ A SSG suffered a severe injury to his right hand when he attempted to reposition an M1101 ¾-ton trailer onto a vehicle. When the tongue leg support of the trailer reportedly failed, the tongue pinned/crushed his middle and ring fingers, resulting in permanent partial disability (PPD).

■ While operating a table saw, the SSG severed the tip of his right index finger.

■ A SPC sustained injury to his left hand when the M21 cartridge

he was attempting to load into a Hoffman Device detonated. The soldier suffered a broken middle finger and loss of the tip of his index finger. Cartridge was the third in a series he had been loading.



POV

Class A

■ A SSG sustained fatal injuries when his motorcycle struck a tree.

■ A CPT and his mother were killed when another vehicle crossed the centerline and hit them head on. His father survived the crash.

■ A 23-year old SPC was killed when he ran a red light and struck another vehicle. His vehicle subsequently struck the median and rolled, coming to stop on its roof. The soldier was partially ejected from the vehicle and crushed during the rollover. He had been driving his POV from his second job to an unknown location at approximately 0500. Speed, fatigue, running a red light, failing to wear a seatbelt, and possible alcohol impairment were cause factors for this accident.

■ A SPC was killed when the car he was driving crossed the centerline and struck a tractor trailer. The passenger in the same vehicle was treated and released.

■ A SSG was involved in a 14-vehicle traffic mishap while traveling between unit locations for official duty. A grass fire in the median reduced his visibility, causing him to lose control of his vehicle and wreck. He was trapped in his vehicle when it caught fire.



AMV

Class A

■ An M925 Tractor/M105A2 Trailer was struck by an oncoming

civilian vehicle when it was negotiating a U-turn. The AMV was part of a convoy movement that was reportedly executing U-turns to correct direction of travel. The civilian operator sustained fatal injuries when the left front portion of his windshield frame was caught by the AMV, thereby separating the roof from the car. AMV operator/soldier has reportedly been charged with having executed an illegal U-turn at this time.

■ U.S. Army recruiter (SSG) was using his POV to transport an enlistee (DEP) and an applicant to the Pittsburgh MEPS for deployment for basic training and in-processing, respectively, when they were involved in a multi-vehicle collision. Both the DEP and applicant sustained fatal injuries as a result. The recruiter was treated and released for bruises.

■ Four soldiers were traveling in a TMP van, when the driver swerved right to avoid a disabled vehicle in his lane. As a result, he struck and fatally injured the civilian driver of the disabled vehicle, who was standing outside in the roadway near his vehicle.

■ A SGT was killed when he lost control of his 5-ton truck, ran off the road, and collided with a tree. Soldier was in AD/SW status.



Other

■ A total of 14 soldiers sustained injuries when two 105MM rounds fired from a towed Howitzer and struck the mess tent in which the soldiers were located. Two soldiers died from sustained injuries, two were listed in critical condition at press time, and as many as six soldiers sustained injuries that could result in permanent partial disabilities. (USASC Investigation continues.)

Small Unit Guide

It's here—the latest version of DA Pam 385-1, *Small Unit Safety Officer/NCO Guide*. It provides guidance for commanders and additional duty safety officers and NCOs to apply policies, procedures and information to develop and execute a unit safety program. The publication, dated 29 November 2001, is being distributed Armywide. The electronic version can be found at the Safety Center web page: <http://safety.army.mil>; click GUIDANCE, then SAFETY, and scroll down to find the link to DA Pam 385-1. 🖨️

POC: Dennis Keplinger, Chief of Strategic Programs, DSN 558-3367 (334-255-3367), dennis.keplinger@safetycenter.army.mil

AAFES Recalls Dehumidifiers

The Army and Air Force Exchange Service is voluntarily recalling about 1.4 million dehumidifiers that can overheat, posing a fire hazard. The dehumidifiers were sold under the Whirlpool, Kenmore, and ComfortAire brand names. They are white plastic, about two feet high, and have a front-mounted water bucket. Serial numbers begin with QG, QH, QJ, QK or QL. The serial number is on a label on the wall behind the water bucket, or on the white tag on the box of the dehumidifiers. AAFES, along with department and appliance stores nationwide, sold the dehumidifiers from February 1997 through December 2001. Customers living in the continental United States should contact Whirlpool at (866) 640-7139 to arrange for a free repair. Overseas customers should contact Whirlpool at <http://repair1.whirlpool.com/summary.htm> or contact a local Whirlpool service representative. Local exchanges can assist in locating the Whirlpool service representative. 🖨️

Printer Recall

For Immediate Release, March 7, 2002; Release #02-115

In cooperation with the U.S. Consumer Product Safety Commission, (CPSC), Longwell Electronics, of Brea, CA, is voluntarily recalling about 2.5 million power cord sets sold with inkjet printers from Hewlett-Packard (HP) Company. The connector can break, exposing electrical contacts and posing a shock hazard to consumers.

No injuries or incidents have been reported. This recall is being conducted to prevent the possibility of injury. The gray, two-wire power cord sets with a LS-7C connector were sold with the following HP printers: HP Deskjet 800 series and 900 series, HP Photosmart 1000 series, 1100 series, 1200 series, and 1300 series inkjet printers. The name "Longwell" is molded on the plug between the blades.

Department, computer, office and electronic stores including Best Buy, CompUSA, Costco, Office Depot, Office Max, Staples and Wal-Mart stores sold the printers with the Longwell cord sets nationwide between April 2001 and February 2002 for between \$100 and \$400.

Consumers should stop using these printers immediately and contact Hewlett-Packard for a free replacement cord. For more information, consumers can contact HP at (877) 917-4378 anytime or visit the firm's web site at www.hp.com

To see a picture of the recalled product(s) and/or to establish a link from your web site to this press release on CPSC's web site, link to the following address: <http://www.cpsc.gov/cpscprerel/prhtml02/02115.html/>. 🖨️

POCs: CPSC Media: Scott Wolfson (301) 504-0580, Ext. 1189; HP Media: Jennifer Boggs (858) 655-4289; or HP Recall Hotline: (877) 917-4378

BICYCLE & HELMET SAFETY

With fitness on everybody's mind these days, more people are turning to bicycling as a way to get into or stay in shape. It is a popular fitness activity for health-conscious adults and provides an alternative means of commuting for the environmentally conscious.

With millions of cyclists on the roads—the same roads occupied by millions of motor vehicles that are larger, heavier and faster than bikes—defensive driving applies to both cyclists and drivers.

Each year, 900 bicyclists are killed and 600,000 suffer disabling injuries. Obviously, taking precautions in traffic and wearing protective equipment are a cyclist's best defense against unintentional injuries. For this reason, a helmet is essential, and a certified helmet can greatly reduce your chance of head injury.

Tips for safe biking

■ **Wear a helmet.** Head injuries cause about 75 percent of all bicycling fatalities. The first body part to fly forward in a collision is usually the head, and with nothing but skin and bone to protect the brain from injury, the results can be tragic.

Look for helmets with Snell Memorial Foundation or American National Standards Institute approval stickers.

■ **Obey traffic rules.** Cyclists must follow the same rules as motorist.

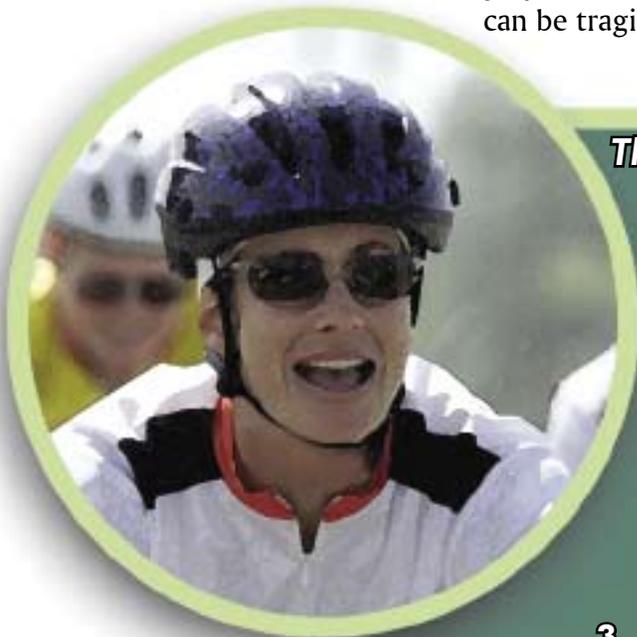
■ **Know your bike's capabilities.**

■ **Go with the flow. Ride in single file with traffic, not against it.** Bicycling two abreast can be dangerous. Bicyclists should stay as far right on the pavement as possible, watching for opening car doors, sewer gratings, soft shoulders, broken glass and other debris. Remember to keep a safe distance from the vehicle ahead.

■ **Stay alert. Always look in all directions before riding into traffic.**

■ **Always be seen.** During the day, cyclists should wear bright clothing. If riding at night is necessary, retro-reflective clothing designed to reflect motorists' headlight beams will make cyclists more visible.

■ **Make sure your bicycle has the right safety equipment:** a red rear reflector; a white front reflector; a red or colorless spoke reflector on the rear wheel; an amber or colorless reflector on the front wheel; pedal reflectors; a horn or bell; and a rearview mirror. A bright headlight is recommended for night riding. 🚗



The Snell Foundation urges that you—

1. Make sure your helmet fits your head.

- Try the helmet on before you buy it.
- Adjust the chin strap firmly but comfortably.
- Try another helmet size or design if simple hand pressure shifts or tilts a helmet significantly or forces it off your head.

2. Wear your helmet correctly.

- Wear it every time you ride a bicycle.
- Wear it low on your forehead just above your eyebrows.
- Always fasten the chin strap firmly.

3. Read and follow all directions carefully.

- Use only manufacturer-approved decorations and cleaners.
- Replace your helmet if it has been damaged.
- Replace your helmet at least every 5 years.

Helmets Prevent Injuries



and
SAVE LIVES!



U.S. ARMY SAFETY CENTER

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 5

<http://safety.army.mil>

MAY 2002

Half-Time REPORT



featuring mid-year

GROUND ACCIDENT SAFETY PERFORMANCE

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3** **DASAF's Corner**
Combined Arms Training
- 4** **Safety Center Half-Time Report**
- 6** **Good Drivers Get Killed Too**
- 8** **Buckle Up America / Operation ABC Mobilization**
- 9** **More News on Ford Explorers and Firestone Tires**
- 10** **Investigators' Forum**
Lack of Supervision and Failure to Pay Attention Lead to Accidents
- 12** **10 Reasons to Wear Eye Protection**
- 13** **Careful With Those Tools**
- 14** **How does Your Grinder Look?**
- 16** **Prevention of Heat Injuries During a Deployment to Kuwait**
- 18** **2QFY02 TACOM Safety Messages**
- 19** **Accident Briefs**
- 20** **Seatbelts Save Lives!**

features



4



8



10



BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

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

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3003 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



Combined Arms Training

We must always prepare for the next fight—not the *last* fight. The Army wins wars by conducting successful campaigns. These campaigns are made up of successful battles and engagements, which have always been the key to battlefield successes. Engagements are where the combined arms of the Army come together.

Our training must focus on employing all of the combined arms assets in a live-fire environment. Infantry and Armor captains must understand how to safely employ their own direct-fire weapon systems, their own crew-served weapon systems, their organic and indirect fire systems, as well as understand how to safely employ supporting artillery, attack helicopter, and close air support assets.

Likewise, our aviation captains must understand how the Infantry and Armor formations at battalion and brigade fight, as well as integrating their fires into the close fight at the company and platoon level. Our aviators must understand what they are seeing, from both the friendly and enemy sides, as they maneuver about the battlefield.

We have already had too many fratricide incidents in the current war. While these have not involved the AH-64, the potential exists for us to have fratricide in the close fight as we did in Desert Shield/Desert Storm. Structured field training is the best way to mitigate the risks. Senior leaders, battalion and above, must be in the field observing and controlling the actions of their units and, most importantly, providing resources to include time to retrain to standard.

For too long, many of our attack units have focused on the deep fight. Except for selected units, we have lost the skills necessary to integrate the critical fires of the AH-64 into the close fight. As we have already seen in Afghanistan, we are going to be employed in a close fight role. We must get busy training for that mission if we are going to be successful at killing the enemy and avoid inflicting casualties on our friendly forces.

Communications, coupled with tactics, techniques, and procedures (TTP) are critical in the employment of all combined assets. You would not play a football game on Saturday without practicing all week on the plays you plan to use. We should not enter into the fight without having worked out our critical procedures on the training field. 🇺🇸

Train Hard—Be Safe!

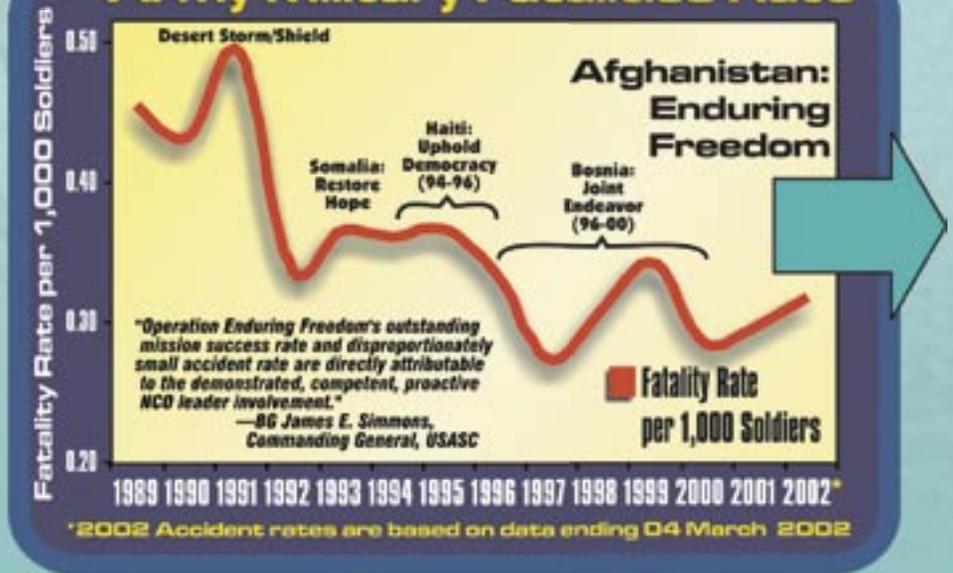
BG James E. Simmons

SAFETY CENTER

HALF-TIME REPORT

The events of September 11th have propelled our nation into war. The Army has answered the call in Operation Enduring Freedom by deploying forces in combat missions around the world. On the home front, National Guard and Reserve Component forces have deployed to protect our borders and key nodes of infrastructure.

ACCIDENTAL Army Military Fatalities Rate

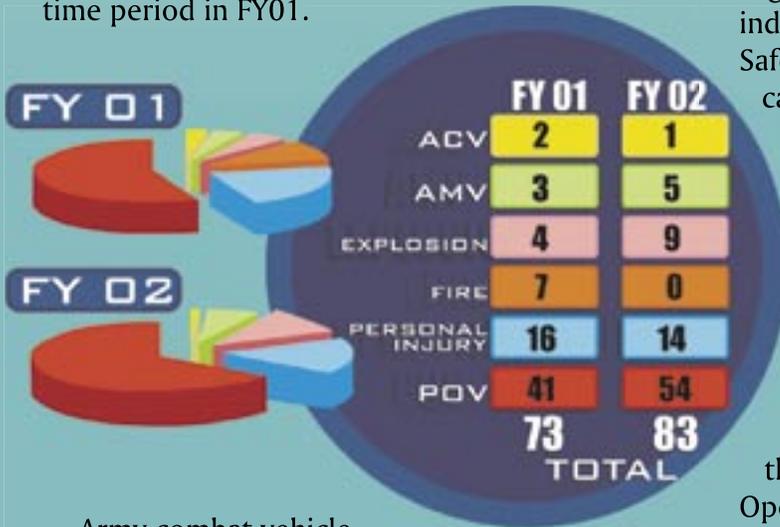


OPTEMPO

Historically, when we are at war, the OPTEMPO increases and there is an increase in accidents, or what is called a spike. While we have seen a slight increase in accidents, we have not noticed a spike as in previous combat operations.

Stats

During the first half of FY02, the Army lost 83 soldiers in ground fatal accidents. This is an increase of 13.7% in comparison to the 73 fatalities during this same time period in FY01.



Army combat vehicle (ACV), Army motor vehicle (AMV), and personnel injury fatal accidents in FY02 are nearly the same as in FY01. There has been an increase in fatalities due to explosions this year (9), compared to four in FY01. Conversely, there have been no fatalities due to fire this year compared to seven last year.

POV accidents remain the number one killer of soldiers. The Army lost 54 soldiers in fatal POV accidents this year versus 41 in the first half of FY01. With the summer months approaching, we need to pay particular attention to POV safety.

Prevention

The Army has taken steps to assist the field in reducing these fatalities. There are new tools

for the POV toolbox on the Safety Center Home Page, as well as other material for units and individuals to improve safe driving. Further, the Safety Center has developed a series of videos called "Drive to Arrive" sponsored by various country music artists to raise POV safety awareness. These videos will be shown in AAFES theatres worldwide prior to the movie presentation.

Proactive

The Safety Center has deployed a team forward in Southwest Asia. Their mission is to provide proactive safety assistance to the Theater Army Commander in support of Operation Enduring Freedom. In conjunction with the ARCENT staff, this team is assisting the command in accident prevention and risk management integration.

Bottom line

Leaders set the conditions for their soldiers to succeed—whether that is accomplishing their tactical mission or driving home safely in their POV. Incorporating the five steps of the risk management process into all operations will assist in not only accomplishing the mission, but getting it done safely.

POC: MAJ Dave Hudak, Operations Research and Systems Analysis Division, DSN 558-2075 (334-255-2075), dave.hudak@safetycenter.army.mil

On a warm September afternoon, Sergeant Jones, 26, departed post and drove home on a two-lane road. Two other soldiers were in the vehicle with him hitching a ride. SGT Jones was looking forward to dinner with his wife and twin sons.

As SGT Jones headed north, a southbound vehicle veered onto his side of the road. At the wheel was a 16-year-old girl driving on her learner's permit. She was trying to pass a sport utility vehicle, but had failed to see Jones' car. The vehicles slammed into each other head-on. Jones' vehicle turned upside down and exploded in flames. Sergeant Jones and one of his passengers were killed; the other was severely burned. The teenager and her mother, who was also in the car, were badly injured.

A simple error on a clear day, by a novice driver on a straight stretch of road, cost two men their lives and left two young boys fatherless. Every day, good drivers, obeying speed limits and the rules of the road, are nonetheless injured or killed by careless, drunk, inexperienced, or reckless drivers.

So, how do these roadway accidents happen? And is there anything you can do to avoid them?

Statisticians at the National Safety Council (NSC) analyzed the nation's 41,611 traffic deaths in 1999 (the latest available data). They were asked to determine common ways that "good" drivers—any of those found not at fault in an accident—were killed. Here are the sobering facts.

Head-on impact

The kind of accident that killed Sergeant Jones and his co-worker is a top killer of innocent drivers. Head-ons killed 42 percent of the good drivers in the NSC's survey. For those behind the wheel, death by an oncoming auto can be particularly devastating because of the laws of physics: the speed of both cars multiplies the magnitude of the collision.

Surprisingly, the NSC study shows that only 6% of head-on collisions are caused by drivers passing at inopportune times. Twenty percent occurred on curves where often a driver going too fast veered into the opposite lane. But the great majority, 63%, happened when drivers were



Good Drivers Get Killed Too

steering straight. The crashes were likely caused by drivers who were distracted by other things (kids, changing a CD, talking on a cell phone), or who fell asleep and drifted into oncoming traffic.

We found that more than half of these head-ons occurred in daylight and more than 80% of them in dry weather. That just goes to show that more fatal accidents of every type seem to occur in nice weather when drivers may relax their guard; rather than in bad weather, when the majority of drivers tend to be more cautious and attentive.

Is there anything you can do to reduce the risk of meeting another car head-on? There is one measure that eliminates much of the risk. Forget the scenic route and head for the highway. Use major highways where traffic flow is separated by medians, and access is controlled by on and off-ramps.

Deadly sign

Perhaps the most familiar of all traffic signs—the red octagonal stop sign—turns out to be a significant risk to good drivers.

Sixteen percent of drivers in the NSC analysis were killed because another driver either did not see, purposely ignored, or showed poor judgment at a stop sign. For example, drivers often stop or slow down at a sign and then pull out without bothering to check the intersection for an oncoming car. Or, they misjudge an approaching car's distance and speed and pull in front of it.

When approaching intersections, even when you have the right-of-way and see a car about to cross or enter the road you're on, don't just look at the car to see if it comes to a full stop. Check the driver too. Is he looking your way? Does he appear distracted? It could be your best warning of an accident waiting to happen.

Red-light running

Red-light running is another deadly accident for innocent drivers, killing 8% of them. Red-light running is on the rise nationwide. To avoid them, the best advice remains the lesson motorists learned from their high school driver-education teachers: Even when your light has changed to green, take one more look both ways before proceeding. Too many drivers consider the yellow light a 'last chance' to get through an intersection,

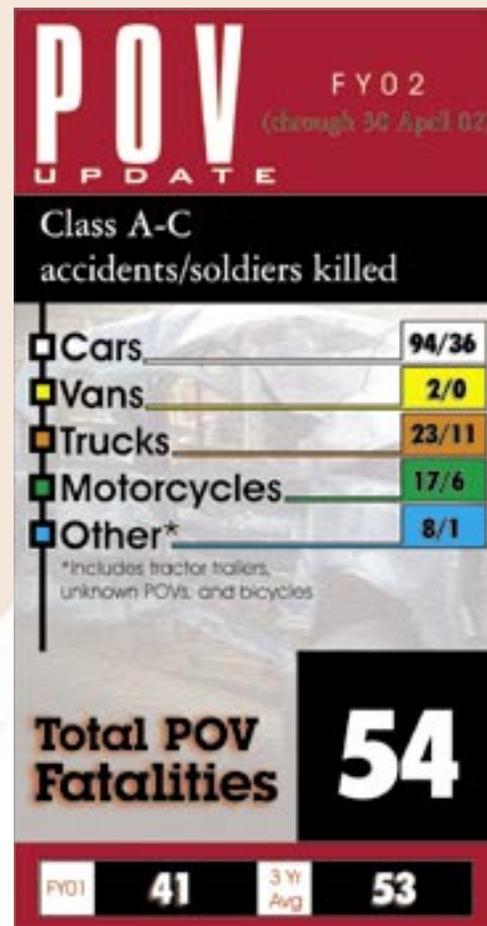
rather than a caution signal. Drivers must get into the habit to **Brake on Yellow, Stop on Red.**

The most important conclusion to draw from the statistics compiled by the National Safety Council is this: stick to major highways whenever you can. An overwhelming 86% of traffic fatalities happen on side roads and byways. Only 14% occur on major highways, according to statistics from the National Highway Traffic Safety Administration (NHTSA).

And most obvious of all: wear your seatbelt all the time, every time. Period! The NHTSA says seatbelts reduce the risk of fatal injury by 45% in a car and 60% in a light truck.

Even with every safety precaution taken, soldiers must remember that the driver's seat is an inherently unsafe place to be. Learn to use your eyes to look far down the road. Learn to spot problems before they happen. Always remember that good drivers—in the safest vehicles, on the best-designed highways, on perfectly clear, dry, sunny days—can still have accidents. 🚗

(Statistics are from the National Safety Council)





BUCKLE UP AMERICA

OPERATION ABC MOBILIZATION

Each May, “*Buckle Up America Week*” marks a high point in our push for greater seatbelt and child safety seat use. This year, in conjunction with the week’s “*Operation ABC Mobilization*,” we will focus on one of the most at-risk populations:

Teenagers. Due in part to low seatbelt use, fatality rates for teen drivers are four times higher than for older drivers. Let’s use the start of the prom, graduation, and summer seasons—a time when teenagers are more likely to be driving and at greater risk of death or injury due to traffic crashes—as an opportunity to spread the “Buckle Up” message.

To raise the bar even higher, this year we will see an unprecedented level of law enforcement activity throughout the Nation. First, under “*Operation ABC Mobilization*,” thousands of law enforcement agencies across the country will mobilize to actively enforce State seatbelt and child passenger safety laws. They will be on special alert for teen drivers and passengers.

In addition to the “*Operation ABC Mobilization*,” several States will launch a high-visibility seatbelt enforcement campaign called “*Click It or Ticket*,” which will be supported by radio and television advertisements to let the public know about enforcement efforts. A successful *Click It or Ticket* campaign in several Southeastern states resulted in an overall 9% increase in seatbelt use. I believe we will continue to see States implement these kinds of programs because we know they result in dramatic and immediate increases in seatbelt use.

Your efforts are no less important. You can help sustain these improvements in seatbelt use and reach people with information and messages about the benefits of seatbelts.

Visit our web site, www.nhtsa.dot.gov or www.buckleupamerica.org to learn more about the tools to use and pass along to leaders in your community.

Let’s make this “*Buckle Up America Week*,” May 20-27, 2002, our most successful ever and ensure that more people, especially teens, buckle up every trip, every time. 🚗

Courtesy of Jeffrey W. Runge, M.D.
Adapted from the National Highway Traffic Safety
Administration Web Site

Ford Explorers and Firestone tires are old news, right? For months on end, the media inundated the public with information concerning Ford Explorers and faulty Firestone tires. The media provided us with recall information, litigation, and horror stories of the victims.

You would think that would have been enough for us to take corrective action, right? Well, several months ago we received another horror story; one that could have easily been prevented.

According to the report, a young soldier bought a 1993 Ford Explorer in January 2001 with the infamous recall tires still mounted on the vehicle. Months later, the soldier and a couple of his buddies were traveling at about 65 miles per hour on the highway when the right rear tire exploded causing the driver to lose control of the vehicle. The vehicle ran off the right side of the roadway, skidded back across to the left side of the roadway, and then flipped over, coming to rest upright in the opposite lane of traffic. During the rollover sequence, the only passenger not wearing a seatbelt was ejected from the vehicle and was fatally injured.

Lessons learned

Be aware that while these precautions are good general guidelines to tire safety, they may not prevent a tire failure.

- Always wear your seatbelt. Drivers/owners should ensure all passengers buckle up!
- Be sure your tires are properly inflated.
- Make sure your vehicle is not overloaded.
- Be proactive. When a critical safety recall is issued, leaders should conduct vehicle inspections and ensure there are no problems.
- Educate your soldiers on recall or defective equipment. 🚗

POC: Peggy Adams, Technical Quality Control,
DSN 558-2256 (334-255-2256),
peggy.adams@safetycenter.army.mil

More News On **FORD** **Explorers** And

Firestone TIRES

A range detail consisting of 10 soldiers were traveling along a dirt/gravel road in an M1083A1 Family of Medium Tactical Vehicles (FMTV), when the driver lost control of the vehicle, resulting in a rollover. During the accident, one soldier was fatally injured, one soldier sustained internal injuries, and six soldiers sustained minor injuries. Damage to the vehicle was extensive.

What happened?

The purpose of the range detail was to reconstruct a range in order for the battalion to conduct a platoon-level live fire exercise. The battalion issued the Operations Order (OPORD) and the range detail deployed, a few days prior to the live fire exercise, in order to complete the reconstruction of the range. They worked on the range for a few days, during which they became familiar with the route to and from the range complex.

Prior to departing the range on the day of the accident, three of the soldiers rode in the cab and seven soldiers rode in the cargo bed equipped with cargo seats. They donned their Kevlar helmets and hooked the cargo strap. The occupants in the cab of the vehicle used their seatbelts. The truck commander told the driver the route to take back to the cantonment area, which was a route familiar to the driver, as he had traveled on this road many times in the preceding days.

The driver departed the range with the nine other soldiers and traveled approximately 4 kilometers when the accident occurred. Specifically, the driver failed to make a left turn at a "Y" intersection, traveled over a dirt berm between the two roads, and back onto the shoulder of the road. The driver then over-steered the vehicle in an attempt to bring the vehicle back on the road. As a result, the vehicle rolled one time and landed back in the upright position.

Lack of Supervision and Failure to Pay Attention Lead to Accidents

During the rollover, the brake pedal bent over the driver's foot, pinning it to the accelerator. The steering wheel and cab of the vehicle pinned the driver in such a way that he was unable to control the vehicle after it rolled over. The vehicle continued to travel another 700 meters and finally came to rest when the vehicle commander was able to engage the emergency brake and activate the engine shut-off switch. Unfortunately, all 10 soldiers had their Kevlar helmets come off their heads during the accident.

What to do about it?

Vehicle drivers and truck commanders, listen up! There are multiple lessons learned from this accident. First, when you are the driver of a vehicle, you are the individual at the controls. Safe vehicle operation while driving should be your foremost concern. Pay attention when you are the vehicle operator, because safe transport of the soldiers and equipment in your vehicle is your primary responsibility.

Second, truck commanders must ensure that the driver pays attention and maintains the posted speed limit. Your primary responsibility is **also** the safe transport of the soldiers in the vehicle.

Many accidents occur as a result of overconfidence and complacency. It is never, *never* routine when you have the responsibility for the safety of soldiers. As the truck commander or driver in a single-vehicle movement, or as part of a convoy, you must continuously enforce and apply safe vehicle operations. Also, add a pre-movement check to ensure proper wear of the Kevlar helmet (helmet on and chinstrap fastened) for all soldiers in your vehicle. Take responsibility and enforce the standards...you *will* gain respect in return. 🚛

POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)



M1083A1 FMTV AFTER A ROLLOVER RESULTING FROM SPEED AND FAILURE TO PAY ATTENTION.

10 Reasons To Wear Eye Protection

- 1.** An employee was trimming branches from a tree when the wind blew the branch into his right eye. The employee lost his eye.
- 2.** An employee working in a mattress manufacturing facility was repairing the dust cover of a box spring using an air-powered staple gun. He noted that a staple had one leg up, and he tried to hammer it down using the inverted staple gun. Consequently, his finger was on the trigger, and upon impact, the gun fired a staple into his eye.
- 3.** An employee was using a high-speed air sander as a portable grinder with an abrasive grinding wheel attached. The wheel shattered, sending fragments of the wheel into his eye. As a result of the employee not wearing eye protection under his face shield, he lost his right eye.
- 4.** An employee was working at a car repair shop, removing an outer axle joint from an axle shaft. He was hitting the joint with a 4-pound blue-point steel hammer, when a piece of steel punctured his eye.
- 5.** An employee working in a wood furniture assembly facility was using an air gun and a pin nailer. The nail shot up and injured the employee's eye.
- 6.** An employee was preparing to clean ink from the press rollers on a printing press. He was required to pour a solvent-based cleaning agent from a 1-gallon container to a 1-quart container. The cleaning agent splashed into his eye, causing a burn to the cornea.
- 7.** An employee working at a soda bottling plant was handling a filled soda bottle when the bottle exploded. Flying glass cut the employee's left eye.
- 8.** An employee was transferring propionic acid from a 55-gallon drum to a 5-gallon can. He was kneeling next to the drum when the transfer hose broke, resulting in the acid spraying over his face, neck, and chest causing minor burns. Fortunately, the employee was wearing eye protection and didn't lose an eye.
- 9.** A machine operator was working on a cutting tool holder. He was trying to get the part out to change it, and when the machine hung up, the employee hit the steel tool holder with a steel hammer. A steel chip from the holder flew up and lodged in his eye lens.
- 10.** An employee was attempting to remove a bearing from an edger housing. He was using a punch and hammer, when a piece broke off and flew into his eye. Surgery was required to repair the damage. 🖤

POC: Truman Taylor, Safety and Occupational Health Manager, USASC,
DSN 558-2609 (334-255-2609),
truman.taylor@safetycenter.army.mil

CAREFUL WITH THOSE TOOLS

Most of us use power tools from time to time, whether at home or on the job. Power tools allow us to get more work done in a shorter amount of time. Of course, they also allow us to do more damage to ourselves in a shorter amount of time. Just like any other piece of equipment, power tools need to be inspected, maintained, and operated properly. Here are a few things that have occurred recently.

Pneumatic and explosive actuated hammers

Pneumatic and explosive actuated hammers are easier, more accurate, and less labor-intensive than the old manually operated vertical impact device, otherwise known as a hammer. Care must be taken when using these devices, as evidenced by the following case:

The soldier was working off-duty using various power tools. While attempting to move a pneumatic hammer, the tool accidentally discharged—firing a 3½-inch framing nail into his femur and knee.



These devices are often called nail guns because they shoot nails into whatever the gun is aimed at. Remember the whole “positive habit transfer” thing? If you treat your nail gun exactly as you would treat an M16 at the range, it will help keep you out of danger. Do you remember the last time you had to pry a nail out of a 2x4? How hard was it to remove? What did it sound like? Now imagine the “Doc” pulling the nail out of this soldier’s knee.

Keep kids away from the workplace

Keep the kids away from the jobsite. We had a recent accident in which a soldier’s son got his hand caught in a shredder and lost four fingers. Kids are great people. I have one at the house and another one inbound. Kids are naturally curious; however, their knowledge and coordination have not yet caught up with their sense of adventure. My five-year old son only has two modes: underfoot or somewhere else. He just wants to see what Daddy is doing and to “help out.” Resist the temptation, wait until they are old enough to learn the proper way to use the tools and strong enough to use them safely.

Lawn mowers

Safety guards are there to protect our various appendages. Many times, an operator disables or circumvents the power disconnect levers found on lawn mowers. You are not going to win that battle, my friend. If that mower is still running, you are going to lose a part of your anatomy. We just had two soldiers lose a finger in April. If your company lawnmower has the power disconnect bar removed or bound-up with 100mph tape, it’s wrong. Fix it! The appendage you save may be your own.

When you have your soldiers performing work with power tools, never assume that they know what they’re doing. Train them, test them, and supervise them. If you are using these tools off duty, apply the same rules to yourself as you would to your soldiers.

Most installations require you to receive training and certification prior to using any power tools. Make sure you check your local regulations. In any case, apply common sense and keep it safe. 🐾

POC: MSG Sean M. O’Brian, Risk Management Integration Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil

How Does Your

Is it to standard? The applicable standards can be found in the Code of Federal Regulations, 29CFR 1910, General Industry.

AR 385-10, Chapter 3-1 mandates that OSHA standards apply to Army workplaces.

Chapter 3-2 of the same regulation says that if there is a conflict between the OSHA standard and the Army regulation, you will use whichever standard provides the greatest measure of protection.



Bench and floor stands. The angular exposure of the grinding wheel periphery and sides for safety guards used on machines known as bench and floor stands should not exceed 90 degrees or one-fourth of the periphery. This exposure shall begin at a point not more than 65 degrees above the horizontal plane of the wheel spindle.

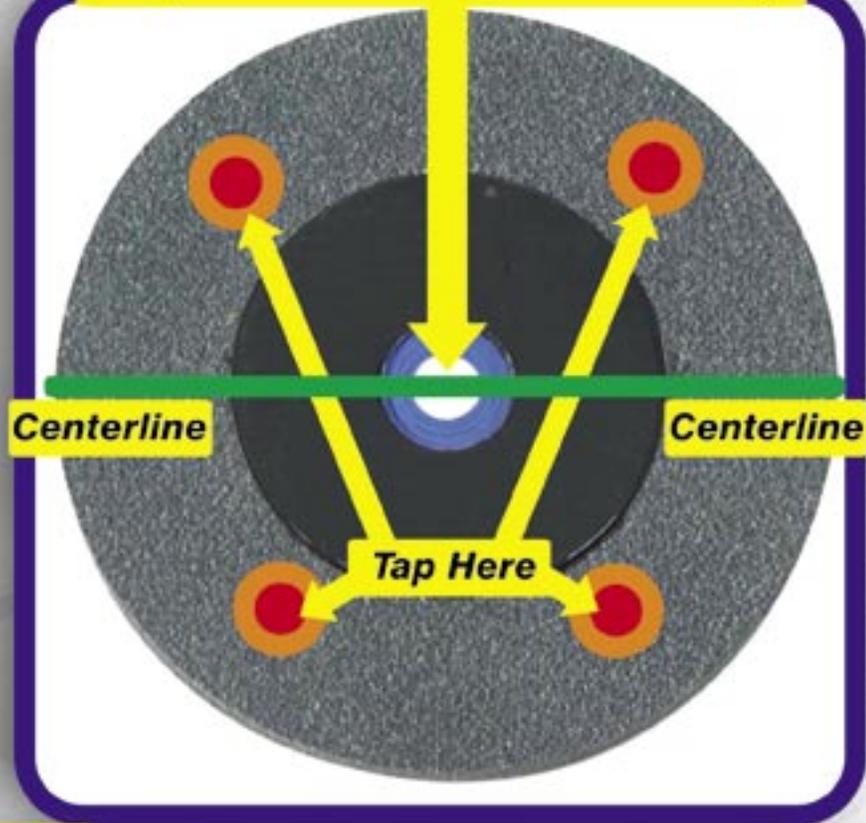
CFR 1910.215(b)(3)

GRINDER Look?

Inspection. Immediately before mounting, all wheels shall be closely inspected and sounded by the user (ring test) to make sure they have not been damaged in transit, storage or otherwise. The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel. Wheels should be tapped gently with a light, nonmetallic implement, such as the handle of a screwdriver for light wheels, or a wooden mallet for heavy wheels. If they sound cracked (dead), they shall not be used.

29CFR 1910.215(d)(1)

Suspend wheel with pencil or string



These eye shields DO NOT eliminate the need for eye protection! Safety Goggles must be worn!



Must be securely anchored to bench. 29CFR 1910.212(b)

These guidelines should not be used as a replacement for the applicable manuals. Refer to the following standards in all cases:

- Appropriate Army manuals and regulations.
- Original Equipment Manufacturer (OEM) specifications.
- Code of Federal Regulations 29CFR 1910, General Industry.
- American National Standard Safety Code, ANSI B7.1-1970. 🛠️

POC: MSG Sean M. O'Brian, Risk Management Integration Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil

PREVENTION OF HEAT INJURIES DURING A DEPLOYMENT TO KUWAIT

Congratulations, Task Force 1-34 Armor! Although Kuwait had one of the hottest summers ever in 2001, TF 1-34 returned from Operation Intrinsic Action without a single heat injury. This is how they did it.

In August 2001, Task Force 1-34 Armor departed Fort Riley, Kansas, to Kuwait for Operation Intrinsic Action.

We, as unit leaders, knew that not only would we operate in the fast-paced tempo of an operational mission, we would also have to contend with the physical environment of a Kuwaiti summer.

Preparing for the mission

This was a major part of our analysis as we prepared for the mission. The brutal heat could not be ignored. How would it affect our soldiers? How could we employ risk management to mitigate the risk of heat-related problems and still accomplish the mission?

Acclimatization

Acclimatization is essential in the prevention of heat injuries. Fortunately, during our pre-deployment training, we had a major heat wave in Kansas. Without a doubt, these hot and humid summers helped acclimatize us to the coming desert heat. Temperatures reached over 100 degrees with high humidity. We emphasized water intake and ensured water was available during pre-deployment training and execution. Leaders constantly enforced hydration and monitored water consumption by the number of canteens consumed.

Hydration

While in Kuwait, we emphasized the same basic tenets. NCOs ensured soldiers remained hydrated and monitored their consumption of bottled water. Ice was a critical commodity and our logistic leaders knew that it was not a mere luxury. All vehicles were issued coolers in order to cool down the issued water bottles. The intent was to cool down the water, not necessarily make the water ice-cold, which could cause stomach upset. Bottled water left in the sun was almost undrinkable; so ice cooling was imperative.

Additionally, we purchased Gatorade™ as a supplement. Gatorade™ and similar-type drinks

help add taste to the water and provide critical electrolytes. Although not mission essential, I believe these type sport drinks helped in the enforcement of water hydration because of its popularity with the soldiers.

Air movement

We identified the air movement as a critical phase in our operation and mitigated its effects. This was important because the air movement proved to be longer than anticipated, due to delays and aircraft changes. When soldiers spend time on aircraft, they become fatigued and potentially dehydrated.

To mitigate this risk, we did a number of things. First, we issued every soldier who stepped on a plane a full gallon of spring water. We coordinated beforehand with contracted air carriers and asked that they serve only water, juice or Gatorade™. No coffee or caffeinated drinks were allowed. No sodas. For the entire flight, soldiers consumed drinks that were not diuretics.

Finally, we emphasized the intake of food and enforced sleep plans. At certain times, no movies were shown and lights were dimmed to help soldiers get some rest before arrival.

Work/rest cycle

We enforced realistic work plans during the equipment draw. Due to the time of arrival into theatre, which was normally early in the morning, the decision was made by the local commander to delay Reception, Staging, Onward-movement, and Integration (RSOI) procedures. Soldiers were able to acclimatize for about 12 hours. This meant that they were allowed to rest, hydrate, and eat a meal in the dining facility before executing a rigorous RSOI.

All heavy work was accomplished at night in Camp Doha. Although temperatures were still extremely challenging, soldiers were better prepared. Plenty of iced water was available in the draw yard and NCOs enforced hydration. This decision was based on enemy threat; but in our case as a training mission, we were able to plan this important acclimatization period. If we had immediately moved to the draw yard and conducted operations in the heat of the

day, we would have inevitably risked significant heat-related injuries. In our scenario, a rest period proved the right decision, as no heat-related injuries were suffered during our entire draw process involving over 1,100 soldiers.

Once in the desert, we enforced a work plan that avoided physical activity during the heat of the day.

Maintenance, physical training, and heavy physical work were performed in the early morning or evening. August proved to be an extremely hot month; but by September, soldiers were

clearly acclimatized and were able to conduct collective training 24 hours a day without any problems.

We finished our deployment in December 2001. Our force protection plan had been prepared and executed right on target. We didn't suffer a single heat-related casualty, even though Kuwait had one of the hottest summers since 1953. When we conducted our analysis of operations in the Kuwaiti summer, we decided that we could not accept casualties in this brutal environment. We looked at all techniques to mitigate the risk. We emphasized it in every operation and incorporated strict discipline into our ethos. Junior leaders enforced water hydration, the staff looked for any technique to minimize the effects of heat, and leaders planned for realistic work schedules to protect the force and maximize combat power. 🚫

“We didn't suffer a single heat-related casualty. This was due to soldier discipline and NCO supervision.”

LTC Bart Howard is Commander, 1st Battalion 34th Armor, 1st Brigade 1st Infantry Division (M), Fort Riley, Kansas. Task Force Centurion was comprised of nine companies of 1200 soldiers from Forts Riley, Hood, Carson and Sill and executed Intrinsic Action 01-03 from August to December 2001.

The following is a listing of selected safety of use messages (SOUMs) and ground precautionary messages (GPMs) issued by Army Tank-Automotive Command (TACOM) for 2QFY02. Complete copies are available on the Army Electronic Product Support Bulletin Board via the Internet web site at <http://aeprs.ria.army.mil>.

■ **TACOM SOUM-02-002**, 171515ZJan02, subject: Technical, All High-Mobility Multipurpose Wheeled Vehicles (HMMWV) with Control, Remote Switch (Protective Control Box), NSN 6110-01-395-9585, received under contract DAAE07-01-C-S023. **Summary:** The PCBs received after Jul 01, under contract DAAE07-01-C-S023, manufactured by Signal and Systems, Inc., are potentially defective. This PCB (cage code 51819) may cause the starter to engage immediately when the ignition switch is placed in the run position. The starter cannot be shut down until power is disconnected. POC: Jody McInerney, DSN 786-2722, jody.mcinerney@us.army.mil.

■ **TACOM SOUM-02-003**, 011842ZMar02, subject: Operational, 25MM Double Feed Hazard. Vehicles affected: Bradley Fighting Vehicle variants; M2, NSN 2350-01-048-5920, LIN J81750; M3, NSN 2350-01-049-2695, LIN C76335; M2A2, NSN 2350-01-248-7619, LIN F40375; M2A2-ODS, NSN 2350-01-405-9886, LIN F40375; M2A3, NSN 2350-01-436-0005, LIN F60564; M3A2, NSN 2350-01-248-7620, LIN F60530; M3A2-ODS, NSN 2350-01-405-9887, LIN F60530; M3A3, NSN 2350-01-436-0007, LIN F90796, M6 Linebacker, NSN 2350-01-448-0368, LIN C00384; M7 BFIST, NSN 2350-01-432-1526, LIN F86571; USMC Light Armored Vehicle 25, NSN 2320-01-123-1602, ID 08594A, TAM E0947; and U.S. Navy MK38 MGS. Affected weapon systems include: Gun 25MM, M242, NSN 1005-01-465-3466; Gun 25MM, M242 ENH, NSN 1005-01-464-9432. **Summary:** It has been discovered that the possibility of a double feed in the M242, 25MM chain gun exists using M910 ammunition. There have been two reported cases with one involving injury to soldiers. The injuries were a result of a multiple primer/propellant initiation within the gun system. POC: Michael King, DSN 786-8668 (586-574-8668), kingm@tacom.army.mil.

■ **TACOM GPM-02-012**, 241204ZJan02, Vehicles affected: Vibratory Roller, Type II, Caterpillar, Model CS563D, LIN: S12916, NSN 3895-01-456-2735. **Summary:** The manufacturer of the vibratory roller, Caterpillar, has identified a situation where the parking brake on the Type II roller may degrade and subsequently fail to hold the roller on an incline. Brake failure is a potential result of hydraulic oil leaking into the final drive group due to seal tolerances. Failure of brakes on an incline can cause vehicle movement with risk to personnel and surrounding environment. POC: Raymond J. Bayma, DSN 786-8019 (586-574-8019), baymar@tacom.army.mil.

■ **TACOM GPM-02-013**, 011606ZMar02, subject: All Terrain Cranes (ATEC), NSN 3810-01-448-2619, Model AT422T, LIN C36586. Reference: DTG251518ZApr01,

subject: TACOM GPM-01-015: "DEADLINE" NSN 3810-01-448-2619, Crane, engine cooling fan bolts loosening. **Summary:** TACOM previously sent GPM-01-015 addressing the problem, and due to low response back to TACOM from the field, this updated message is being sent. TACOM received two reports of engine cooling fan bolts loosening and shearing off causing damage to the radiators and surrounding parts. Thirty-one other ATEC Cranes have had loose fan bolts without incurring damage. If fan bolts become loose, it is likely the bolts will shear off and the fan will damage the radiator, fan shroud, and surrounding coolant/hydraulic lines. POC: James E. Jump, DSN 786-6916 (810-574-6916), jumpj@tacom.army.mil.

■ **TACOM GPM-02-015**, 201745ZMar02, subject: M1A2 SEP Tanks, NSN 2350-01-328-5964, LIN T13305. **Summary:** Issue 1: Air Handling Unit (AHU) Fan Motor Hydraulic Fluid Leakage. A prevailing failure mode of the AHU is fan motor hydraulic fluid leakage. Hydraulic fluid leaks are a known cause of vehicle fires. The current short-term solution is to replace the leaking fan motor in the AHU and turn in the unserviceable. This method will, by attrition, remove and replace all hardware that is likely to leak. Issue 2: Abrams crews have questioned the use of propylene glycol (PG) coolant vs. ethylene glycol (EG) in the SEP TMS. PG coolant has a much lower order of toxicity than EG making it safer for the crew, maintainer, and environment. POC: Michael Akrigg, DSN 786-2354, (586-753-2354), akrigga@tacom.army.mil.

■ **TACOM GPM-02-016**, 201817ZMar02, subject: Loaders Door Mounting Bracket on M1A1, NSN 2350-01-087-1095, LIN T13168, M1A2 and M1A2 SEP Tanks, NSN 2350-01-328-5964, LIN T13305. **Summary:** An accident occurred when the loader's hatch mounting screws on an M1A2 (SEP) pulled out of the turret block causing the hatch to release and strike the loader's head and hand. Follow-on inspections of the same production model vehicles at Fort Hood and at the Lima Army Tank Plant (LATP) found no other instances of loose hatch mounting bolts. The problem was related to the production procedures for mounting the hatch and a spot fix was implemented. Engineering analysis indicates the spot fix should solve the problem. POC: Berniece Dubay, DSN 786-8215 (586-574-8215), dubayb@tacom.army.mil.

■ **TACOM GPM-02-017**, 29 March 02, subject: Commercial 100-Round Magazine for use in M249 Squad Automatic Weapon (SAW), NSN 1005-01-127-7510, LIN M09009 (AR Role) and NSN 1005-01-451-6769, LIN M39263 (LMG ROLE). **Summary:** The C-MAG magazines were a free issue to Forts Bragg, Drum, Campbell, and Hood for use in the M249 SAW. The C-MAG magazines are an interim, alternative measure to meet our needs for training while conserving linked 5.56 ammunition. The C-MAG has not been Army type classified. The NSN is managed by DLA. During testing, rounds were sometimes left loose in the C-MAG drums. Blank ammunition showed a very high stoppage rate. POC: Don Kelly, DSN 793-1897, kellyd@ria.army.mil. 



Personnel Injury

Class A

- A SSG was participating in a 2-mile run during a diagnostic PT test following a 12-hour duty when he collapsed and died.

Class B

- A SGT severed the middle finger of his left hand while attempting to adjust the height of the lawnmower during unit spring clean-up efforts. Attempted corrective surgery was unsuccessful.

- Six jumpers sustained a variety of injuries during landing on a multi-National airborne operation. Five of the jumpers were treated in an in-patient status.

Class C

- A Department of Army civilian employee sustained an extensive head injury (severed hair/scalp layers) when his hair became entangled in the tail rotor drive shaft of an aircraft.



POV

Class A

- A 1SG was operating his POV while on-duty when it collided head-on with a civilian extended cab pick-up truck. Three minors who had been riding in the bed of the truck sustained injuries, one of which was fatal. The 1SG also sustained neck and back injuries.



AMV

Class A

- A SGT sustained fatal injuries when the GMC TR/6K-gallon Water Trailer he was driving reportedly departed the road and overturned. He was pronounced dead at the scene. The co-driver sustained minor injuries.

- A civilian sustained fatal injuries when his POV was struck head-on by a military vehicle. The soldier reportedly lost control of the military vehicle when it experienced a blow-out of the left front tire and crossed the median. The passenger in the POV sustained critical injuries. The soldier has been released from the hospital.

Class B

- A soldier sustained significant internal injuries when he was pinned while walking between a parked vehicle and a moving HMMWV as it was being ground-guided into parking.



ACV

Class B (Damage)

- An M2 Bradley Fighting Vehicle slid off of the trailer bed of a HET during transport and overturned onto the road surface. Both the HET and BFV sustained damage. BFV was being transported to the NTC for unit training.



Other

Class A

- Three members of a track crew were fatally injured when an M1064 Mortar Track/120mm HE round detonated while the crew conducted misfire procedures. One crew member sustained survivable (ambulatory) injuries. (Investigation continues.)

- During a trench-clearing exercise, three soldiers sustained non-life-threatening injuries when an M-67 fragmentation grenade reportedly detonated short of its intended target. The soldier deploying the grenade sustained fatal injuries. (Investigation continues.)

- Four soldiers were killed and one seriously injured when a 107mm rocket detonated during EOD operations. (Investigation continues.)

Class B (Damage)

- An Avenger gun system sustained significant damage after it contacted the ground during a heavy equipment airborne operation.

SEATBELTS

Save

LIVES!



**BUCKLE UP
AMERICA**

Every Trip. Every Time.





ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 6

<http://safety.army.mil>

JUNE 2002

STOPPING
Explosives
ACCIDENTS

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3 DASAF's Corner**
Let's Make It A Safe Summer
- 4 Army Explosives Accidents**
- 6 Unexploded Ordnance**
Recognition 101
- 8 Do The Right Thing**
- 10 Safety Alert Notice-120mm**
Mortar
- 10 Ammunition Information**
Notice (AIN) 40-02,
Subj: M134
- 11 Safety Alert Notice-105mm**
Howitzer
- 12 Investigator's Forum**
Carry The Torch
- 14 NCO Corner**
Sergeant Major of the Army
Sends...
- 16 Tell Us About Your NCOs**
- 17 Training & Risk Management**
Prepare, Be Aware, Be There
- 18 Safety Is Our Shared Mission**
- 19 News & Notes**
Power Lawn Mowers Recalled
GSA to Feds: Don't Talk and
Drive
Farewell
Thanks
- 20 Keep Focused On Your**
Driving



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

BG James E. Simmons
Commander/ Director of
Army Safety

COL John S. Warren
Deputy Commander

LTC Scott G. Ciluffo
Publishing Supervisor

Paula Allman
Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to ODN 555-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3003 (Ms. Paula Allman) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to ODN 555-2062 (334-255-2062). Visit our website at <http://safety.army.mil>.



Let's Make It A Safe Summer

So much has changed since we last focused our energies on summer activities. Many things taken for granted before last September have now acquired a deeper meaning, perhaps making us more reflective and mindful of how quickly danger can surface.

Our nation and world may have changed since the days of previous summers, but many of the hazards our soldiers face both on and off duty have not. Our civilians and soldiers are not only lost to terrorists and hostile fire, they die in accidents as well.

Accident rates traditionally rise when summer's fast-paced, high-energy activities are in full swing—both on and off duty. Field training activities intensify, basic training expands, Reserve Components accomplish their annual unit training, and units capitalize on improved training opportunities and flying weather. Increased exposure to common hazards associated with summertime activities must be met with a corresponding increase in our efforts to manage the risks associated with those hazards more effectively.

Off-duty POV accidents remain the number one killer of soldiers, and the summer months are the deadliest. From Memorial Day through Labor Day last year, we lost 37 soldiers in POV accidents. This summer, we have some new risk management tools to help us combat POV accident losses. "Drive to Arrive" POV accident prevention videos, as well as a third edition of our POV Risk Management Toolbox, are now available on the Safety Center website at <http://safety.army.mil>. Make sure your soldiers see the videos before heading out on the highways for their weekends of off-duty summer fun.

While POV accidents account for the majority of our losses, they aren't the only killers. Every summer, we lose soldiers to all types of hazards: plunging into cool waters to momentarily escape the heat of the summer sun, heat exertion during training activities, boats capsizing, and even insect bites. We need to ensure our soldiers are conscious of even the lesser-known hazards, such as insect/snake bites, and enforce appropriate controls.

The best weapons in this battle to keep soldiers safe during summer activities are your NCOs and risk management. Make sure your NCOs get the word out on common and not-so-common summer hazards, so that your soldiers can, in turn, make informed risk decisions. We must instill in everyone a keen sense of awareness of the tragic consequences of failing to effectively manage risks associated with both their on- and off-duty activities.

As commanders, leaders, and first-line supervisors, we each have a moral responsibility to devote time and attention to ensuring that this summer's activities are accident free. Leadership, training, enforcing standards, discipline, and applying solid risk management principles can help us accomplish this. We must each avoid complacency in dealing with summer's known hazards and be vigilant in identifying new hazards as missions and environmental conditions change.

This summer, let's strive for one more major change: Let's put an end to the summer season's infamous history of being one of the most significant accident-producing periods of the year. Doing so will help us preserve our readiness for combating those who would inflict harm on the people of our great nation and our allies.

Remember that a single word of caution about the hazards associated with swimming and boating activities, hot-weather training activities, drinking and driving, fatigue, road rage, failure to use seatbelts, etc., may save a life or prevent a serious injury. With your commitment, we can make this our safest summer season ever. 🇺🇸

**Train Hard, Play Hard—
but Be Safe!**

BG James E. Simmons

ARMY EXPLOSIVES ACCIDENTS



The U.S. Army Technical Center for Explosives Safety (USATCES) has recently completed an evaluation of Army explosives accidents and mishaps for the 5-year period FY 96-00. This evaluation was a follow-on to the FY 95-99 five-year study completed by USATCES in September 2000. The current review reaffirmed the findings from the previous study.



The FY 96–00 analysis identified 285 explosives accidents/mishaps. Two hundred and thirty-six of those accidents resulted in 274 injured personnel and 14 fatalities. The numbers show that training remains the number one activity where Army explosives accidents/mishaps occur. Of the 285 reported explosives accidents/mishaps, 202 (70.9%) occurred during training.

Human error remains the leading cause of all explosives accidents accounting for 164 (57.5%). A significant finding was that 74 (25.96%) of the accident reports did not actually identify a cause. Similarly, a large number of reports didn't identify the specific type of ammunition or explosives involved. Rather, only generic terms such as simulator, small arms, etc., were used. Human error most commonly involved failure to follow published procedures:

- Failure to wait the appropriate time before opening a jammed weapon.
- Failure to wear proper personnel protective equipment.
- Failure to employ/use munitions as intended.
- Failure to clear a weapon.
- Failure to properly secure ammunition and explosives.
- Failure to follow proper UXO handling procedures.
- Failure to remain cognizant of surroundings.

The most common types of ammunition involved in Army explosives accidents were pyrotechnics (85 accidents or 29.8%), small arms ammunition (78 accidents or 27.4%), followed by grenades and rockets. The root causes for these accidents include:

- Unauthorized tampering with pyrotechnic devices.
- Improper placement or use of the pyrotechnic device.
- Throwing or functioning the pyrotechnic device too close to personnel.
- Prematurely clearing stopped or jammed weapons.
- Failure to properly clear a weapon.
- Failure to properly identify a target, failure to properly safe a weapon, or improperly handling of weapons.
- Not accounting for dud grenades.
- Grenades not being fully in the bunker.
- Personnel located in the “back blast” area.
- Improper tiedown or securing of munitions during transportation.

To reduce the number of explosives accidents, all levels of Army leadership must become actively involved in explosives safety and ammunition/explosives accident prevention. Army leadership must ensure adequate procedures are in place to identify potential explosives safety hazards and implement mitigating measures to eliminate or reduce those hazards. The unit leadership must also hold personnel accountable for following established procedures, thus significantly reducing the number of Army explosives accidents/mishaps due to human error.

In closing, we would like to quote Brigadier General James E. Simmons, Director of Army Safety: *“Units that participate in tough, well disciplined training with technically and tactically competent leaders present have significantly fewer accidents.”*

The U.S. Army Explosives Accident/Incident 5-Year Summary FY 96-00, as well as the U.S. Army Explosives Accident/Incident 5-Year Summary FY 95-99, can be found on the USATCES website at <http://www.dac.army.mil/es/Default.asp?id=9>.

—Courtesy of USATCES Explosives Safety Bulletin, Vol. 13, Issue 2, March 2002, DSN 956-8804 (918-420-8804)

Unexploded Ordnance

Unexploded Ordnance (UXO) hazards on the battlefield have an enormous effect on command and control decisions for battle planning. During Operation Desert Storm, there were 21 Army personnel killed and 53 injured as a direct result of handling/mishandling of UXO. UXOs are hazards, whether they are on the battlefield or in designated training areas. Personnel can lessen the danger of UXO hazards by being able to recognize the hazard and strictly follow the basic safety guidelines.

By definition, explosive ordnance is any munitions, weapon delivery system, or ordnance item that contains explosives, propellants, and chemical agents. Unexploded ordnance consists of these same items after they have been: (1) armed or otherwise prepared for action, (2) launched, placed, fired, or released in a way that they cause hazards, and/or (3) remain unexploded either through malfunction or design. An individual's ability to recognize a UXO is the first and most important step in reducing risks associated with UXO hazards.

This article provides information about the most common types of UXO and how they may be found or appear in a field environment. Munitions come in all shapes, sizes, and colors. They are color-coded during the manufacturing process for easy identification purposes; however, color markings alone cannot be relied upon to identify UXOs. These markings can be altered or removed by exposure to the elements. Instead, physical features should be used to identify UXO outside its normal environment. Listed below are just a few items that may be encountered in a battlefield or training environment:

Hand grenades. Hand grenades are small explosive- or chemical-filled munitions designed for throwing at short range. Grenades that may be encountered as UXO include fragmentation, smoke, and illumination grenades. All grenades have three main parts: a body, a fuze with pull ring, and safety clip assembly.

Fragmentation grenades are the most common type of grenade used. They have a metal or plastic body filled with an explosive material. Most use a burning delay fuze that functions 3 to 5 seconds after the safety lever is released, but some activate instantly when the lever is released (smoke grenades).

Rockets. A rocket uses gas pressure from rapidly burning propellant to transport its warhead to a desired location. Rockets can range from 1½ inch to more than 15 inches in diameter, and they can vary from 1 foot to over 9 feet in length.

All rockets consist of a warhead section, a motor section, and a fuze. The warhead section of the rocket is the portion that produces the intended effect; it can be filled with explosives, toxic chemicals, white phosphorus, submunitions, riot-control agent, or illumination flares.

Fuzes may be located in the nose of the rocket or internally between the warhead and motor. Fuzing on rockets can be impact, time-delay, or proximity fuzing. Impact fuzes function when they hit the target. Delay fuzes contain an element that delays the explosion for a fixed time after impact. Proximity fuzes are intended to function when the rocket reaches a predetermined distance from the target. Do not approach! The proximity fuzing may activate, causing the rocket warhead to explode. Fired rockets may still contain residual propellant that could ignite and burn violently.

Projectiles. Projectiles can range from approximately 1 to 16 inches in diameter and from 2 inches to 4 feet in length. Projectile fuzes can be located in the nose or in the base. Like rockets, projectiles may be stabilized during flight by fins or bands fixed around the circumference of the projectile.

Mortars. Mortars range from approximately 1 to 11 inches in diameter and can be filled with explosives, toxic chemicals, white phosphorus, or illumination flares. Mortars generally have a

An individual's ability to recognize a UXO is the first and most important step in reducing risks associated with UXO hazards.

Recognition 101

thinner metal casing than projectiles, but use the same types of fuzing and stabilization.

Projected grenades. The most commonly used projected grenade is the 40mm grenade. This grenade is also among the most commonly found UXO items. The 40mm grenade is about the same size and shape as a chicken egg. It contains high explosives and uses a variety of fuzes, including some of the most sensitive internal impact fuzing systems. Because of their relatively small size, 40mm grenades are easily concealed by vegetation. They are extremely dangerous and can explode if moved or handled.

Submunitions. Submunitions include bomblets, grenades, and mines filled with explosives or chemical agents. They may be antipersonnel, antimateriel, antitank, dual-purpose, incendiary, or chemical. Submunitions are typically spread over a large area by dispensers, missiles, rockets, or projectiles. These delivery systems disperse the submunitions while still in flight, scattering the submunitions over a wide area. Submunitions are activated in a variety of ways, depending on their intended use. Some are activated by pressure, impact, movement, or disturbance. Others are activated in flight or when they come near metallic objects. Some submunitions contain a self-destruct fuze as a backup. The self-destruct time can vary from a couple of hours to several days.

Submunitions are extremely hazardous, because even very slight disturbances can cause them to explode. Some types of submunitions require stabilization to hit the target straight on. Stabilization can be provided through an arming ribbon, parachute, or fin assembly.

Bombs. Bombs range in weight from 1 to over 3,000 pounds and in length from 3 to 10 feet. Generally, all bombs have the same components—a metal container, a fuze, and a stabilizing device. The metal container, or bomb body, holds the explosive or chemical filler and may consist of one or multiple pieces. Bombs use either mechanical or electrical fuzes, typically located in the nose or tail section, either internally or externally. Mechanical fuzes are

generally armed by some type of arming vane. The arming vane operates like a propeller to line up all the fuze parts and thus arm the fuze. The fuzes may be configured as impact, proximity, or delay fuzes. Bombs are stabilized during flight by fin or parachute assemblies attached to the rear section of the bomb, which often detach after impact.

Whether present in an area by design or by accident, UXO poses the risk of injury or death to anyone in the vicinity. To lessen the danger of UXO hazards and prevent placing others at future risk, certain precautions and steps should be taken by anyone who encounters UXO.

IF YOU DIDN'T DROP IT, DON'T PICK IT UP!

The danger of UXO hazards can be lessened by being able to recognize the hazard and by adhering to the following basic safety guidelines:

- Once you visually identify a UXO, do not move any closer to it. Do not attempt to remove any object on, attached to, or near a UXO. Some types of ordnance have magnetic or motion-sensitive proximity fuzing that may detonate when sensing a target. Others may have self-destruct timers built in. Leave the hazard area and report the UXO.

- Do not transmit any radio frequencies near a suspected UXO hazard. Signals transmitted from items such as walkie-talkies, short-wave radios, citizens' band (CB) radios, or other communications and navigation devices may detonate the UXO.

- Whenever possible, mark the UXO hazard(s) with suitable materials, such as engineer tape, colored cloth, or colored ribbon. Attach the marker to an object so that it is about 3 feet off the ground and visible from all approaches. Place the marker no closer than the point where you first recognized the UXO hazard.

- Stay away from areas known or suspected of UXO contamination. This is the best way to prevent accidental injury or death. 

Remember, ordnance is intended to kill...by design.

**POC: CW4 Ramiro Rodriguez, Ground Systems and Accident Investigation Division,
DSN 558-9377 (334-255-9377),
ramiro.rodriguez@safetycenter.army.mil**

All right, it's time to have a talk about grenade and artillery simulators. We have too many people getting hurt with these things. When they are properly used, they make a great addition to training, but it's important to remember they are not toys.

Don't tamper with simulator devices

The most frequently occurring accident trend is soldiers attempting to cut simulators open and light the powder with a match or lighter. Guys, this is not gunpowder! The photoflash powder in these simulators burns much faster than gunpowder and generates extremely high temperatures. Igniting flash powder with a match would be similar to mistaking detonation cord for time fuze. Bad news! Even Jackie Chan wouldn't be able to get away with it, what chance do you have?

Leave duds alone

Just because the simulator didn't work when you wanted it to, doesn't mean that it won't work when you don't want it to. Mark it and report it. This applies to all unexploded ordinance. The EOD guys don't get all that extra money just for wearing sunglasses and looking cool, they get the extra money because they know what they are doing and because it's DANGEROUS!

Wear the appropriate safety equipment

I know soldiers don't want to put on leather gloves and eye protection just to detonate a simulator. I also know that faulty simulators and premature detonations are relatively rare events, and the odds of your encountering one are fairly unlikely. Quality control has come a long way. But, let me put it into perspective... What are your odds of winning the lottery?

DO THE RIGHT THING

You play the lottery anyway, don't you?
Bottom line—wear the safety equipment!

Read the instructions

Everything in the Army inventory comes with instructions...read them. They are provided as a result of past pain and in an effort to prevent future pain. I like to think that I don't need instructions to keep me from applying my plastic 1-quart canteen to "open heat or flame," but obviously someone did, or the warning wouldn't be on there. Just bear in mind that instructions are there to keep you safe.

Injury doesn't recognize rank

In years gone by, simulators were hurting a lot of the junior enlisted soldiers. So the smart people decided that only NCOs could use simulators. On some installations, soldiers must be in the pay grade of E-8 or above. As a result, soldiers stopped getting hurt for a little while. Now the problem is NCOs are getting hurt. Shrapnel doesn't stop for stripes. Just because you have rank doesn't mean you no longer have to be careful. The first guy I saw get hurt with a simulator was a Sergeant First Class, the last guy was a Master Sergeant. Both of them Infantry, both of them with years of experience and combat tours to their credit. Never assume just because soldiers have been in the Army a long time, they have experience with and know how to use all pyrotechnic devices.

Careful when you throw

In theory, there is a reason why we wear camouflage. It makes us harder to see. You must be sure that your detonation area is clear. You don't want to co-locate a simulator with your soldiers, as this tends to severely impact both their health and morale. By the same token, detonating a simulator in dry grass or brush will start a fire; you may find yourself ENDEXing in order to play Fire Marshal Bill (ask me how I know!). In fact, I may have a better idea, take a look at the next paragraph.

Blast pits

If time and situation allows, construct a blast pit for simulators. (This is mandatory at some installations, so check your local regulations.) Defined in simple terms, it is nothing more than a pit constructed to deflect the blast and debris away from you and yours. Getting hit with a twig doesn't sound like much, until it impacts your eyeball at the speed of sound. Important safety note: No more than one simulator at a time in the blast pit. Do the math on this, the first simulator you put in the pit is also going to be the first to detonate. Any additional simulators in the same pit may be ejected, thereby achieving an airburst on your own position.

Think safe

Here are some basic rules that might help:

- If you have to wonder whether you are doing the right thing, you probably aren't.
- If you have to wonder if your commander will approve, he probably won't.
- Don't do dumb stuff.

Help is available

To order your free pyrotechnic safety movie, go to our website, <http://safety.army.mil>, and click on **Media>Videos>Ground**.

Pyrotechnic Simulators - Beware (TVT 20-925, PIN 707508)

Click the "order now" Icon and follow the instructions. 

POC: MSG Sean O'Brian, Risk Management Integration Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil

**Everything
in the Army
inventory
comes with
instructions...
read them.**

Recently, the Army experienced a tragic accident involving the M121, 120mm mortar system. While conducting live-fire gunnery, the crew of the M1064A3 mortar carrier experienced a misfire, and during the process of extracting the round, an in-bore detonation occurred. Three soldiers died and one soldier received minor injuries. While there are numerous factors involved in this accident, the following information requires immediate attention.

The misfire procedures for the 120mm mortar system differ between TM 9-1015-250-10 and FM 23-90 (Mortar). Crews must use the procedures as outlined in Safety of Use Message (SOUM) TACOM Control number, SOUM-02-004. The initial safety investigation revealed that critical steps of the misfire procedures were not followed or enforced; such as ensuring the weapon is fully locked in the SAFE position, giving special attention to ensure the Blast Attenuator

Device (BAD) is removed, and the artillery cleaning staff used for extracting the round is fully extended and locked. Leaders must ensure that crews follow the exact sequence of these procedures; any deviation from the required steps can result in loss of life.

The safety mechanism on the M121 and M120, 120mm mortar is unlike other safety switches in the Army. With the safety switches on these weapons, the selector lever is moved *away* from the desired function (letter F for Fire, or letter S for safe). Because of this, the switch will reveal S if the weapon is on Safe, or F if set to Fire, and will fully cover up the function *not* desired. During the investigation, it was also revealed that the firing pin can still be exposed above the cannon base if the switch is in any other position except the fully locked Safe position. Because of this, the weapon must be considered armed even when the switch is not fully locked in the fire position. Crews *must* ensure the switch

is **FULLY** locked into either the Fire or Safe position depending on the mode of operations.

Additional factors revealed that crew drills using the 120mm mortar inert training round, (nomenclature “Battalion Training Aid”, NSN 6920-01-383-2939, found in appendix C of TM 9-10150250-10, additional authorization list) is required for misfire procedures training. Soldiers must conduct this training using the inert round in order for them to fully master the task of extracting a round. Simulation or talking through the sequence of misfire procedures is not adequate.

Leaders must ensure crewmembers are cross-trained and can demonstrate through practical exercise each step required during the misfire procedure. Then, leaders at all levels must enforce those standards and not allow either shortcuts or deviation from procedural sequencing. 

—BG James E. Simmons,
Director of Army Safety

091606Z May 02
FROM: CDR OSC ROCK ISL IL //AMSOS-PBS//

Subject: Ammunition Information Notice (AIN)
40-02: Retransmittal of GPM-01-009, R131937Z
Mar 01, M134, 7.62mm Machine Gun, NSN 1005-00-903-0751, LIN L92323

An increase in M134 gun stoppages and

jams occurs when firing Department of Defense Ammunition Codes (DODAC) A163/A164/A165/A168, 7.62mm ammunition linked with the M13 link that has an optional 0.165-inch hole in the connecting loop.

Although the M13 link with the optional hole can cause an increase in M134 gun stoppages and jams, the operational effectiveness of the M134 gun remains high when using A163/A164/A165/

“ATTENTION”

This message contains information that is vital to the safety of Army personnel and the operation or maintenance of Army equipment. This AIN should be disseminated to all personnel involved in inspecting, storing, handling, issuing, or using ammunition used in the M134, 7.62mm machine gun.

Recently, the Army lost two soldiers and injured 13 others in a tragic 105mm artillery accident. While conducting a calibration mission, the artillery unit did not follow established firing procedures when conducting live fire. As a result, a round impacted 930 meters short of its intended target. While there are numerous factors involved in this accident, the following information requires immediate attention.

Reference MILPER message 01-163, the MOS conversion of 13C and 13E into 13D is based upon the final fielding of the Advanced Field Artillery Tactical Data System (AFATDS). Commanders must be aware that 13D MOS training has not yet been incorporated into the schoolhouse POI. Currently, AFATDS New Equipment Training (NET) and unit level manual gunnery training is the only training available for this conversion process from 13C/E to 13D. Commanders must be aware that while

manual gunnery training and AFATDS NET can teach a 13C the mechanics behind manual gunnery, it may be inadequate to qualify a 13C to fulfill traditional 13E FDC NCOIC responsibilities at battery level. Commanders should carefully consider the level of training and qualification of 13C personnel recently reclassified to 13D, before certification and qualification in a battery-level Fire Direction Center.

Concurrently with the MOS reclassification, selected artillery units are undergoing fielding of the AFATDS, version 99.Oscar. A limited safety release message on AFATDS states that units must adhere to all standard policies and procedures for live-fire, to include verifying all data put into AFATDS via another approved method (Battery Computer System and/or manual computations). Commanders must be aware that AFATDS V99.Oscar has a built-in default of zero altitude if target altitude is not entered. A CECOM Safety Alert, and Amendment 1 to

Safety Confirmation for the non-First Digitized Division (non-FDD) Advanced Field Artillery Tactical Data System 99 (AFATDS 99), published by the U.S. Army Developmental Test Command (DTC), dated 10 April 2002, provides a warning to operators of this software behavior shortfall. Until this is corrected in AFATDS (V99.T and subsequent), Commanders must ensure that ballistic solutions obtained via AFATDS are appropriately verified by other approved methods.

Commanders must thoroughly assess all missions and use all information available to them as part of their risk management process. Ensure all assigned soldiers are trained, certified and supervised to standard both individually and collectively. There is no substitute for proper leader supervision, continuous and ongoing risk management, and on-the-spot corrections. 

—BG James E. Simmons,
Director of Army Safety

A168, 7.62mm ammunition without the optional hole in the M13 link.

All M134 users are advised to limit the use of A163/A164/A165/A168, 7.62mm ammunition linked with the M13 link with the optional hole to training purposes only. (Note: this message does not apply to the M60 and M240 machine gun.) A163/A164/A165/A168 ammunition linked with M13 link with the optional hole should not be fired in the M134 gun in combat. When using the M13 link with the optional hole during training, units are advised to have the necessary logistics in place in preparation for additional M134 gun stoppages and jams.

Supply status: Inspect all A163/A164/A165/A168 ammunition lots in basic loads/ammunition supply points and identify lots "For Training Only" which have the M13 links with the optional hole. An investigation into this problem will be conducted to determine if an alternate resolution is feasible. 

POCs: Mike Schneider, TACOM-RI, AMSTA-LC-CSAU, DSN 793-1789, schneiderm@ria.army.mil; Cecil Cook, OSC, SOSMA-SNS, DSN 793-1688, cookc2@osc.army.mil; or Gary Zink, DSN 793-1688, zinkg@osc.army.mil

Carry the Torch

A soldier was involved in a fatal mishap while his company was conducting a mission in support of Operation Enduring Freedom. The mishap occurred while the soldier was preparing a heavy piece of leftover Soviet-era equipment for removal from a building in order to make more usable space.

What happened?

While using oxygen-acetylene torch-cutting equipment during partial renovation of a building, a soldier was kneeling at the base of an old hydraulic metal press weighing approximately 2000 pounds. The press was connected by four load-bearing steel plates attached to a steel beam platform on a concrete foundation. The soldier used the torch to cut along the inside edge of one of two load-bearing steel plates, then he cut the inside edge of the second load-bearing steel plate located on the same side of the press. When he completed the cut on the second steel plate, the hydraulic metal press abruptly shifted and fell over, striking the soldier in the back, and pinning him to the concrete foundation. It took 15 soldiers to remove the press from the soldier.

Prior to the accident, the First Sergeant instructed the soldier to remove the four bolts from the base of the hydraulic metal press, and further instructed two soldiers to assist. The first-line supervisor observed the soldier having difficulty removing one of the four bolts and instructed him to remove the bolt with the cutting torch. The soldier indicated that the oxygen-acetylene torch was not working properly and needed adjusting. The first-line supervisor adjusted the valves on the oxygen-acetylene torch, cut a small piece of metal to test the equipment, and left the soldier to continue his task.

The two other soldiers arrived to help remove the four bolts. They removed three of the four bolts with a wrench and the soldier originally assigned to the task cut the remaining bolt with the torch. The two soldiers then left the area to resume other tasks.

After a period of time, another soldier entered the room where the soldier was working on the press and observed him kneeling down next to the hydraulic metal press using the cutting torch on the load-bearing steel plates. Neither of the soldiers realized the hazard involved with cutting the steel plates at the base of the press. A short time later, the soldier that entered the room observed the hydraulic metal press abruptly shift, fall over, strike the other soldier on the back, and pin him to the concrete foundation.

Why did it happen?

As with the case of many fatal accidents, a number of contributing factors caused this accident. Why did the soldier unnecessarily cut along the inside edge of two load-bearing steel plates on the same side of the press after being instructed to remove the four bolts? These plates secured the press to the support structure, and caused the now unsupported machine to fall from the support structure to the ground in his direction. The soldier was fatally injured; therefore it is difficult to determine the specific cause for his actions. He was no doubt trying to do the right thing. However, he didn't adequately pay attention to the instructions provided to him by the First Sergeant and first-line supervisor.

The company leadership was significantly involved in mission accomplishment as opposed to specific task accomplishment. Their main concern was clearing out the building to make more room, and the First Sergeant would

"Piece of equipment that struck a soldier while he was using a cutting torch."

occasionally check on progress. The First Sergeant's actions were the result of haste to complete the mission and overconfidence in the ability of the soldier to completely understand the entire task. The First Sergeant did not provide adequate instructions for the entire task that included removing the bolts, necessary precautions related to the hydraulic metal press, and the process for extraction of the press from the room. Also, the first-line supervisor had decreased his level of supervision of the soldier over time during this mission and was now periodically checking the soldier's progress on assigned tasks. This was the first of this type of mission for this unit, and no written standards existed for this type of task. Therefore, these circumstances required the leadership to apply more direct supervision.

The battalion failed to adequately conduct formal risk management during mission analysis. They failed to adequately recognize hazards associated with removing equipment from the building to make usable space. Further, formal risk management was not adequately conducted at company level. Additionally, the battalion and company failed to continuously assess the hazards and implement the necessary control measures in order to mitigate the risks associated with this mission.

Although the configuration of the welding equipment did not contribute to this accident, it was a significant hazard. The standard welding equipment authorized in this unit is the Torch Outfit, Cutting and Welding. However, the unit

used a combination of standard and nonstandard equipment. The oxygen regulation valve was adapted to fit a nonstandard oxygen tank. Also, the valve regulating gauges to both the oxygen and acetylene tanks were inoperative. So, what is the hazard associated with this? The hazard associated with inoperative gauges and adaptation of gauges to nonstandard tanks consists of inaccurate pressure determination and a possibility of an extremely violent explosion.

Countermeasures

- **Soldiers:** Pay attention to instructions, particularly when performing tasks that are not routine.
- **Leaders:** Don't let haste to complete the mission and overconfidence in subordinates lead you down the path to an accident and fatality.
 - Apply more direct supervision and adequate instructions as control measures during a "first of a type" mission.
 - Integrate risk management into mission planning, preparation and execution, and continuously assess the hazards during the mission.
 - Ensure that the decision to use nonstandard equipment is made at the appropriate level in the chain of command with control measures in place to mitigate risks. 🚒

POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)



wish each of you could have been with me earlier this month when I spent a week visiting our great soldiers serving in Afghanistan and other corners of that area of operation. All of us should be proud of them and the work they're doing in support of America's war on terrorism.

No matter if they were pulling force protection duties in Qatar, providing logistics support out of Oman, or fresh from the fight we're calling Operation Anaconda, all of these soldiers were pumped up about what they were doing for their country.

I told them their country and their fellow soldiers were proud of them. I ask each of you to keep them in your prayers as often as possible.

Sergeant Major of the Army

NCO business

From talking to sergeants who were on the ground in the Afghanistan highlands during Anaconda, I came away again impressed with the importance of the basic fundamentals of soldiering. Their time on the rifle range paid off, as their basic marksmanship skills and the M-4 rifles allowed them to consistently hit targets more than 400 yards away.

Their physical and mental stamina also served them well in the steep, barren terrain where the air was thin. One movement by soldiers of the 187th Infantry Regiment was expected to take as long as two days, but these Rakkasans soldiers did it in about eight hours.

Equally impressive to me was the fact that there were minimal cold weather injuries reported during Anaconda, despite temperatures that plunged as soon as the sun went down and the minimal amount of cold weather gear carried by the soldiers.

All of these things—physical conditioning, marksmanship, and cold weather injury prevention—are NCO business; if Operation Anaconda is any indicator, our sergeants know their business quite well.

I was especially proud of the performance of our younger soldiers for another reason. Some have been quick to criticize the soldiers who have joined the Army in recent years, saying they somehow don't measure up to their predecessors. I wish anyone believing that could have been with me on that trip, both to hear stories of their performance and see the fire in their eyes. Today's soldiers are as good as any that have ever worn our Army's uniforms. Period!

Other leaders and I recognize that our troops in

Afghanistan aren't the only ones working hard these days. Many soldiers are putting in incredible hours at their home stations on force protection duties and supporting the war on terrorism. Additionally, thousands of our troops are deployed far from home in places other than Afghanistan and the Philippines. Their contributions are vital to our country's interest, and I hope leaders at all levels are expressing that to them as often as possible.

Army Transformation

I also spent time this month at Fort Lewis staying abreast of the Army's Transformation. I bought into this process a long time ago; but the more I learn

about it, the more convinced I am that it's absolutely the right thing for our Army.

If our interim brigades were online, they would be carrying much of the frontline load in Afghanistan right now. Once they are ready, they will play a critical role both in future missions and in developing the objective force.

Exceptional Family Member Program

No doubt because my own family has been enrolled in the program for years, I try to stay involved with the military's Exceptional Family Member Program (EFMP). Based on personal experience, I can tell you that it means a lot to the parents of a special needs family member when the chain of command understands EFMP and takes time to occasionally ask about EFMP families in their units. That little bit of knowledge and concern can go a long way toward helping EFMP families feel like they are truly understood and cared for. I ask leaders—especially at battalion level and below—to reach out to these families, get to know them, and learn what the program offers in their respective area.

Army Soldier and NCO of the Year

I'm getting excited about the rapidly approaching Army Soldier and NCO of the Year competition, which will bring our MACOM's finest to Washington, DC, for the final competition.

This is the first time in institutional memory this has been done, and I ask for your assistance in looking for ways to publicize this event. You can help by ensuring your unit and installation soldiers and NCOs of the year receive publicity in your command's

ny Sends...



newspapers, web sites, and other internal media outlets. Also, if your unit's best are among the MACOM finalists coming here, ensure your public affairs offices are publicizing that story as well, both on and off the installations.

This is a good news story for all of us, and the personal involvement and availability of senior NCOs in publicizing this new program will only serve to increase the honor going to the individuals who win, as well as their MACOMs, posts and units.

Basic courtesy

It could be that I'm old-fashioned, but for years much of my initial impression of a person or an organization has been based on how polite and courteous they are. Some might call this military courtesy; but to me, it's basic courtesy and doesn't necessarily have a lot to do with a person's place of employment or job title.

Little things like simply saying "hello" to another person crossing a parking lot, standing up when you're doing business with your co-workers, and maintaining a positive, professional outlook have always been important to me. And, more importantly, I believe these acts of good manners do something for morale and impact how an organization perceives itself.

Leader involvement is key to reducing accidents

We've lost several soldiers this month in several accidents, and I hope these tragedies will motivate each of us to put safety at the forefront of every plan we make and all we do throughout the day. I remain convinced that leader attentiveness and involvement are the keys to reducing accidents.

Complacency can cost an organization in areas beyond its safety statistics. The events of last year demonstrate that we have enemies who wish to destroy us. They watch us, probably more often than we want to believe, in hopes of discovering weaknesses that can be exploited. All of us—at all levels—must guard against complacency.

This is especially key as the war on terrorism

Tell Us About Your NCOs

Most NCOs do good work. They train their soldiers well and keep them out of harm's way. NCO leadership is so important that when an NCO fails to lead safely, the results can be catastrophic...and the results often show up in *Countermeasure* as an accident report. What we'd really like to do is tell the stories of successful NCOs who train safely and take care of their troops. We'd like to share their secrets with the rest of The Army. But, to do that, we need your help.

Please send your stories or give us a call. We'll do the rest. You can reach us by e-mail countermeasure@saftycenter.army.mil or call one of our NCOs at DSN 558-2959/2744/3774.

begins to lengthen and deployed units begin a rotation schedule. Just as good soldiers work constantly to improve whatever fighting position they occupy, I hope leaders will constantly review and refine their force protection procedures. This could save more lives than we could possibly know.

Housing allowance surveys

I noted recently that housing allowance surveys have been mailed to more than 17,000 overseas service members who don't live on military installations. The surveys collect information on costs associated with utilities, trash disposal, heating fuels, security fees, and a number of other routine maintenance costs. The results are then used to determine how much overseas housing allowances will be increased in the coming years.

Typically, less than half of the surveys are completed and returned, and that could cost some of our soldiers money. I ask

you to remind your formations that these surveys are on the way, encourage recipients to complete them, and remind them that they can be done via the Internet.

Veterans

I'd like to leave you—as I often do—with a note about our great veterans. For those of you who haven't made it a point to get to know the veteran groups in your area, I suggest that you are missing out on opportunities that are both rewarding and motivational.

I recently accepted an invitation to travel and speak before a small American Legion Conference. Just having a senior, active-duty NCO talk about today's Army seemed to mean a lot to them. I'd like to remind you that our veterans are a group that we can never do enough for.

Again, I appreciate everything you're doing for our country, our Army, and our soldiers. God bless!

—Adapted from Sergeant Major of the Army's April Thoughts-n-Concerns

Prepare, Be Aware, Be There

When the sun turns the heat up in late spring and summer, that soldier who just processed into your unit from Europe is going to have problems if you don't help him keep his cool. We NCOs need to inform soldiers of the great risks of heat injuries before the solar blast of summer hits.

"But Sarge, I'm used to the heat, I'm from Florida" doesn't mean much if the soldier has recently returned from an overseas assignment. As little as two weeks away from a warm climate is enough to cause the body to "forget" how to handle the heat. Soldiers must be acclimatized gradually.

One soldier went directly from an assignment in Alaska to an assignment at Fort Sill, OK. He became a heat casualty shortly after the move.

The typical heat casualty is a young male soldier in 11B or 12B MOS, who is engaged in MOPP training, patrolling, road marches, land navigation, physical training or unit runs, or is in a hot field environment.

Preventing heat injuries is clearly the business of leaders at all levels. Leader preparation, awareness, and presence are all critical to avoiding heat casualties.

Prepare

First and foremost, leaders must set the conditions for success by ensuring their soldiers are provided adequate amounts of water, food, and rest.

Soldiers also need training on prevention of heat injuries, and they should receive refresher training before hot weather arrives.

Supervisors should be fully trained on the requirements of hydrating soldiers, but they also should know about the phenomenon of hyponatremia. This occurs when someone takes in too much water without maintaining enough salt in his body, ordinarily from not eating properly. While hydration is critical, it should never be forced to the point that it exceeds 1½ quarts per hour or 12 quarts per day.

Another key element of leaders' preparation is the physical conditioning of their units. Physically fit soldiers withstand the rigors of training in the heat better than those in a lower level of fitness. The "chairborne" soldier who goes to the field for two weeks can be in for trouble if he doesn't exercise caution.

Aware

Next, leaders must be fully aware of the climatic conditions and the degree of acclimatization and prior heat problems of their soldiers.

To accurately gauge heat conditions, the Army uses the Wet Bulb Globe Temperature (WBGT) index system. This device—and its accompanying fluid replacement and work/rest charts—gives leaders clear guidance on how to measure the combined effects of heat, wind, and humidity, and then how to take appropriate steps to modify hydration and work cycles to prevent injuries. (See April 2002 *Countermeasure*.)

Leaders must also be aware of soldiers who have recently PCS'd to the command. Someone who has been assigned to a new base less than two or three weeks is far less likely to be able to handle the rigors of field training than an "old hand" in the unit. Leaders also must clearly identify those soldiers who have been heat casualties before, because they are more susceptible to a repeated heat injury.

Leaders should know which soldiers have recently been sick or on medication, because many medications can reduce the body's tolerance to heat.

Wise supervisors know they can't be everywhere at all times, so they must ensure their subordinates are using the buddy systems to monitor one another.

Presence

Just as important as preparation and awareness is leader presence. Nothing takes the place of supervision on site at training. Leaders must be at training so they can gauge what the soldiers are experiencing. They also must be present to ensure that hydration breaks are taking place, rest breaks are given, and sensible modifications are made to work schedules.

The prevention of heat injuries is leader business. We, as leaders, are responsible for our soldiers. The time lost by soldiers suffering from heat injuries is a direct reflection on our leadership—we must prepare, be aware, and be present! 

POC: SFC Patricia Stoker, Aviation Maintenance NCO, Risk Management Integration Division, DSN 558-9854 (334-255-9854), patricia.stoker@safetycenter.army.mil

Senior Army leadership and civilian employees at Fort Bragg, North Carolina and Watervliet Arsenal, New York have been participating in the Defense Employee Work Safety Demonstration Program (DEWSDP) since its introduction last November.

So, what is the DEWSDP? This pilot program has been mandated by Congress to introduce private industry's proven best safest work practices into DOD sites. The Army selected Fort Bragg and Watervliet Arsenal for participation in the pilot program which runs through September 2002. These two installations will evaluate whether these practices can improve DOD-wide civilian work force safety standards and reduce accident and injury rates and the resulting human and fiscal costs. Concurrent programs are being implemented by the other DOD services—Navy, Marines and Air Force. Results will be reported to Congress in December 2002.

This work safety program is different. Instead of traditional classroom-style training, its aim is to change—with your active involvement—the safety culture at your workplace and in the Army generally. Through the program, you will learn how to recognize unsafe behavior—your own and others'—and how to negotiate changing those behaviors. You'll also learn how to make identifying and reporting unsafe conditions part of the way you go about your daily business.

Safety is our workplace priority

The Department of Defense and the U.S. Army are committed to workplace safety. Currently, civilian employee occupational injuries and illnesses cost the Army in the vicinity of \$169 million each year in direct costs (Federal Employee Compensation Act, 2001) and an Armywide daily average of 33 civilians injured on the job (OSHA, 2000). Department of Defense costs for workplace accidents and injuries are estimated at \$600 million per annum, based on FECA figures.

The Army program has three integrated components:

■ **Safety training.** The DuPont Safety Resources-developed discovery-learning module is tailored to a range of onsite responsibilities that helps employees engage with safety issues in a solutions-focused manner. Developing observation and negotiation

skills is a key element of this training. Ongoing coaching is also offered.

■ **Data collection.**

A sophisticated database, originally designed for Intel®, records safety observations and tracks accident and injury case management with customized real-time data and analysis. The system—known as the Environmental Health and Safety Data Management System—also tracks employee observations and perceptions as a means of involving the total workforce in maintaining and developing safe practices. Server space for this web-based system is being provided by the U.S. Army Center for Health Promotion & Preventive Medicine.

■ **Communications.** With the help of a range of onsite news media, management, and employees at participating installations, information is being disseminated throughout the command structure about progress of the pilot program. Information regarding the DEWSDP is now available through Army publications, television news services, and websites.

Army implementation of the DEWSDP is being managed by James Gibson, Office of the Director of Army Safety, and COL Mary Lopez, U.S. Army Center for Health Promotion & Preventive Medicine at Aberdeen Proving Grounds. DuPont Safety Resources (DSR), a division of the historic Delaware-based corporation DuPont, has been contracted to provide program implementation services to the Army. 

“Developing safety in the workplace is about everyone changing their own habits, being observant and communicating the changes that need to happen; that is, taking ownership of safety.”

—DuPont Safety Resources (DSR)

Contractors to Army implementation of the DEWSDP

POC: Ruth Riddick, Communications Program, Army Implementation Team, Defense Employee Work Safety Demonstration Program, (202) 365-3038, RiddickR@aol.com

Power Lawn Mowers Recalled

The Army and Air Force Exchange Service (AAFES) has issued recalls for several models of Murray riding lawn mowers. The lawn mower recall is part of a voluntary recall between the U.S. Consumer Product Safety Commission and Murray Inc., of Brentwood, Tenn. The recall involves about 89,500 rear-engine riding lawn mowers and about 6,200 mid-engine riding mowers. It affects models manufactured in Lawrenceburg or Jackson, TN. AAFES sold only the Model 30560x99 rear-engine mowers. For more information on the lawn mowers, visit the Murray Website at <http://www.murray.com> or contact AAFES. 🐾

—Military Report, March 26, 2002 Issue

GSA to Feds: Don't Talk and Drive

The General Services Administration (GSA) told federal agencies to urge their employees not to talk on hand-held wireless phones while driving vehicles owned or leased by the federal government.

While GSA did not ban talking on hand-held cell phones while driving altogether, it recommended that agencies discourage the use of cell phones by drivers of federal vehicles.

As one solution, GSA recommended that agencies provide a hands-free car kit with government owned wireless phones and educate employees on how to drive safely while using them.

"It is appropriate that the federal government assume a leadership role in promoting the safe use of wireless telephones by its employees when they are engaged in official government business," GSA said in a bulletin published in the *Federal Register*.

Legislation pending in 27 states would ban hand-held wireless phones while driving. New York state has already approved such a ban. In general, federal employees are not exempt from state and local laws dealing with motor vehicles, and agencies should be aware of the potential for increased liability from accidents caused by the use of wireless hand-held phones, GSA said.

The National Highway Traffic Safety Administration (NHTSA) has several studies underway of such driver distractions as cell phone use. GSA plans to keep agencies informed on the findings and any changes in federal policy on cell phone use, the bulletin said. 🐾

Courtesy of Katy Saldarini, ksaldarini@govexec.com, GovExec.com Federal Newsletter, March 5, 2002

Farewell...

This issue is my last as editor of *Countermeasure*; however, I will not be going far. On 1 June, I will be transitioning over as the *Flightfax* editor, the Army Safety Center's aviation safety publication. So, if you have any aviation stories to tell, send them to flightfax@safetycenter.army.mil or call DSN 558-9855.

I came to the Safety Center in 1997 as editor of *Countermeasure*, which was a 12-page black-and-white newsletter. In August 2001, *Countermeasure* grew to a 20-page full-color magazine with a distribution of 30,000 copies.

I wish I could take complete credit for *Countermeasure's* birth and growth, but I can't. The people who have made this magazine a useful tool in their safety programs are its readers, contributing authors, and supporters. You are one of those people. Without your contributions, input, suggestions, and encouragement, this magazine wouldn't be published on the scale it is today.

Starting with the next issue, Melissa Bonds and Truman Taylor, Occupational Safety and Health Managers, will be the interim editors of *Countermeasure*. You can reach Melissa at DSN 558-2947 and Truman at DSN 558-2609 or e-mail countermeasure@safetycenter.army.mil. Give them a call or send them a note. They will be glad to hear from you. 🐾

Mission First, Safety Always!

Paula Allman

Paula.allman@safetycenter.army.mil

Thanks...

I would like to say thanks to You, the readers, for your continued, unwavering support and dedication to safety. Although I'm leaving to attend the War College in July, it has been my distinct privilege to serve as the Publishing Supervisor of both *Countermeasure* and *Flightfax* magazines over the past 11 months. Throughout the period, it has remained our mission to provide you with quality, well-written, informative and relevant coverage of safety-related issues, TTPs, DOs & DON'Ts, and accident analysis with one end-state: Accident Prevention. I challenge each of you to continue your vigilance; you Can, Have, and Do make a difference every day. You cannot let your guard down...because the loss, injury, or damage to a single soldier or piece of equipment in a preventable accident could mean the difference between success and failure on the next battlefield. 🐾

LTC Scott G. Ciluffo, Deputy Director of Operations & Publishing Supervisor, DSN 558-2801 (334-255-2801), scott.ciluffo@safetycenter.army.mil



RAY ATTENTION!

**Keep
Focused
On Your
Driving**



ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

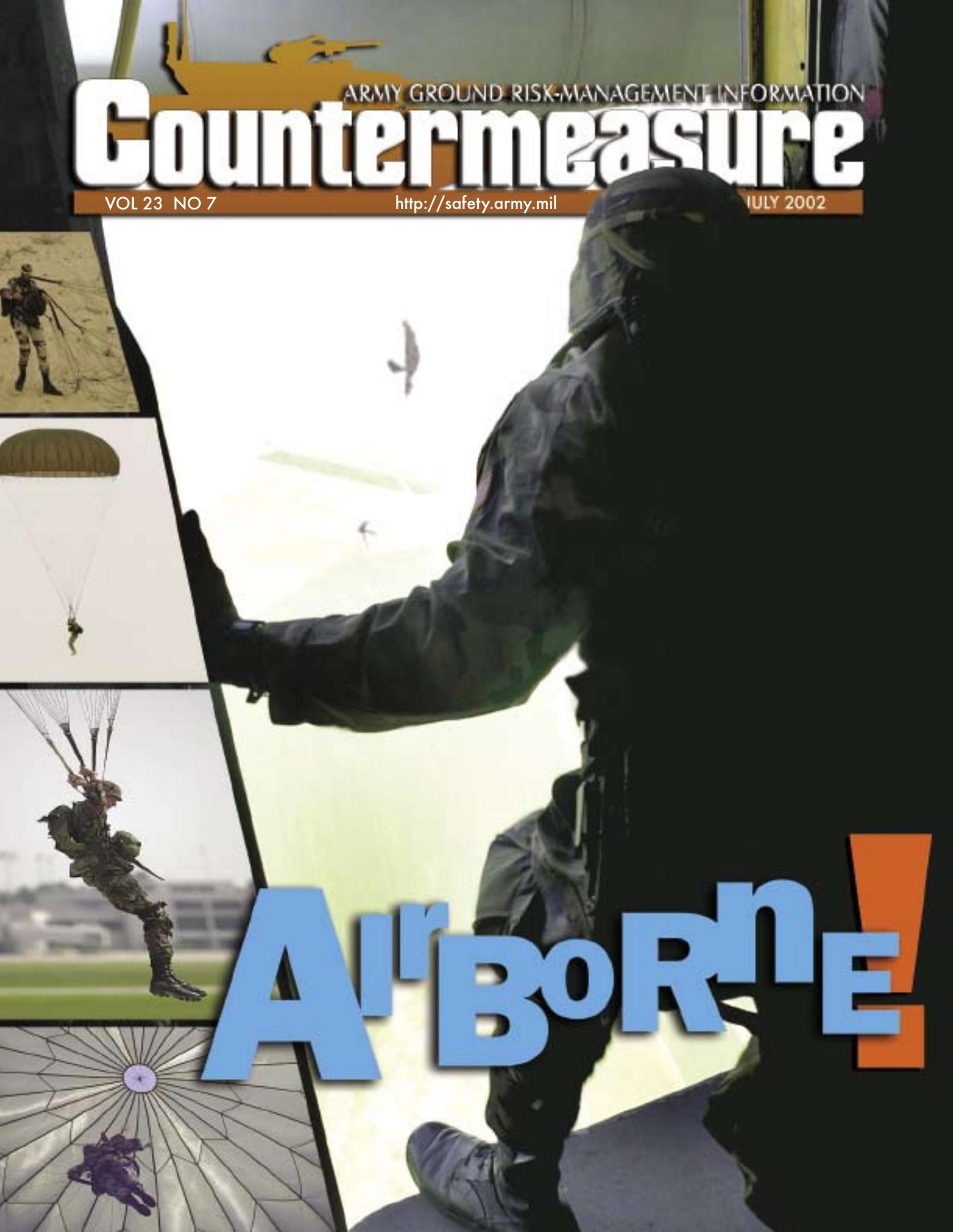
VOL 23 NO 7

<http://safety.army.mil>

JULY 2002



AirBORNE!



ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3** **DASAF's Corner**
Enjoying Summer Activities-Safely
- 4** **Feet and Knees Together!**
- 8** **Rucksack Brochure-Pack for Performance**
- 9** **Every Drive Counts**
- 10** **POV**
Big Rigs-Respect'em or Suffer the Consequences
- 12** **USAREC Accident Numbers Going Down**
- 13** **Get Your Cold Weather Equipment NOW**
- 14** **Hurricanes**
- 18** **Heat Index**
- 19** **Accident Briefs**
- 20** **Safety Alert Notice on Drownings**



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

BG James E. Simmons
Commander/ Director of
Army Safety

LTC Mike Cumbie
Publishing Supervisor

Truman Taylor
Coordinator

COL John S. Warren
Deputy Commander

Melissa Bonds-Wilkins
Writer/Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use Fax 334-255-3003 (Ms. Melissa Bonds-Wilkins) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2052 (334-255-2052). Visit our website at <http://safety.army.mil>.



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

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).

Feet and Knees Together!!!

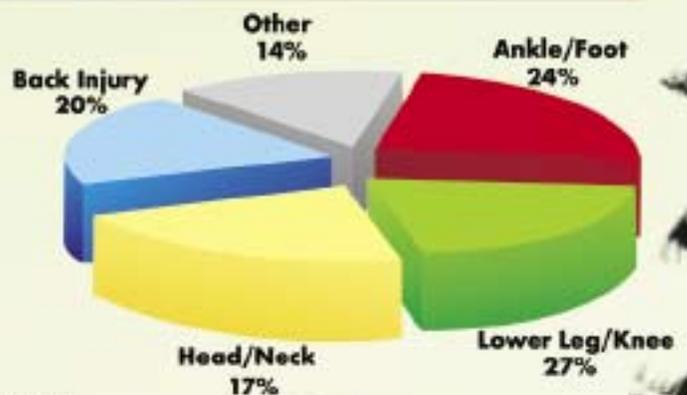
During FY 2001 there were thousands of tactical parachute jumps made across the Army. Also in FY01 there were 395 parachute related accidents reported to the USASC. Of those 395 parachute accidents, 1 resulted in the loss of a fellow Jumpmaster when he was extracted by his MIRPS while performing his 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! 🚗

MSG John S. Darlington
Special Operations Safety LNO
DSN 558-2744/COMM (334) 255-2744
john.darlington@
safetycenter.army.mil



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. 

POC: Rebecca Nolin, Media and Marketing Division, DSN 558-2067 (334-255-2067), rebecca.nolin@safetycenter.army.mil

POC: Al Brown, Strategic Programs, DSN 558-3421 (334-558-3421), james.brown@safetycenter.army.mil

“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

BIG RIGS

Respect ‘Em,
Or Suffer the
Consequences

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.

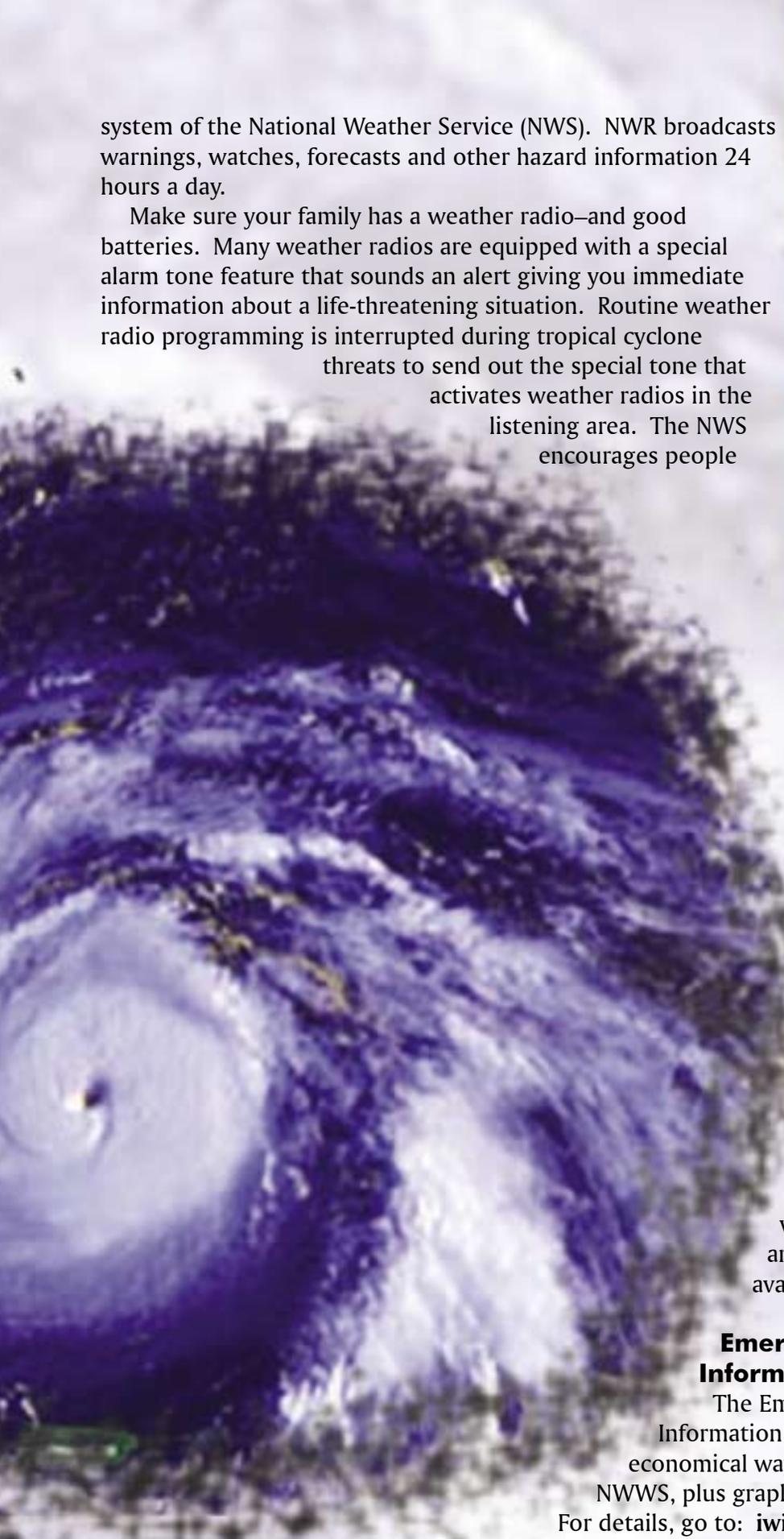
Knowledge and preparation are key in surviving a hurricane and in minimizing the damage that can result from one of these storms. What can you do to ensure that you are adequately prepared for hurricane season?

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

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

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.

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 progress.

- 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										
		70	75	80	85	90	95	100	105	110	115	120
Relative Humidity %		Apparent Air temperature (Fahrenheit) What it Feels Like										
0	64	69	73	78	83	87	91	95	99	103	107	
10	65	70	75	80	85	90	95	100	105	111	116	
20	66	72	77	82	87	93	99	105	112	120	130	
30	67	73	78	84	90	96	104	113	123	135	140	
40	68	74	79	86	93	101	110	122	137	150		
50	69	75	81	88	96	107	120	135	150			
60	70	76	82	90	100	114	132	149				
70	70	77	85	93	106	124	144					
80	71	78	86	97	113	136	157					
90	71	79	88	102	122	150	170					
100	72	80	91	108	133	166						

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 having 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-evacuated 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 other vehicles. One civilian was seriously injured and one SM 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





ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 8

<http://safety.army.mil>

AUGUST 2002

Ground RISK *management*

CONTENTS

- 3** **DASAF's Corner**
- 4** **Speed Kills...Again**
- 7** **A Chain Reaction**
- 8** **Investigators' Forum**
M1A2 Tank NBC Fire
- 9** **POV**
Gasoline and Static Electricity—A Bad Combination
- 10** **NCO Corner**
Keep Our Soldiers Safe and Straight
- 12** **Hurricanes Family Disaster Plan**
- 16** **Protect Yourself Against West Nile Virus**
- 18** **BSC—The "S" Stands for Safety**
- 19** **Accident Briefs**

features



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

BG James E. Simmons
Commander/Director of
Army Safety

LTC Richard Pryke
Publishing Supervisor

COL John Frketic
Deputy Commander

Julie Shelley
Writer/Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use FAX 334-255-3003 (Ms. Julie Shelley) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2052 (334-255-2052). Visit our website at <http://safety.army.mil>.



Recognizing Outstanding Soldiers and Civilians Is Important

I have used this forum many times to share my personal philosophy with you: *units that participate in tough, realistic training—with technically and tactically proficient leaders present—have significantly fewer accidents.* Those technically and tactically proficient leaders across our Army are doing a great job in integrating risk management to help us ensure that we have combat-ready battalions capable of going out and conducting tough, realistic training without hurting or killing soldiers before crossing the line of departure.

You have practiced risk management everyday, during every training mission. Now that we have deployed into actual combat conditions, risk management is an integral part of how each of you think and maneuver your way through situations as battlefield conditions change instantaneously.

You have repeatedly proven that risk management works and carries forward into combat. Our fellow soldiers continue to hold the torch high and execute real-world missions around the globe, fighting and winning this war on terrorism.

It is time to recognize our units and our outstanding soldiers and civilians who integrate risk management and safety into our tactical operations and garrison support missions. Their perseverance in identifying, assessing, and controlling hazards saves countless injuries and fatalities and prevents costly damage to our equipment.

Two shining examples come immediately to mind: the 101st Airborne Division, Air Assault, and Tobyhanna Army Depot. Thanks to the care and guidance of some dynamic leaders and NCOs, the 101st Airborne Division, Air Assault, has deployed 1,411 soldiers during Operation Enduring Freedom and brought them all home—alive! Over the last 9 years, Tobyhanna Army Depot, where overhaul and repair of essential warfighting equipment takes place, reduced the amount of Department of Labor compensation chargeback costs by \$8 million to cover civilian injury claims. Additionally, with great support by the chain of command and our civilian and military workforce, Tobyhanna Army Depot achieved Star Site status as a member of the Occupational Safety and Health Administration's Voluntary Protection Program.

The Chief of Staff and I would like to recognize your units, soldiers, and civilians—both at home and deployed abroad—for their efforts to incorporate risk management into plans and operations, and thus significantly enhance readiness by reducing accidental losses. We all know the loss of any soldier or damage to any piece of Army equipment seriously impacts our readiness and ultimately our ability to fight and win this war. For those units and individuals who excel in preventing this from happening, we owe them recognition for a job well done.

Review the criteria found in Army Regulation 672-74, *Army Accident Prevention Awards Program*, and nominate your units and individuals for either of the two Chief of Staff Safety Awards or any of the four Director of Army Safety Awards. Make time to do the small amount of paperwork necessary to ensure our great soldiers and civilians get the long-overdue recognition they have earned and deserve. ✪

Train Hard, Be Safe!
BG James E. Simmons

REPORT



On the day of the accident, the platoon conducted wake-up, stand-to, and personal hygiene, ate chow, and began preparation for redeployment with the intent of redeploying to the field the following week to continue individual and team-level certification.

...again

The platoon leader took the opportunity to conduct driver training with select soldiers before redeployment. Four soldiers requiring the road test portion of driver training were identified and put under the control of the unit driver instructor. The soldiers departed the platoon command post to begin the road test, with four soldiers occupying the vehicle

seats and one soldier in the gunner's cupola of an M1114 up-armored HMMWV.

The first driver descended a slight grade on a gravel road leading to a low-water crossing. He then traveled through the water crossing and lost control of the vehicle. As the vehicle exited the water

“There is a tremendous responsibility on your part to ensure the safe transport of other soldiers.”

crossing, it went into a broadside skid, rolled one and three-quarter times, and came to rest on its right side. During the accident, the soldier in the gunner's cupola sustained fatal injuries and was ejected from the vehicle, while the other four soldiers sustained minor injuries. Damage to the vehicle was extensive.



Why did it happen?

As the driver was descending the hill before the water crossing, he was traveling in excess of 38 mph in a 25 mph speed zone. Further, the truck commander/unit driver instructor failed to ensure that the driver maintained





the 25 mph posted speed limit. The excessive speed caused the vehicle to hydroplane, and the driver was unable to regain control of the vehicle after exiting the water crossing.

What to do about it?

First, when you are the driver of a vehicle, you are the individual at the controls and there is a tremendous responsibility on your part to ensure the safe transport of other soldiers. Speed limits are determined and posted for good reason. Comply with posted speed limits and remember that the lives of fellow soldiers are in your hands.

Second, have you ever been driving your POV along a wet road surface and had the heart-fluttering sensation that you momentarily lost control of the vehicle while traveling through a puddle? This is the effect that hydroplaning has on a vehicle. During a hydroplane, the tires of a vehicle lose contact with the road surface and, therefore, literally skim across the water. This hydroplane effect occurred in this particular accident.



Third, the truck commander must ensure that the driver maintains the posted speed limit. The truck commander's primary responsibility is to ensure the safe transport of soldiers.

Many accidents occur as a result of overconfidence and inadequate supervision. If a leader allows noncompliance of known established standards, then he/she is fostering indiscipline in subordinates that will result in noncompliance of standards as an accepted practice. Do the right thing and develop leadership skills that will earn you the respect of your peers and subordinates alike. 🚛



POC: Ground Systems and Accident Investigation Division, DSN 558-3562, 334-255-3562

A Chain Reaction

A convoy consisting of two M998 HMMWVs and 15 heavy equipment transporters (HETs) loaded with 14 Abrams main battle tanks and one M88 heavy recovery vehicle was conducting a convoy operation as part of a training support mission. While descending a steep .5-mile hill, the convoy encountered dismounted soldiers along the shoulder of the road. In accordance with (IAW) the unit standing operating procedure (SOP), the vehicle operators began decelerating to 5 mph and activated their four-way flashers. The operator of the 11th HET stopped his vehicle at the base of the slope in order to avoid a rear-end collision with the 10th HET. The operators of the 12th through 15th HETs were unable to stop their vehicles and avoid a collision with the vehicles to their front. The result was a multiple-vehicle chain reaction accident involving the 11th through 15th HETs. During the accident, 15 soldiers sustained minor injuries, while damage to the equipment was extensive.

Why did it happen?

The vehicle operators, convoy commander, and HET truck commanders did not comply with a warning sign at the crest of the slope that specified for trucks to use low gear. Further, the HET technical manual (TM) specifies that the transmission low range be used for maximum engine braking while descending steep grades. All five HETs involved in this accident were not in low range when they descended the slope. The transmission range selector on these vehicles varied anywhere from 2-5, used for normal driving, to 2-3 and 2-4, which are used for cross-country travel. As a result, some of the vehicles were traveling at approximately 30 mph while descending the slope and were unable to slow and avoid a collision. Due to overconfidence and inadequate supervision, this had become a routine method in the unit for descending the slope in the past and, therefore, fostered an accepted practice of noncompliance with the warning sign located at the crest of the slope.

What to do about it?

Vehicle operators, convoy commanders, and truck commanders have responsibilities associated with their respective positions. Foremost is the responsibility to safely transport soldiers and equipment. Warning signs are posted for a reason. Comply with all municipal, state, and military motor regulations, as well as published TM procedures. Your noncompliance could put your life, as well as the lives of other soldiers, at risk. If you observe noncompliance, alert your supervisor, express your dissatisfaction, and do the right thing. Supervisors, remember that your actions—good, bad, right, or wrong—are observed by subordinates and will directly influence their actions. 

POC: Ground Systems and Accident Investigation Division,
DSN 558-3562, 334-255-3562

M1A2 Tank NBC Fire

Recently, the Army experienced a tragic accident involving the M1A2 Abrams main battle tank. While the crew of the M1A2 was operating the vehicle, a failure within the vehicle's nuclear, biological, chemical (NBC) main system occurred and resulted in an NBC filter fire. One soldier died and nine others received injuries as a result of the incident. While there were numerous factors involved in this accident, the following information requires immediate command attention.

The M1A2 tank provides various warnings and cautions to crewmembers in the event of an NBC system problem. These warnings and cautions are displayed visually on the commander's integrated display (CID) and the driver's integrated display (DID); additionally, an audio tone is transmitted to each crewman via the vehicular intercommunication set (VIS). The audio warning is generated from the tank's analog input module (AIM) by way of the 2W119-5 wiring harness (Y-cable), which is connected to the driver's station full-function control box (AN/VIC 3). The Y-cable must be connected to the driver's control box at the J3 connector with the driver's combat vehicle crew (CVC) cable plugged into the P4 end of the Y-cable. Failure to properly connect the 2W119-5 cable will not interfere with vehicle communications, but will result in a "NO NBC" warning tone being heard. In addition to the accident vehicle, several other M1A2 tanks at this particular installation were found to have the same incorrect connection. Commanders should ensure that each M1A2 in their command is inspected to guarantee that this system is connected correctly. The NBC system should not

be used until the inspection is complete.

If an NBC warning message (visual or audio) is given, crews should immediately press the NBC MAIN pushbutton on the CID to turn off the NBC main system. Continued use of the NBC main system will result in an NBC filter fire.

Tank crews must rehearse and commanders must re-enforce all emergency procedures as outlined in the M1A2 technical manual (TM 9-2350-288-10-1/2, with Changes). Fire evacuation drills must be understood fully by each crewmember and should be integrated into all pre-gunnery and maneuver training. It takes flawless crew coordination within the vehicle to maintain a safe operating environment. Commanders should verify that emergency evacuation procedures, as well as rollover drills, are rehearsed before gunnery or maneuver training where the NBC system will be used.

The NBC system is a critical component of the M1A2 and provides our crews with increased protection when operating in a combat environment. This system requires proper servicing and checks as outlined in the TM. Ensure that all NBC sponson bolts and hardware are properly mounted and secure at all times; failure to do so could result in the buildup of dirt and dust within the NBC sponson box, with the potential for damage to the air cycle machine (ACM) and other components. 🚗

U.S. Army Safety Center Website,
<http://safety.army.mil/>

HAZARDS

- NBC filters/materiel location
- Technical manual, no defined standards
- Communications connections for driver
- Confusing fire evacuation procedures

CONTROLS

- Increased training for crews and maintainers on NBC system
- Review of the TM
- Establish a single fire evacuation drill
- Crew awareness of all NBC system functions



RESULTS ■ 1 fatality
■ 9 injured

Gasoline and Static Electricity-

A **BAD** Combination

Static electricity can make sparks fly—literally. Produce those sparks while pumping gas in your car, and both you and your car could go up in smoke and flames!

Researchers at the Petroleum Equipment Institute (PEI), as well as several other companies, are working on a campaign to try and make the public aware of fires as a result of static electricity at gas pumps. Out of an estimated 16 to 18 billion fuelings a year in the United States, most are safe non-events that pose no danger to consumers. However, PEI has documented more than 150 incidents of static electricity related fires at fuel pumps nationwide, with more than half occurring since 1999. Even though incidents related to static electricity at retail gasoline outlets are extremely unusual, all motorists should be aware of the potential that re-entering their car creates static electricity that could cause a fire.

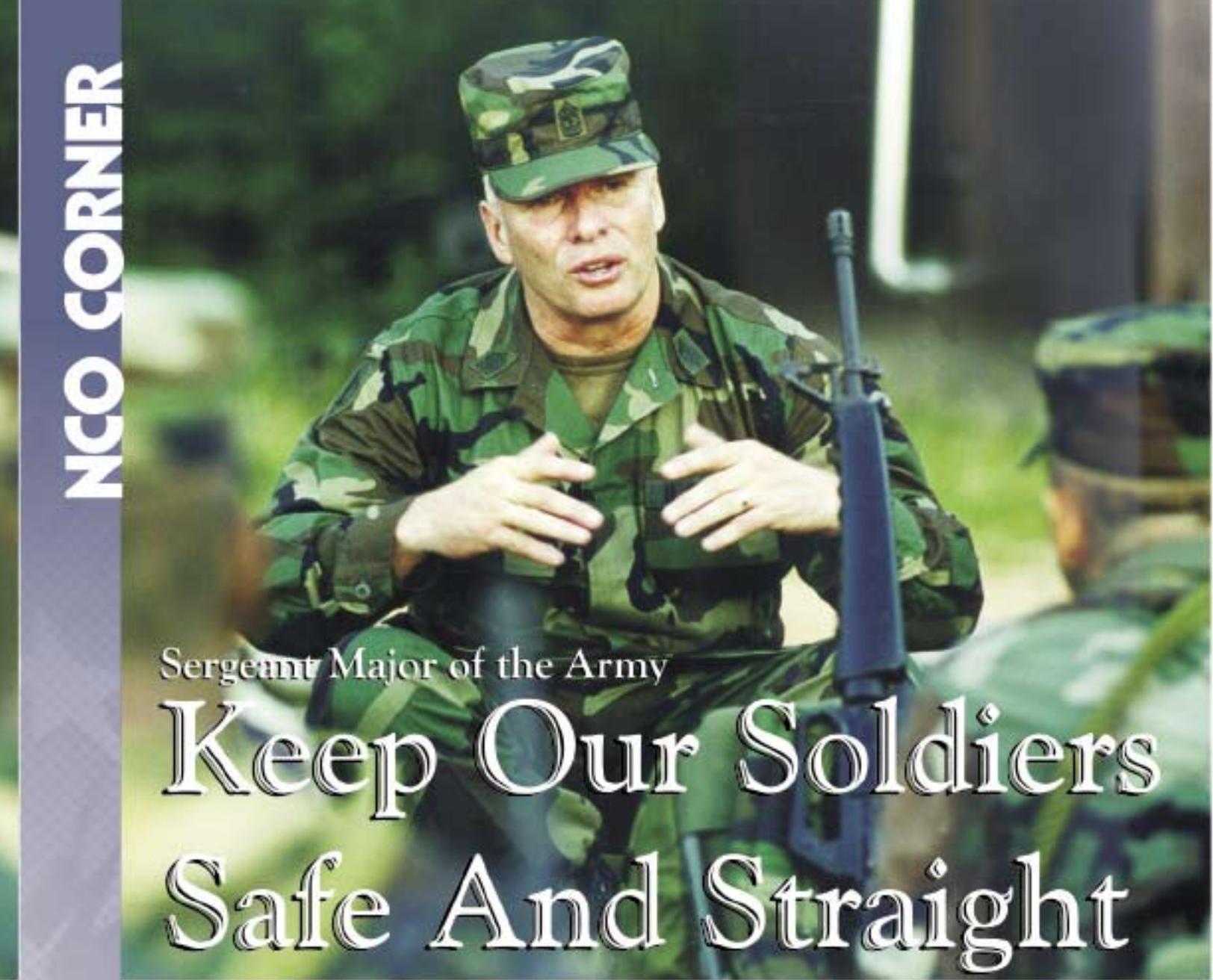
A buildup of static electricity can be caused by re-entering a vehicle during refueling, particularly in cool and dry climate conditions. If customers return to their vehicle's fill pipe when refueling is complete, the static could discharge at the fill point and cause a brief flash fire with gasoline vapors. To greatly minimize the likelihood of any buildup of static electricity, motorists should not get back into their vehicles during refueling. Customers who cannot avoid re-entering their car should always touch a metal part of the vehicle away from the fill point, such as a door, before removing the nozzle.

The following tips will help to keep you and your family safe at the gas pump year-round:

- Keep gasoline away from ignition sources such as heat, sparks, and flames.

- Do not smoke around gasoline, either at the pump or at home.
- Shut off the vehicle's engine when refueling and disable or turn off any auxiliary sources of ignition (i.e., camper/trailer heaters, cooking units, or pilot lights).
- Only store gasoline in containers with approved labels, as required by federal or state authorities. Never store gasoline in glass or unapproved containers.
- Place portable containers on the ground during filling, and keep the nozzle in contact with the container to prevent buildup and discharge of static electricity. Never fill a container in or on a vehicle.
- Manually control the nozzle valve throughout the filling process. Fill a portable container slowly to decrease the chance of static electricity buildup and minimize spilling or splattering.
- Fill containers no more than 95% full to allow for expansion.
- Place the cap tightly on the container after filling—do not use containers that do not seal properly.
- If gasoline spills on the container, make sure it has evaporated before you place the container in your vehicle.
- When transporting gasoline in a portable container, make sure it is secured to protect against tipping and sliding, and never leave it in direct sunlight or in the trunk of a car. 

Adapted from PEI and American Petroleum Institute press releases. More information can be found at www.pei.org and www.api.org.



Sergeant Major of the Army

Keep Our Soldiers Safe And Straight

The past several months have continued to be busy times for the Army, but despite this hectic pace I ask each of you to increase your focus on safety and standards. We cannot allow ourselves to be lax on either—soldiers' lives depend on both.

I am especially concerned about accidents so far this year. Our fatalities are up and more than 60 percent of accidental deaths involve

either tactical or privately owned vehicles (POVs).

We have to ensure that our soldiers, civilian employees, and family members are wearing their seatbelts, helmets, road guard vests, and other safety equipment. These simple devices save lives only if they are used. They don't help anyone if they are tucked in a closet or not wrapped over a shoulder. Risk assessments, safety briefings, spot checks, and corrections are vital to keeping our troops alive.

On a recent trip, I left a battalion run to make a soldier—in uniform and in a government vehicle—put on his seatbelt.

What was even more troubling was that there was an NCO in the passenger seat who was not enforcing standards.

This is not an anomaly; any of us could stand at an intersection at any post and spot dozens of soldiers driving by not buckled in. I need your help to ensure that first-line supervisors all the way up to post commanders continue to stress safety.

Our soldiers are our most valuable resource. We can't afford to lose them because we didn't try hard enough to ensure people put safety first. This starts with enforcing standards. As I have said before, we cannot lead from behind a desk. You can't mentor via e-mail. You have to be out front showing soldiers what "right looks like."

It's our job as NCOs to lead in every aspect. Soldiers deserve nothing less. We have outstanding leaders out there. Don't let complacency detract from those qualities. We must energize our efforts and not disregard mistakes. Deficiencies need to be corrected. Training needs to be realistic and hard. Soldiers need to be inspected. Height and weight standards must be met. Force protection must remain rigid.

I'm not talking about a revolutionary way of doing business. These are the basics. If we don't keep our soldiers safe and straight, lives will be lost. Soldiers will die in accidents that could have been prevented or because we were lax on standards. We cannot afford to pay that price. America has given us her brightest and best.

Lead. It's that simple. 

—Adapted from SMA Jack L. Tilley's Message to MACOMs/Corps, 9 August 2002

We Can Make a Difference!

We have made significant progress in soldier safety over the past decade, resulting in an approximate 50% reduction in Class A-C accidents and an estimated 10% decrease in fatalities.

So far this year, however, we have lost approximately 177 soldiers to accidents. When compared to the same time last year, this is about a 21% increase in fatalities. POV fatalities have increased by around 15%—roughly 97 of our soldiers lost to POV accidents. Almost an entire company gone forever. We can and must do better. We owe it to our soldiers and to the families who have entrusted us with their sons and daughters.

Statistics indicate that a large percentage of POV accidents possibly could be attributed directly to both poor discipline and a lack of standards enforcement. These same statistics show that you will have a serious injury or fatality in your unit if you don't take preventive steps. This is not somebody else's squad. This is not another division—this is all of us. This problem is an Army-wide issue and we must address it at all levels.

We have too many soldiers not using seatbelts and operating motorcycles without Department of Transportation (DOT)-approved helmets, safety equipment, and reflective clothing. Stand in the parking lot of any military facility and you will see examples of this. It does not require an MP to make this correction. It is called an "on-the-spot correction," and anybody can make one.

The standard is stated expressly in Army Regulation (AR) 385-55, *Prevention of Motor Vehicle Accidents*. Military or civilian personnel, active duty or reserve component, on or off duty, or on or off post, it does not matter: we are all required to wear seatbelts when operating motor vehicles and to use the proper safety equipment when riding a motorcycle. As leaders, we must take the time and effort to make the correction. It just might save a life.

Who is primarily responsible for enforcing the standard? The Non-Commissioned Officer. Us. We are the ones who can make it happen.

Let's tighten up our shot group. We are a championship team comprised of the finest warfighters in the world. It is time to get back to basics and demonstrate it. Mistakes cost lives in our world, but we know how to prevent them, so let's do it. The Army Safety Program belongs to commanders and NCOs at all levels.

The United States Army Safety Center (USASC) provides the tools to help unit leadership develop and implement an effective risk management program for their commands. These tools are easily obtained at the USASC website at <http://safety.army.mil/home.html>.

As NCOs, we make the program work. Together we can make a difference. 

SGM David Griffith
USASC

"It's our job as NCOs to lead in every aspect."

Hurricanes

Family Disaster Plan

This is the second part of a two-part series on hurricane preparedness.

Prepare for hazards that could affect your area with a family disaster plan. Where will your family be when disaster strikes? They could be at work, school, or in the car. How will you find each other? Will you know if your children are safe? Disaster may force you to evacuate your neighborhood or confine you to your home. What would you do if basic services—water, gas, electricity, or telephones—were cut off?

Steps to take

Gather information about hazards.

Contact your local National Weather Service office, emergency management office, or American Red Cross chapter. Find out what type of disasters could occur and how you should respond. Learn your community's warning signals and evacuation plans. Assess your risks and identify ways to make your home and property more secure.

Meet with your family to create a disaster plan.

Discuss your plan with your family. Pick two places to meet: a spot outside your home away from an emergency (such as fire), and a place away from your neighborhood in case you can't return home. Choose an out-of-state friend as your "family check-on contact" for everyone to call if the family gets separated. Discuss what you would do if advised to evacuate.

Implement your plan.

1. Post emergency telephone numbers by the telephone.

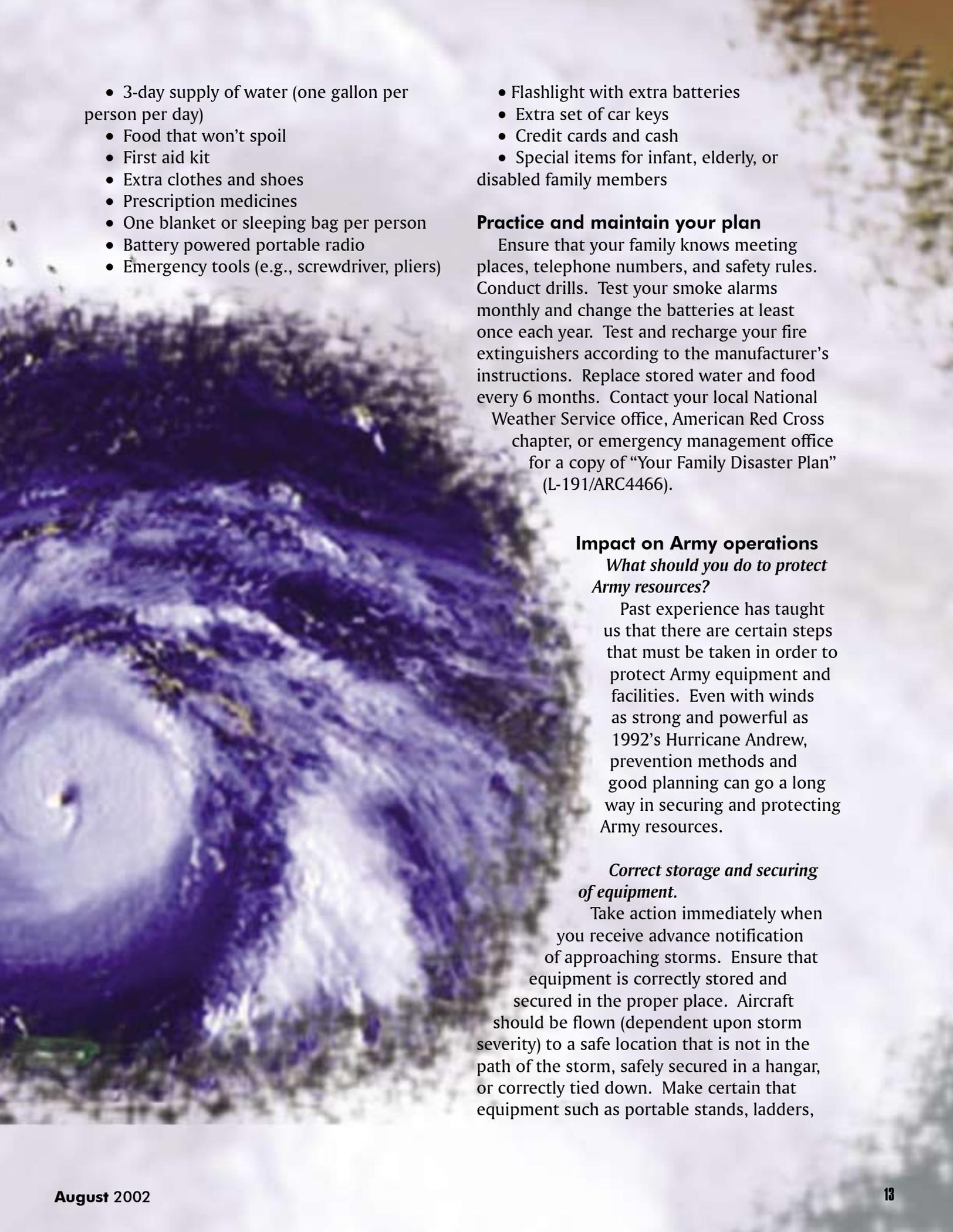
2. Install safety features such as smoke detectors and fire extinguishers in your house.

3. Inspect your home for potential hazards (items that can move, fall, break, or catch fire) and correct them.

4. Have your family learn basic safety measures such as CPR, first aid, fire extinguisher use, and water, gas, and electricity turn-off procedures.

5. Teach children how and when to call 911 or the local emergency medical services number.

6. Keep enough supplies in your home for at least 3 days. Assemble a disaster supply kit. Store supplies in sturdy, easy-to-carry containers such as backpacks or duffle bags. Keep important documents in a waterproof container. Keep a smaller disaster supply kit in your car. Items to include in a disaster supply kit include:

- 
- 3-day supply of water (one gallon per person per day)
 - Food that won't spoil
 - First aid kit
 - Extra clothes and shoes
 - Prescription medicines
 - One blanket or sleeping bag per person
 - Battery powered portable radio
 - Emergency tools (e.g., screwdriver, pliers)

- Flashlight with extra batteries
- Extra set of car keys
- Credit cards and cash
- Special items for infant, elderly, or disabled family members

Practice and maintain your plan

Ensure that your family knows meeting places, telephone numbers, and safety rules. Conduct drills. Test your smoke alarms monthly and change the batteries at least once each year. Test and recharge your fire extinguishers according to the manufacturer's instructions. Replace stored water and food every 6 months. Contact your local National Weather Service office, American Red Cross chapter, or emergency management office for a copy of "Your Family Disaster Plan" (L-191/ARC4466).

Impact on Army operations

What should you do to protect Army resources?

Past experience has taught us that there are certain steps that must be taken in order to protect Army equipment and facilities. Even with winds as strong and powerful as 1992's Hurricane Andrew, prevention methods and good planning can go a long way in securing and protecting Army resources.

Correct storage and securing of equipment.

Take action immediately when you receive advance notification of approaching storms. Ensure that equipment is correctly stored and secured in the proper place. Aircraft should be flown (dependent upon storm severity) to a safe location that is not in the path of the storm, safely secured in a hangar, or correctly tied down. Make certain that equipment such as portable stands, ladders,



carts, etc., is stored in the proper place. Experience has shown that these items can be picked up by the wind and literally thrown into aircraft and equipment, causing damage that otherwise would not have occurred had it been stored correctly.

The same standard applies for ground vehicles and equipment. If possible, store ground vehicles inside a building and ensure that extraneous lightweight equipment, tools, and objects are stored correctly and secured properly to prevent them from becoming flying objects.

Utilities must be shut off and facilities prepared as much as possible to prevent damage. Follow your local standing operating procedure (SOP) for disaster situations. Every installation must maintain an SOP for each natural disaster that is prevalent for that location.

When emergencies occur, people tend to abandon safety in an effort to perform

the mission. In preparing for disasters, and then in the subsequent rescue and cleanup operations, it is imperative to perform to standard. If standards do not exist, then they must be established. Require all personnel to perform to standard in all operations. Establish a command climate from the outset that promotes safety. Begin by establishing a safety network and designating safety personnel.

In rescue and cleanup operations, make certain that arriving troops are given the opportunity to rehydrate and rest *before* being assigned duties. Remind soldiers to avoid strains and lifting injuries by lifting correctly. Remind soldiers to use teamwork. Fatigue will only lead to more accidents, so adequate rest is imperative.

When issuing equipment, make absolutely certain that the person who is receiving the equipment knows how to use it safely. In cleanup operations after Hurricane Andrew and other natural disasters, equipment such as chainsaws was issued to Army personnel clearing debris. Chainsaws and other such equipment can be dangerous if used improperly and without proper instruction. Safety personnel working with the cleanup crew quickly realized the error, and that error was corrected.

Operate according to the “crawl before you walk, walk before you run” philosophy, especially in an unfamiliar environment. It is a tragedy to lose personnel in a natural disaster, but inexcusable to lose them in cleanup operations. 🚢

Did You Know?

1900 Hurricane

In terms of loss of life, the greatest natural disaster to strike the U.S. was the Galveston, Tex. 1900 Hurricane. An estimated 6,000 to 8,000 individuals lost their lives as a result of this devastating storm that struck the small barrier island in early September 1900. More people died during this hurricane than all fatalities combined from the 325 tropical storms and hurricanes that have occurred since then.



The 1900 Hurricane that struck Galveston, Tex. devastated not only property within the booming town, but the population as well. An estimated 6,000 to 8,000 people lost their lives in the storm.

Hurricane Andrew

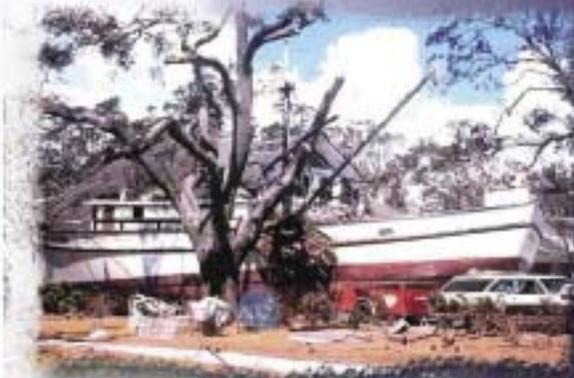
In terms of property damage, 1992's Hurricane Andrew was the costliest hurricane to make landfall in the U.S., with an estimated \$26.5 billion in damage left in its wake. One of Hurricane Andrew's biggest impacts on the economy of south Florida was the complete destruction of Homestead Air Reserve Base, which resulted in an annual loss of \$430 million in economic activity and 11,400 jobs. When Andrew hit the southern tip of Florida in August 1992, it was classified as a category 4 hurricane, with winds of up to 175 mph recorded. Twenty-three people were killed.



A damaged F-16 sits at the devastated Homestead ARB after Hurricane Andrew ripped through southern Florida in August 1992.

Hurricane Camille

Category 5 hurricanes are fortunately rare, with only two striking the U.S. during the 20th century. The first, the 1935 Florida Keys Labor Day Hurricane, left 423 dead. The second category 5 storm, Hurricane Camille, made landfall on the Mississippi coast on 17 August 1969, bringing with it maximum sustained winds of 190 mph and gusts of up to 220 mph. The death toll from Camille was 256, with 143 killed along the Gulf Coast and an additional 113 in the Appalachians, where its remnants caused massive flooding in the days following landfall. 



Hurricane Camille's 25-foot storm surge and 200 mph winds brought death and destruction to Mississippi's Gulf Coast.

Protect Yourself Against

WEST NILE VIRUS

In recent months, a new outbreak of West Nile Virus (WNV), a mosquito-borne illness, has been reported throughout the United States. Department of Defense (DoD) installations have not been immune to WNV—infected mosquitoes have been found at Forts Myer, McNair, and McPherson, the Pentagon, and Andrews Air Force Base. Fortunately, no human infections have been reported among DoD personnel or their families at those or other installations; however, all military personnel should take the necessary precautions to protect themselves and their families from the potentially deadly illness.

Before an outbreak in New York City in August 1999, no cases of WNV had ever been documented in the Western Hemisphere. During that time, 62 human cases, including 7 deaths, were confirmed in the New York area. The following year, 21 cases, including 2 deaths, were reported in 3 states. As of September 2001, WNV had been confirmed in 22 states and Washington, D.C. At the present time, at least 36 confirmed cases of WNV and WNV-related deaths have been reported in 33 states as far north as North Dakota, south to Texas, east to Florida, and north to the New England states, with Mississippi and Louisiana being hit hardest. In addition to humans, WNV has been found in a wide variety of North American species, including birds and horses. Although WNV occurs primarily in late summer and early fall, it can be transmitted year-round in southern climates.

WNV is spread to humans through the bite of infected mosquitoes, who become infected by feeding on birds that carry the disease. Although there is no evidence that a human can get WNV by handling dead birds or infected horses, gloves should always be worn when handling dead animals, and double-plastic bags should be used for their disposal.

If you suspect your dog, cat, horse, or other pet has been infected with WNV, contact your veterinarian immediately. WNV is not transmitted from one person to another.

A person's chance of becoming seriously ill from any one mosquito bite is extremely small (less than 1% of humans bitten by an infected mosquito develop severe symptoms). However, the flu-like symptoms of WNV—fever, headache, and body ache—should not be ignored. In a small number of cases, particularly among the elderly, the disease is much more serious and can cause encephalitis, or an inflammation of the brain. Although there is no specific treatment for WNV, its symptoms and complications can be managed and treated.

To reduce your and your family's risk of becoming infected with WNV, follow these tips:

- Stay indoors at dawn, dusk, and early evening (hours when mosquitoes are most active).
- Wear a long-sleeved shirt, long pants, and socks when you are outdoors, and wear loose-fitting clothing to prevent bites through thin fabrics.
- Use Environmental Protection Agency (EPA)-approved insect repellents. For your skin, use a product that contains 20% to 50% DEET, and apply the product sparingly and evenly to exposed skin, avoiding eyes, lips, and broken or irritated skin. Use DEET sparingly on children and don't apply the product to their hands. Always wash the DEET-based product off when your exposure to mosquitoes ends.
- For your clothing, use an insect repellent spray that contains either DEET or permethrin (available commercially as a 0.5% spray formulation). Permethrin should be used only on clothing, never on exposed skin.
- Soldiers should utilize the DoD Insect Repellent System for optimum protection

against mosquito bites and WNV. In addition to proper wear of the battle dress uniform (BDUs), which provides a physical barrier to insects, this system includes the concurrent use of both skin and clothing repellents. The standard military skin repellent is the 33% DEET long-acting formulation (one application lasts up to 12 hours) (NSN 6840-01-284-3982). There are two standard military clothing repellents to choose from: an aerosol 0.5% permethrin spay (one application withstands five to six washes) (NSN 6840-01-278-1336); or a 40% permethrin impregnation kit (one application lasts the life of the uniform) (NSN 6840-01-345-0237).

- During field training exercises, the proper use of bed nets and repellents should be enforced.

Ensure bed nets are intact, without holes or rips.

- Eliminate mosquito breeding sites by emptying water from birdbaths, old tires, and other outdoor containers or debris.

- Empty and refresh pet water dishes, watering troughs, and birdbaths at least once a week.

- Ensure that garbage cans and receptacles have tight-fitting lids.

- Clean debris from rain gutters and remove any standing water under or around structures or on flat roofs.

- Check around faucets and air conditioner units and repair leaks or puddles that remain for several days.



- If you have a swimming pool or spa, keep it chlorinated and, when not in use, cover. Empty children's wading pools immediately after use.

- Store small boats upside down and cover large boats. Make sure the drain plug is removed so standing water can drain from the boat.

- Stock ornamental pools with "mosquito fish" (contact your local health department or mosquito abatement district for information on these fish).

- Irrigate lawns and gardens carefully to prevent standing water.

- Adult mosquitoes rest on weeds and other vegetation. Remove brushy areas from around structures and mow your lawn regularly.

- Ensure that door and window screens do not have holes.

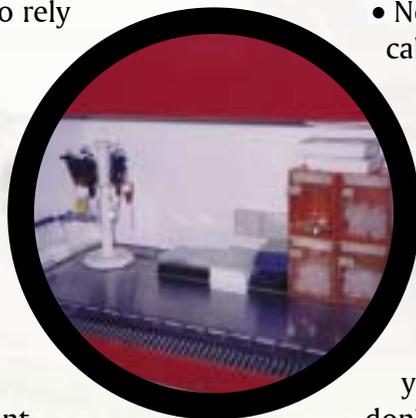
- Vitamin B, ultrasonic devices, and bug "zappers" are NOT effective in preventing mosquito bites.

More information on WNV can be found at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm> and <http://chppm-www.apgea.army.mil/westnilevirus/>.

Adapted from the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Entomological Sciences Program September 2001 bulletin

BSC The "S" Stands for Safety

For those workers who rely on the protection of a biological safety cabinet (BSC), does the interior of your cabinet resemble this photo? If so, then a review of some basic work practices is in order. First, a BSC is not a glove box. It is not totally enclosed. It has an open front and is designed to protect the product and the environment using HEPA (high-efficiency particulate air)-filtered air, while inward airflow protects the worker. When operating according to the manufacturer's specifications and used correctly, BSCs greatly reduce the chance of your product being contaminated and, more importantly, you being contaminated. Before you begin work in a BSC, consider the following safe work practices:



- Contact your industrial hygienist or safety officer to ensure you have the proper cabinet for the type of work you are doing. Class II BSCs provide worker, product, and environmental protection, while Class I BSCs only protect the worker and the environment—not the product.

- Ensure your BSC is certified annually or following maintenance or relocation of the cabinet.

- Leave the cabinet blower running at all times. If your lab standing operating procedure (SOP) does not allow this, then allow the blower to run approximately 3 to 5 minutes before beginning work to purge the air that is in the cabinet. Likewise, allow the blower to run 3 to 5 minutes following work.

- Never use volatiles or an open flame in the cabinet, especially inside the cabinets, which recirculate the majority of air. Otherwise, dangerous gases or vapors could accumulate in the cabinet, leading to an explosion hazard. An open flame could also damage the HEPA filter.

- Immediately after entering the lab, turn off the ultraviolet (UV) light if your cabinet is equipped with one. Also, don't rely on the UV light for disinfection. The UV light must be operating at the correct wavelength in order to have germicidal properties. Just because you see a blue light does not mean it is operating at the correct wavelength. Dust and dirt on the UV light can minimize the effects of UV germicidal properties.

- Before beginning work and before beginning a new procedure, always disinfect the interior surfaces of the cabinet. Use the proper disinfectant for the microorganism you are targeting. Ethanol may not always be the best choice.

- Place only items needed for a particular procedure in the cabinet. Placing extraneous items inside the cabinet increases the chances of product contamination and could disrupt airflow and possibly contaminate you, the worker.

- Minimize traffic around the cabinet while you are working. Even minor movement can disturb greatly the airflow in the cabinet, increasing the chances of you or your product becoming contaminated. 🐾

POC: LTC Heidi Overstreet, Chief, Policy and Programs Division, DSN 558-2477, 334-255-2477, e-mail heidi.overstreet@safetycenter.army.mil



ACV

Class A

- Reported explosion and fire in an M1A1, resulting in fatal injuries to two crewmembers.



AMV

Class A

- Forklift overturned while downloading an ammunition pallet from a commercial carrier, fatally injuring a Department of the Army Civilian.

- HMMWV departed the roadway for unknown reasons and overturned, ejecting the driver. The driver died of his injuries 3 days later.

- A 5-ton truck overturned on a downgrade, resulting in three fatalities.

Class B

- While performing ground guide activities for a crane, a soldier caught his hand between the crane deck plate and a piece of equipment, resulting in amputation of his finger.



Personnel Injury

Class A

- Soldier died while conducting the Land Navigation Course.

- Soldier was struck and killed by vehicle while walking home from a local tavern.

- Soldier was participating in a recreational fun run when he collapsed. Soldier died the following day.

- Soldier collapsed during diagnostic APFT and died 8 days later.

- Soldier collapsed following organized PT and died at the local medical facility.

- Soldier collapsed during cool-down lap following a 1-mile diagnostic PT run and was pronounced dead at the scene.

- Soldier collapsed during a PT run and subsequently died.

- Soldier collapsed during cool-down lap after PT test. Attempts to revive soldier were unsuccessful.

- Soldier had been swimming with fellow soldiers when he was observed to be struggling in the water. Soldier was retrieved from the pool after several attempts and was pronounced dead at the local medical facility.

- Soldier drowned while swimming in a lake.



POV

Class A

- Soldier died when his POV was struck from behind by a POV driven by another soldier.

- Soldier sustained fatal injuries when his motorcycle was struck by another vehicle.

- Soldier pulled into roadway and was broadsided by a truck carrying steel beams. The driver was ejected from his POV and covered by the steel beam cargo, resulting in fatal injuries.

- A soldier's POV rolled several times, resulting in fatal injuries to one soldier and critical injuries to another.

- Soldier rolled his POV and was ejected, resulting in fatal injuries.

Class B

- Soldier's POV struck a median and overturned, resulting in amputation of the driver's leg. 



It takes more than tanks and guns and planes to win.
It takes more than masses of men.
It takes more than heroism, more than self-sacrifice,
more than leadership.
Modern war requires trained minds.
The days of unthinking masses of manpower are over.
Individual intelligence, individual understanding,
and individual initiative in all ranks will be powerful
weapons in our ultimate success.

General Brehon Somervell, Public Addresses, 1941-1942





ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 9

<http://safet>

SEPTEMBER 2002

COLD Weather SAFETY

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3** DASAF's Corner
- 4** Cold Weather: Know the Threat
- 7** Winter Driving: Are You Ready?
- 10** Ammunition Safety Risk Assessment and Management
- 12** Get to Know Your Privately Owned Weapon!
- 14** Bag One for Safety
- 16** Think Before You Climb
- 19** Accident Briefs
- 20** In Memoriam

features



BG James E. Simmons
Commander/Director of
Army Safety

LTC Richard Pryke
Publishing Supervisor

COL John Frketic
Deputy Commander

Julie Shelley
Writer/Managing Editor

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

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use FAX 334-255-3003 (Ms. Julie Shelley) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



The Basics of Accident Prevention

Executing our missions in support of Operation Enduring Freedom requires a high state of readiness that, in turn, makes it even more imperative that we not allow accidents to degrade our ability to accomplish those missions.

Everyday we expose our soldiers to hazards in uncertain and complex operational and training environments. Increased mission optempo, leader inexperience, and constant changes with personnel resource issues in terms of time, equipment, etc., are all present. None of these elements alone are the inherent cause of accidents. However, when left uncontrolled, seemingly low-risk hazards can collectively raise risk to an unacceptable level. The cumulative effect of these risks could create breakdowns in leadership, discipline, training, and standards, which in turn can quickly set the accident chain of events in motion.

In fact, an analysis of FY02 Class A accidents reveals that breakdowns in discipline, leadership, training, and standards were the main contributing causes of these accidents. Data also supports that, in many cases, the accident didn't just happen on the day of the helicopter crash or the tank rollover. Sometimes the sequence of events that culminated in the accident started days, weeks, and even months before—and not always at the accident unit level.

If we understand what is causing our accidents, the logical follow-on question is, “How do we prevent them?” The preventive answer doesn't lie in the development of some new program with a catchy slogan. The answer lies in what I call “the basics.” As I've stated many times, my personal belief is that **“Units that participate in tough, well-disciplined training—with technically and tactically competent leaders present—have significantly fewer accidents.”** Today, I'm more convinced than ever that leadership (theater, corps, division, brigade, battalion, and company) involvement while executing aggressive, realistic training and real-world missions—combined with effective risk management and strict enforcement of discipline and adherence to standards—are the primary tools that can prevent accidents and save lives.

Our great Army is built on a tradition of discipline and clearly defined standards. Good leaders who are responsible and accountable have no trouble enforcing either. Risk management is the bedrock of our safety culture. Good leaders not only enforce discipline and standards, they understand and apply risk management effectively—and they ensure the soldiers in their command can do so as well.

Risk management is the tool that helps us identify hazards and reduce risks to our soldiers, thus allowing us to successfully operate in high-risk environments with minimal losses. For maximum effectiveness, it has to be a closed-loop, cyclic five-step process: identify hazards, assess hazards, make the right risk decisions, put controls in place, and supervise. The process must start with planning and continue throughout execution and the after-action reviews.

As an Army, we are fully engaged in prosecuting this war on terrorism and, at the same time, continuing to transform our Army into a more agile, lethal, and deployable force. Recently signed by the Secretary of the Army and Chief of Staff of the Army, the Army Safety Strategic Plan (<http://safety.army.mil/StrategicPlan2002.PDF>) is our roadmap for ensuring that, in conjunction with transforming our Army, we are **safely** transforming our Army by fully integrating risk management and safety into each of the 14 lines of operation within the Army Transformation Campaign Plan.

From the Army strategic level to the individual level, risk management is the accepted process for preventing accidents. On the individual level, I challenge all of you—every soldier and civilian alike—to make a renewed personal commitment to thoroughly understand and practice risk management until it becomes intuitive. Risk management is probably the most important five-step process that any of us will ever learn. Embrace it and practice applying the entire process in everything you do, both on and off duty. The more you practice risk management, the easier it becomes.

Cold Weather Know the Threat!

Risk management is a solid accident prevention program. It affords us the capability to conduct those tough, realistic training missions that replicate combat conditions while minimizing losses due to accidents. It is incumbent upon each of us to apply the process to all that we do and execute every mission to the risk management standard—an informed decision at the appropriate level.

I recognize that there is some concern that junior officers and NCOs lack experience in the application of risk management. We are currently working with TRADOC to ensure we have embedded risk management education from pre-commissioning through the Division Commander's Course, and to make certain that we have embedded appropriate levels of risk management education and training in NCOES from PLDC through the Sergeants Major Academy.

If you need help in the form of risk management training at the unit or MACOM level in integrating risk management into operational plans to execute the objectives within the Army Safety Strategic Plan, the Safety Center team is standing by to assist. Contact our risk management mobile training team at DSN 558-9854/3790 (334-255-9854/3790) or our Army Safety Strategic Plan coordination team at DSN 558-3367 (334-255-3367).

Any failure to manage risks at either the strategic, operational, tactical, or individual level could well result in a much higher price than we are willing to pay. The payoff of doing it right will be accidents avoided and lives saved. ✪

Train Hard, Be Safe!
BG James E. Simmons



If you don't know the threat, you really can't fight the battle well. The threat of cold weather is no exception; many generals have lost the battle of the cold. Napoleon learned this in 1812 when, during his retreat from Russia, he lost 250,000 soldiers as a result of the cold. In the Crimean War (1852-1856), 5,215 French soldiers succumbed to the cold, and 1,178 died. During the same war at the Battle of Sevastepol, 2,800 British soldiers suffered horrible cold weather injuries, and 900 of those died.

Things didn't get much better early in the 20th Century. During World War I, the British had 115,000 cases of all types of cold injuries. During the Dardanelles campaign, the British sustained 14,500 cold weather casualties. In World War II, the Germans failed to learn from Napoleon. On the eastern front between December 1941 and January 1942, 100,000 German soldiers suffered frostbite, resulting in 15,000 amputations.

The U.S. Army has not been immune to the cold, either. During World War II, records show 46,000 cold injuries in the European theater from autumn 1944 to spring 1945. In the Korean War, it is estimated that nearly 10 percent of all wounds were related to cold injuries.

The good news is that we learned valuable lessons from those incidents. Today we have better equipment and training: cold injuries, even during initial deployment to places like Bosnia and Kosovo, are rare indeed. However, they will stay rare only if you know the threat.

That's when a leader's job of protecting soldiers gets tougher. Leaders must watch for early signs of cold stress in their soldiers. The most dangerous of these threats are shown in the chart on page 6.

Plan for the cold

The most important element of cold protection is planning for the cold. Ensure that you have accurate weather information for the area and time of the mission. Be particularly aware of rain, snow, and winds (wet conditions and windchill greatly increase the chance of injury). Ensure soldiers have appropriate cold weather clothing.

Weather:

If the tactical situation permits, use covered vehicles for troop transport. Have warming tents or areas available, if possible. Have warm drinks and food on hand.

Wear the right clothes the right way

The most important individual preventive measure is the proper wearing of cold weather clothing and boots. Some soldiers think wearing every article of cold weather clothing issued is the way to go. Wrong!

This can cause overheating and dehydration or restrict circulation in the extremities, which can increase the risk of frostbite. All cold weather clothing should be worn loose and in layers; this allows for insulation by air trapped between the layers. Socks should be changed frequently and boots rotated.

Proper wear of boots is important. You don't wear jungle boots in the snow, and you shouldn't wear intermediate cold weather boots (Gore-Tex™ lined, like Matterhorn™ boots) indoors and out, year-round. Wet or damp boots need to be dried with warm air whenever possible. If boots are removed at night and moisture in them freezes, it can be just like sticking your feet in ice cubes the next day—a perfect setup for a cold injury.

It is important to keep clothing clean and dry. Dirt, oil, or water can increase the rate of heat loss by reducing the insulation ability of the clothes. It is also important to keep clothing repaired—a broken zipper cannot keep the cold out. Headgear is extremely important; the body can lose large amounts of heat through the head.

It is also important to protect hands and fingers by wearing proper gloves. Nomex™ aviator gloves may be light and flexible and look cool, but they are designed to protect from fires, not extreme cold, and will do little to protect your hands when they are wet. Unless specifically authorized, they should not be worn.

Other contributing factors and prevention techniques

By knowing some of the other factors that

contribute to or prevent cold injury, you can further protect yourself.

- **Previous cold injuries.** Soldiers with previous cold injuries are more susceptible to another one. These soldiers must be identified, and first-line supervisors should monitor them closely.

- **Tobacco.** Nicotine, regardless if it comes from a cigarette, snuff, pipe, or cigar, causes blood vessels to constrict. This is particularly dangerous in the hands and feet and can lead to or worsen a cold injury.

- **Alcohol and caffeine.** These substances can lead to increased urination and subsequent dehydration.

- **Meals.** If you skip meals, the first thing the body does is slow the metabolism. Slower metabolism means less heat production and an increased chance of cold injury.

- **Activity.** Huddling up and not moving is the wrong thing to do. The more you move, the more heat you produce. Decreased activity decreases the time it takes to get an injury.

- **Buddy system.** The buddy system is a great way to help prevent injuries, if soldiers are trained to know what to look for.

- **Self-checks.** A simple self-check is to pinch a fingernail and watch how fast the blood returns to your finger. The slower the return, the higher the potential for a cold injury to the fingers or toes.

- **Other information.** More information on cold injuries can be found in Field Manual (FM) 21-10, *Field Hygiene and Sanitation*; FM 21-11, *First Aid for Soldiers*; Graphic Training Aid (GTA) 5-8-12 (this is a good pocket guide for soldiers); Technical Note 92-2, *Sustaining Health and Performance in the Cold: Environmental Medicine Guidance for Cold-Weather Operations*, published by the U.S. Army Research Institute of Environmental Medicine; and FM 21-76, *Survival*.

Prevention is key

All cold weather injuries are preventable! Prevention is the responsibility of leaders at all levels, as well as the individual soldier. We have learned the lessons of unpreparedness from soldiers who have gone before us. Cold injuries are always a threat in cold environments; however, only by proper planning and training for cold weather operations can we beat them. 🐻

Reprint from September 2001 Countermeasure

Cold Weather Injuries Chart

Dehydration

- Cause**
- Depletion of body fluids.
- Symptoms**
- Dizziness.
 - Weakness.
 - Blurred vision.
- First Aid**
- Replace lost water. Water should be sipped, not gulped.
 - Get medical treatment.

Chilblain

- Cause**
- Repeated exposure of bare skin for prolonged periods to temperatures from 20 to 60°F (for those not acclimated to cold weather).
- Symptoms**
- Swollen, red skin (or darkening of the skin in dark-skinned soldiers).
 - Tender, hot skin, usually accompanied by itching.
- First Aid**
- Warm affected area with direct body heat.
 - Do not massage or rub affected areas.
 - Do not wet the area or rub it with snow or ice.
 - Do not expose affected area to open fire, stove, or any other intense heat source.

Immersion Foot (Trench Foot)

- Cause**
- Prolonged exposure of feet to wet conditions at temperatures between 32 and 60°F. Inactivity and damp socks and boots (or tightly laced boots that impair circulation) speed onset and severity.
- Symptoms**
- Cold, numb feet may progress to hot with shooting pains.
 - Swelling, redness, and bleeding.
- First Aid**
- If you suspect trench foot, **get medical help immediately.**
 - Rewarm feet by exposing them to warm air.
 - Evacuate victim to a medical facility.
 - Do not massage, rub, moisten, or expose affected area to extreme heat.

Frostbite

- Cause**
- Freezing of tissue, normally due to exposure below 32°F. Parts most often affected include fingers, toes, ears, and other facial parts.
 - Exposure to bare skin on metal, extremely cool petroleum, oil, and lubricants (POL), wind chill, and tight clothing—particularly boots—can make the problem worse.
- Symptoms**
- Numbness in affected area.
 - Tingling, blistered, swollen, or tender areas.
 - Pale, yellowish, waxy-looking skin (grayish in dark-skinned soldiers).
 - Frozen tissue that feels wooden to the touch.
- First Aid**
- **Frostbite is a medical emergency! Consult medical personnel immediately and evacuate the victim as soon as possible. If not treated properly, frostbite can lead to gangrene and amputation.**
 - Start first aid immediately. Warm affected area with direct body heat.
 - Do not thaw frozen areas if treatment will be delayed.
 - Do not massage or rub affected areas.
 - Do not wet the area or rub it with snow or ice.
 - Do not expose affected area to open fire, stove, or any other intense heat source.

Hypothermia

- Cause**
- Prolonged cold exposure and body-heat loss. May occur at temperatures well above freezing, especially when a person is immersed in water.
- Symptoms**
- Lack of shivering.
 - Drowsiness, mental slowness, and lack of coordination. Can progress to unconsciousness, irregular heartbeat, and death.
- First Aid**
- **This is the most serious cold exposure medical emergency and can lead to death! Get the soldier to a medical facility as soon as possible.**
 - **Never assume someone is dead; victims with temperatures as low as 82°F have been revived. In extreme cases, the pulse and breathing can be so low as to be nearly undetectable.**
 - Strip off wet clothing and wrap victim in blankets or a sleeping bag.
 - Place another person in sleeping bag as an additional heat source.

Winter Driving: *Are You Ready?*

Winter driving can be inconvenient, annoying, even infuriating, but most of all—DANGEROUS! Winter is the most difficult driving season. Not only do you have snow and ice to deal with, but there are fewer hours of daylight as well. However, you can offset those aggravations and minimize the special risks of winter driving by following a few simple steps and taking certain precautions before and during driving.

Getting started: pre-check

Here are some routine precautions to help you avoid starting problems:

- Get an engine tune-up in the fall.
- Switch to winter-weight oil if you aren't already using all-season oil.
- Be sure all lights are in good working order.
- Have the brakes adjusted.
- Battery and voltage regulators should be checked.
- Make sure battery connections are good.
- If the battery terminal posts seem to be building a layer of corrosion, clean them with a paste of baking soda and water. Let the paste foam, and then rinse with water. Apply a thin film of petroleum jelly to the terminal posts to prevent corrosion and reconnect.
- Be sure all fluids are at proper levels.
- Antifreeze should not only be strong enough to prevent freezing, but fresh enough to prevent rust.
- Make sure wiper blades are cleaning properly. Consider changing to winter wiper blades, which are made for driving in snow. Winter blades are covered with a rubber boot to keep moisture away from working parts of the blade.

Equipment and supplies

Here's what you'll want to have on hand, especially in an emergency:

- Snow shovel
- Scraper with a brush on one end
- Tow chain or strap
- Tire chains
- Flashlight (with extra batteries)
- Abrasive material (cat litter, sand, salt, or traction mats)
- Jumper cables
- Warning device (flares or reflective triangles)
- Brightly colored cloth to signal for help
- Empty coffee or similar type can containing candles, matches (in a watertight container) or lighter, and high-energy food (e.g., dried fruit)

Driving

- Before winter weather arrives, make sure your vehicle is in good condition, especially the tires.
- Make sure you've got good snow tires, and put them on early. Try not to get caught without them in the first snowfall. Never combine radial and non-radial tires on the same vehicle. It's best to put snow tires or all-season tires on all four wheels, not just the front.
- If you must drive, clear the ice and snow from your vehicle, including all windows and the windshield wipers. Be sure the windshield washer reservoir is adequately filled with a freeze-resistant cleaning solution.
- Plan your route.
- Be familiar with maps and directions to avoid confusion.
- Check weather reports and adjust starting times accordingly.
- Let others know what your route will be and give an estimated arrival time.
- Always fill the gasoline tank before entering open country, even for a short distance, and stop to fill up long before the tank begins to run low. Keeping the gas tank as full as possible will minimize condensation, providing the maximum advantage in case of trouble.
- A citizens band (CB) radio and/or cellular phone can be very useful to you or another stranded motorist in case of an emergency. Remember, pull off the road to talk on a cellular phone.
- In heavy snow, keep your low beams on, as well as fog lights (if available).
- **Drive slowly!** Even if your vehicle has good traction in ice and snow, other drivers will be traveling cautiously. Don't disrupt the flow of traffic by driving faster than everyone else. Remember how far it takes to bring your car to a stop on dry pavement? In winter conditions, allow at least three times that distance to reach a full stop and avoid skidding. This means your safe distance behind the car in front of you should be three times as far as in dry weather, and you must begin braking three times as far away from the stoplight or corner where you turn. In a rear-wheel drive vehicle, you can usually feel a loss of traction or the beginning of a skid. However, there may be no such warning in a front-wheel drive vehicle.

Skids

Despite a popular misconception, the best approach to recovering from a skid is the same for both front- and rear-wheel drive vehicles.

If your vehicle wheels start to skid:

- Recovering from a rear-wheel skid: in a rear-wheel skid, the front wheels are heading into the turn, but the rear wheels are continuing in their original direction, which means that the rear end of the vehicle is quickly catching up with the front end. You need to keep the front wheels ahead of the rear wheels and, to do this, you have to reverse the actions that initiated the skid—reduce speed by lifting your foot off the accelerator, and un-turn your steering wheel. The easiest and most natural way to do this is to look in the direction you want to go and gently steer towards it.

- Recovering from a front-wheel skid: in a front-wheel skid, the front wheels are turned but are continuing in their original direction, and the rear wheels are only along for the ride. When an under steer occurs, the natural tendency is to turn the steering wheel more, but it was turning that created the problem in the first place. What you need to do is get the front wheels rotating in the same direction as they are traveling. To do this, you must reduce speed by lifting your foot gently off the accelerator and straighten the front wheels, actually turning away from where you want to go and towards the direction you are skidding. There is no easy or natural way to do this. By simply reducing speed, some of the weight of the car will be transferred to the front tires, which will serve to increase their grip on the road surface and straighten out the front wheels, which will be inclined to start rotating in the direction they are traveling.

- If your car has an antilock braking system (ABS), keep your foot on the pedal. If not, pump the pedal gently, pumping more rapidly as your car decelerates.

Braking hard with non-antilock brakes will make the skid worse.

To avoid skids, brake carefully and gently on snow or ice. Squeeze your brakes in slow, steady strokes. If your vehicle has ABS, do not pump the brakes; instead, apply a steady pressure and allow the wheels to keep rolling. If your brakes start to lock, ease off the brake pedal. As you slow down, you may also want to shift into a lower gear.

When sleet, freezing rain, or snow starts to fall, remember that bridges, ramps, and overpasses are likely to freeze first. Also be aware that slippery spots could still remain after road crews have cleared the highways.

Getting unstuck

If you should find yourself stuck, here's what to do:

- Turn your wheels from side to side a few times to push snow out of the way. Keep a light touch on the gas and ease forward.

- Don't spin your wheels—you'll just dig in deeper.

- Rocking the vehicle is another option, but be sure to check your owner's manual first; rocking can damage the transmission on some vehicles.

- Shift from forward to reverse and back again.

Each time you are in gear, give a light touch on the gas until the vehicle gets going.

- For front-wheel drive vehicles, snow tires should be on the front—the driving axle—for better traction in mud or snow.

If you get stranded...

You may feel helpless, stuck in the snow in a lonely

GETTING THINGS STARTED IN COLD WEATHER

As most of us know, operating in cold weather can bring many challenges.

Things as simple as preventing drinking water from freezing in the field and protecting soldiers from cold weather injuries can prove trying in harsh winter conditions.

What about our equipment? Are there different procedures for operations in a cold weather environment? As a maintenance officer, I can tell you operating in the cold does present numerous opportunities

for mission failure because of equipment damage or personnel injuries. But as a safety officer, the scope and hazards can and will be much larger.

When operating equipment in extreme climates, be it an aircraft or a vehicle, the operator's manual will have specific procedures to follow. On the aviation side, it's a good idea to stay on the auxiliary power unit with the heat on, allowing the black boxes to warm up a little before hitting them with a

power surge. After all, when we roll out of the sleeping bag on a cold morning, it takes us standing around the stove and a few cups of coffee to get started. Just remember, give those systems that electric cup of joe before asking them perform.

Well, the systems are now up and running and ready to go—right? Wrong! Yes, we have done the right thing with our electronic systems. Now what about the mechanical systems? Transmissions, gearboxes, even tires need to be warm

place, but there are things you can do to survive until help reaches you.

- Stay in the vehicle.
- Don't wander—you could get lost or frostbitten.
- Run the engine for heat about once every hour, or every half-hour in severe cold.
- Clean snow from around the end of your car's tailpipe to prevent carbon monoxide buildup.
- For extra heat, burn a candle inside a coffee can, but don't set the can on fabric.
- Make sure the vehicle is NOT airtight by cracking a window, and leave one window cracked open.
- Clear outside heater vents (the grill under the windshield).
- Avoid alcohol—it lowers body temperature and causes drowsiness.
- Remember that freezing winds and driving, wet snow can quickly seal a vehicle.
- Signal to other motorists that you're stranded by using flares or flashlights, or by tying a piece of brightly colored cloth to the radio antenna.

Ice

Expect icy conditions any time the outside air temperature reaches 40 degrees F or lower. Although water freezes at 32 degrees F, road surfaces can freeze when the air temperature drops to 40 degrees or less. An important place to watch for this condition is on bridges. Bridge surfaces are exposed to the wind and cool off faster than the rest of the road. You should also prepare for icy conditions on roads through shaded areas, where a cold wind can freeze a wet road surface.

White ice

Snow that has been compacted during the day and melted slightly will freeze at night. Usually this white ice can be seen on the road. When traveling on white ice, drive very slowly. If you cannot find a place to park until conditions improve, install tire chains for better traction.

Black ice

Black ice (clear water that has frozen on black pavement) usually forms below overpasses, on bridges, in areas that are surrounded by landscape, or on a source of water running across pavement. Black ice commonly occurs in low, shaded areas and/or when the road surface starts to freeze at night. You usually cannot see or feel this ice until your vehicle is already on it, and you may not expect a patch of ice because you've been driving on dry, clear pavement. Black ice can be found in an area where melting snow or a roadside spring caused water to run onto the road and freeze. If you are not aware that the water has frozen, you could lose control and the vehicle could skid.

Winter driving requires motorists to be extra careful and alert, but the most important tip for winter driving is **SLOW DOWN!** Always give yourself plenty of time to get where you are going, and get off the road before you get stranded by worsening weather conditions. 🚗

Adapted from the Safety Division, Fort Bragg Public Safety Business Center website, <http://www.bragg.army.mil/safety/winter>

before we ask for 100% from them. Transmissions and gearboxes are lubricated by either oil or grease. Both of these lubricants can be affected by temperature, and in cold weather they tend to thicken. We know that thicker fluid means higher pressure on seals. In maintenance lingo, that means lots of blown seals. Tires, for those of you from the southern regions, will sometimes get flat spots after sitting in the cold for a while.

Now, let's talk about our most important resource: people. Getting soldiers to work in cold climates is a

challenge too, but it's also a very big responsibility. Call it tricks of the trade or just plain old experience. Take an active role in caring for your soldiers. Small things like hot coffee and soup go a long way. Make sure soldiers are dressed for the environment. Poly-pro may be okay for walking around for short periods of time, but it is not the correct PPE for launching an aircraft or working on a vehicle for long periods of time.

The bottom line is that, as leaders, we are responsible for our equipment and soldiers. Use risk management and

other tools to help keep from becoming a statistic. Think of it this way: by doing little things like taking care of the equipment (let it warm up before we ask it to perform), our soldiers don't have to be out in the cold fixing equipment because someone else didn't adhere to **the standard**. 🚗

POC: CW4 Todd Toth, Risk Management Integration Division, DSN 558-9579, (334) 255-9579, e-mail todd.toth@safetycenter.army.mil

An Infantry platoon was conducting collective training related to knocking out bunkers and entering and clearing trenches. The platoon had completed day blank/live fire training and had just finished night blank firing and was starting the night live fire exercise in conjunction with entering and clearing trenches.

Two soldiers crawled to their designated entry point and assumed the correct opposing position on their backs. The soldier designated to throw the live hand grenade initiated the first foot tap, signaling to the other soldier that he had control of the M67 hand grenade. The second soldier acknowledged by returning the “Are you in position and ready?” foot tap; the thrower responded with the “I’m ready” tap and proceeded to remove the safety clip from the grenade and pull the ring. The thrower took two deep breaths as if to calm himself and proceeded to roll onto his right

removing the safety clip, pulling the safety pin, and throwing the grenade within the 4- to 5-second delay time. Bottom line: unit leaders were aware of the hazards but failed to implement controls identified in the risk management worksheet, resulting in the death of a soldier and hospitalization of two others.

Because of the destructive nature of munitions and explosives, all personnel working or using these items must constantly be aware of associated hazards and know how to effectively apply safety controls. Carelessness and unsafe practices can result in injury, illness, or death to personnel, and damage to or loss of equipment and property. In wartime, these factors can seriously disrupt the mission and have a negative impact on the outcome of operations.

Risk management is always critical whether an entire unit, platoon, or squad is operating in a peacetime or combat environment. Soldiers

AMMUNITIONS

RISK ASSESSMENT AND MANAGEMENT

shoulder in preparation to throw the grenade. At some point during the throwing sequence the grenade exploded, fatally wounding the thrower. The second soldier received grenade fragments to both legs, and the OC received a fragment to his knee.

The battalion’s risk management worksheet listed the use of the M228 practice grenade fuze during the short range training ammunition (SRTA) portion of the exercise to control the hazards associated with handling and throwing live grenades. The battalion’s leadership failed to provide M228 fuzes for use during the SRTA. This oversight significantly diminished the training realism of the events by not allowing soldiers to gain experience with handling live grenade fuzes and complete all required steps for arming and throwing grenades with the fuze delay burning,

and leaders at all levels must always be proactive when it comes to safety during day-to-day operations. The importance of safety is further intensified for units and personnel engaged in munitions-related activities. Before engaging in operations involving munitions/explosives, leaders must know how to apply the principles of risk management to the mission at hand.

Risk assessment is the process of identifying hazards and their possible effects or potential outcome. In peacetime, leaders learn to assess risks during training exercises. Techniques learned and applied successfully in peacetime training can be used effectively in combat. After carefully evaluating the mission, leaders can take a certain amount of risk in combat that would be unacceptable in peacetime operations.

During the planning phase of any operation, leaders must conduct a task hazard analysis and safety evaluation before writing standing operating procedures (SOPs). This allows for the development and implementation of controls to ensure that operational changes are efficient and effective. Areas to consider during the hazard analysis process are mission, enemy, terrain, troops, and time (METT-T), and the number of personnel involved in the operation. Prior planning reduces the potential for accidents and significantly increases efficiency.

Risk management is the decisionmaking process that, when properly implemented, balances training and operational demands against identified risks. Risk assessment and management need to be integrated fully into the planning and execution process to be effective. Risk management is a closed-loop, five-step process that can be used for any type

5. Enforce control measures through supervision, and continually evaluate them for effectiveness.

Implementation of the risk assessment and management processes during peacetime operations is an effective force protector and combat multiplier. 🚀

POC: Ground Systems and Accident Investigation Division, DSN 558-3562, (334) 255-3562

SAFETY

of mission, be it peacetime or combat. The five steps are as follows:

1. Identify all hazards, including those that affect soldiers, equipment, and property.
2. Assess hazards to determine the risks involved and the degree of impact in terms of potential loss and cost. To a degree, assessments are based on probability and severity.
3. Develop control measures that eliminate or reduce hazards and risks, and continually re-evaluate risks until they are reduced to a level where the benefits outweigh the costs.
4. Implement controls that are effective in eliminating hazards and reducing risks.

Get to Know Your Privately Owned Weapon!

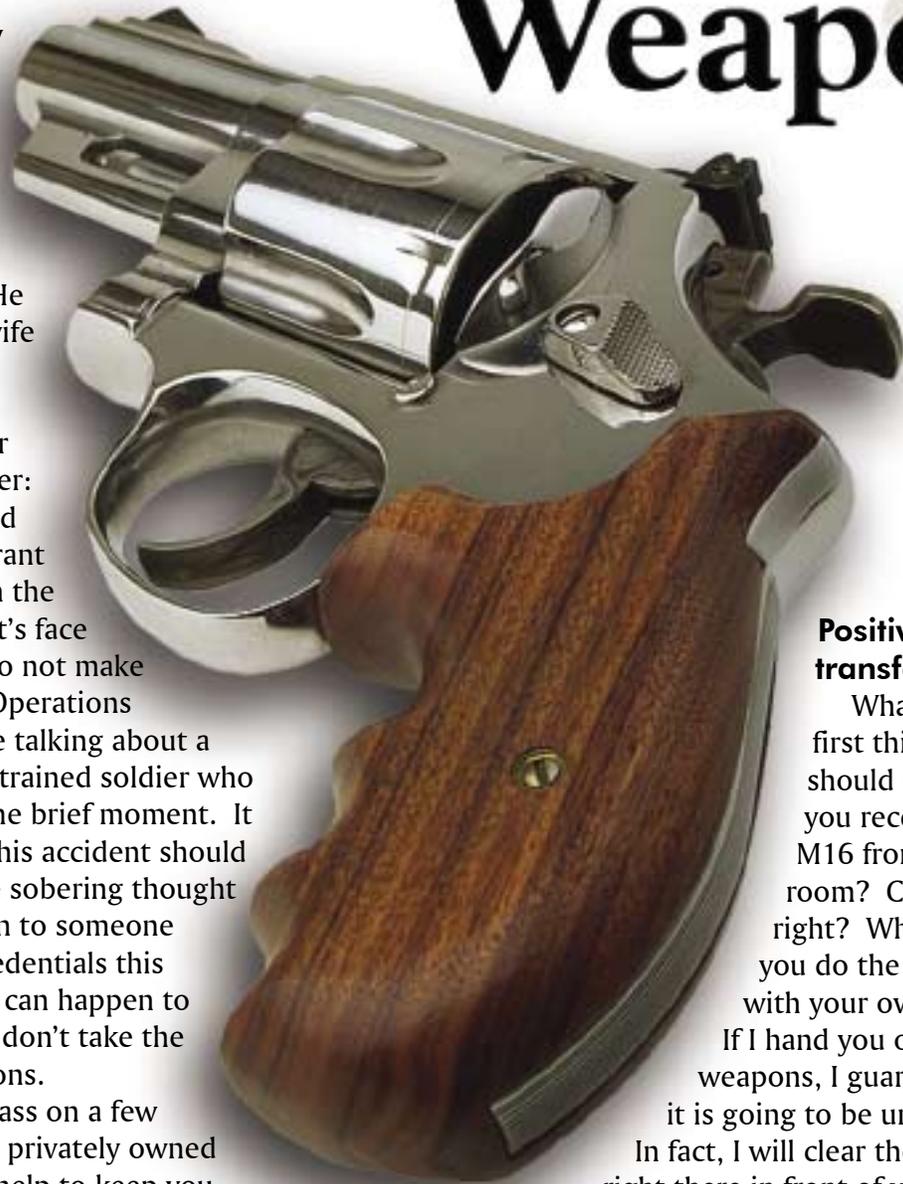
We recently lost a soldier to an accidental gunshot wound sustained while cleaning his .357 Magnum revolver. He is survived by his wife and son.

This was not an inexperienced or untrained gun owner: he was a 41-year-old Special Forces Warrant Officer proficient in the use of firearms. Let's face it—dumb people do not make it into the Special Operations community. We are talking about a highly skilled, well-trained soldier who lost his focus for one brief moment. It cost him his life. This accident should provide us with the sobering thought that if it can happen to someone with the kind of credentials this soldier had, then it can happen to any one of us if we don't take the necessary precautions.

I would like to pass on a few tips in dealing with privately owned weapons that may help to keep you and your family safe.

Know the law

You must become familiar with the federal and state laws that pertain to firearm ownership, and you must know the regulations established by your installation. Pleading ignorance will not keep you from an extended vacation turning big rocks into little rocks. You will find that law enforcement agencies have no sense of humor when it comes to weapons violations. Getting into trouble with your privately owned weapon is not the way you want to meet your Provost Marshal.



Positive habit transfer

What is the first thing you should do when you receive your M16 from the arms room? Clear it, right? Why wouldn't you do the same thing with your own firearm?

If I hand you one of my weapons, I guarantee that it is going to be unloaded.

In fact, I will clear the weapon right there in front of you before

I let you have it, and I still expect you to clear it yourself. It is not a trust issue, it is a *safety* issue.

Muzzle control

Make this a religion. Loaded or unloaded, clear or unclear, do not point your weapon at anything you do not intend to shoot.

Got kids?

I have a 5-year-old son, and trust me when I say that he wants to get into my gun cabinet pretty badly. I suspect your kids are the same. We have the obligation to safeguard our

children. Keep your weapons and ammunition locked in separate areas. Keep a trigger lock on weapons that are not in use. Hiding your weapon will not cut it. Think about when you were a kid. How many times did you find something that your parents did not want you to find? Now think about the devastation caused in a household where a child is hurt or killed in a firearms accident. Don't let it be your child. If you do maintain a weapon for home defense, there are plenty of storage devices on the market to keep the weapon secure. My .45 is kept in a locked and coded storage safe, and I am the only one with the code. However, in the event of a home emergency, I strongly advocate the use of 911. Let professional law enforcement come take care of business.

Do the research

If you purchase a new firearm, take the time to learn about it. There are a great variety of firearms available on the market and while they tend to be similar in design and function, there still could be something unique to that weapon that you need to know. I own a Mini-14, which is a semi-automatic, magazine-fed rifle that fires 5.56mm. On the surface it sounds an awful lot like an M16 when, in fact, they are two entirely different animals. When I bought it, I had the dealer teach me how to clear, disassemble, reassemble, and perform a functions check. Then I had him instruct me on how to load, unload, and reduce a stoppage. Do any of those terms sound familiar? They should, since they are common tasks for any Army firearm. Why not apply them to your privately owned weapon?

It is a tool, not a toy

I know the deal. Your buddies come over to the house and you just have to go through your gun cabinet and show them your latest and greatest gun purchase. Resist the temptation. There have been many accidents caused by

visitors handling their host's guns. Would you drag your new power saw out and let your buddy play with that?

Educate yourself

Most Army installations offer some sort of gun/hunter safety course. If your installation doesn't, you can probably find one off post. Get smart. Just because you can "follow all instructions from the tower" while on the range does not mean that you are necessarily a firearms safety expert. Time spent in the classroom is much better than time spent in the hospital or on a slab. We often get caught in the "I am in the Army and that means I know everything there is to know about every firearm

Keep Your Focus!

While at a party involving alcohol, a soldier stuck his 9mm pistol into the waistband of his pants. During his return from a trip to the store, the pistol discharged, inflicting penetrating trauma to the soldier's penis, scrotum, and knee.

While extending the bayonet on a military surplus carbine, a soldier inadvertently discharged his weapon, removing the tip of his right thumb and injuring his ring finger.

A soldier was loading equipment into his truck bed in and around a weapon that he had already put in the truck. The weapon discharged, striking the soldier in the thigh.

ever made" trap. Come on. I am retiring soon after more than 20 years in the Infantry. I still ask questions, and I still read the manual whenever I get a new firearm. One of the biggest attributes of being smart is recognizing when you are ignorant. Any reputable dealer should be able to give you minimum safety and maintenance instructions. Some dealers even have an on-site range available and will give you basic firearms instructions subsequent to the sale. Shop around, do the research, and get educated.

The bottom line? Employ your brain-housing group to its fullest ability and maintain your focus. We lost a good man. We don't want to lose you. 🚗

POC: MSG Sean O'Brian, Risk Management Integration Division, DSN 558-2845, (334) 255-2845, e-mail sean.obrian@safetycenter.army.mil

Bag One for Safety

Hunting with a firearm, bow, or other weapon is dangerous under any circumstance, but can be downright deadly when hunters are not well trained or properly prepared. During the 2000 hunting season, a total of 926 hunting-related accidents were reported in the U.S. and Canadian provinces, with 91 of those incidents resulting in fatalities. Fortunately, none of those fatalities were soldiers; however, one soldier lost a finger and another was injured in separate hunting accidents caused by slips.

Keep these tips in mind as you head to the woods this hunting season:

- Begin your hunting experience by taking a firearms safety course available in your area. In some states, these courses are required before you can obtain a hunting license.
- Keep firearms unloaded, and keep the action open until you are hunting. Carry guns in their cases to the shooting area. This is the law in most states.
- Always assume every firearm is loaded and dangerous. Respect it for the harm it can inflict.
- Never take someone else's word that a firearm is not loaded—always check for yourself.
- Never engage in horseplay with a firearm. Guns are deadly business and should be treated in a serious, cautious manner.
- Always point the muzzle in a “safe” direction. A safe direction is one in which, if fired accidentally, a weapon will not cause injury or damage. Never point a gun at anything you do not intend to shoot.
- Be sure the barrel and mechanisms are clear of obstructions. This is best done by looking down the breech end of the weapon, after having cleared the weapon first.
- Be sure you use the proper ammunition for the weapon you are using, and know the maximum range of your ammunition.
- Keep the muzzle of your gun under control and pointed away from yourself and others.
- Be certain the safety is on.
- Keep your fingers outside the trigger guard.

- Clearly identify your target before you shoot. If you are not absolutely sure of your target, do not shoot.

- Know what's beyond your target. For example, just because you cannot see what's in the distance, do not shoot at an animal standing on the horizon of a hill.

- Never shoot at a sound or a patch of color.
- When a shell does not fire, keep the muzzle pointed in a safe direction for at least 45 seconds, and then remove the cartridge.

- Do not climb fences or trees, cross slippery areas, or jump ditches or creeks while carrying a loaded gun—unload the firearm first. It takes only a few seconds, and it could save someone's life. If you are hunting with a partner, hand your gun to him/her when crossing an obstacle.

- Never pull a firearm toward you by the muzzle.

- Handguns should be carried in a holster.

- Do not shoot at flat, hard surfaces or at water. Bullets will ricochet out of control off these surfaces. Remember, a bullet or shotgun shell is your responsibility from the instant it leaves your gun.

- Be especially careful at the end of the day as you become tired and the firearm you are carrying becomes heavier. Fatigue can make you careless. If you feel tired, stop, unload your weapon, and rest.

- Do not use alcohol, drugs, or medication that could impair your judgment and dull your senses.

- Never pick up unexploded ordnance.

- Follow established policies and procedures on military installations.

- Wear hunter or blaze orange. Most states have laws requiring the wearing of hunter or blaze orange, and also have requirements specifying the minimum amount that must be worn. 🐾

Article updated and reprinted from December 1998 Countermeasure

The Numbers...Hunting Accident Factors

The tables below are broken down by weapon and game types, shooter age, and contributing factors in hunting accidents reported in the U. S. and Canadian provinces during 2000.

Weapon Type	Fatal Two-party Incidents	Non-fatal Two-party Incidents	Fatal Self-inflicted Incidents	Non-fatal Self-inflicted Incidents
Shotgun	29	416	7	107
Rifle	31	117	13	103
Bow	3	5	0	6

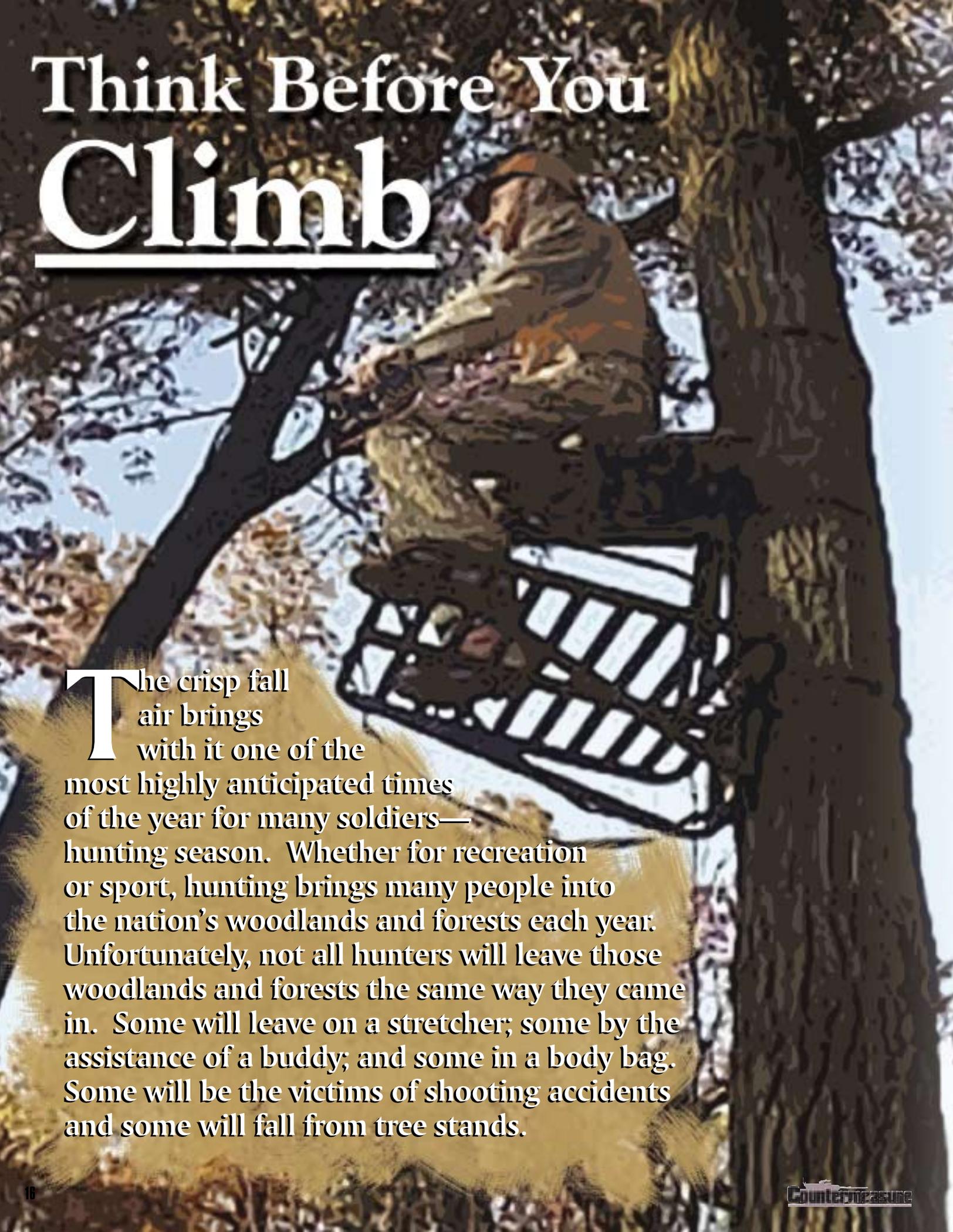
Game Hunted	Fatal Two-party Incidents	Non-fatal Two-party Incidents	Fatal Self-inflicted Incidents	Non-fatal Self-inflicted Incidents
Deer	38	182	18	125
Dove/Pigeon	3	42	1	9
Turkey (Fall and Spring)	1	74	0	11
Duck/Geese	10	28	0	7
Pheasant	1	78	0	14
Squirrel	1	32	2	30
Rabbit	2	32	1	16

Shooter Age	Fatal Two-party Incidents	Non-fatal Two-party Incidents	Fatal Self-inflicted Incidents	Non-fatal Self-inflicted Incidents
1-9	2	9	1	6
10-19	18	104	4	77
20-29	18	90	4	54
30-39	14	121	6	43
40-49	8	77	3	40
50-59	3	53	4	29
60-up	2	37	3	16
Unknown	0	74	1	5

Hunter Judgment/Skill and Aptitude Factors	Fatal Two-party Incidents	Non-fatal Two-party Incidents	Fatal Self-inflicted Incidents	Non-fatal Self-inflicted Incidents
Failure to Identify Target	25	125	0	0
Victim Covered by Shooter Swinging on Game	6	164	1	1
Victim Moved Into Line of Fire	9	30	0	2
Victim Out of Sight of Shooter	5	102	0	0
Careless Handling of Firearm	9	35	7	106
Shooter Stumbled and Fell	3	13	4	23
Removing/Placing Loaded Firearm in Vehicle	1	10	1	10

Tables adapted from the International Hunter Education Association Annual Report of Hunting and Hunting Related Incidents, www.ihea.com

Think Before You Climb

A person wearing a brown jacket and a hat is sitting in a black metal tree stand. The stand is attached to a large tree trunk. The background shows a forest with trees and a blue sky. The overall scene is outdoors in a wooded area.

The crisp fall air brings with it one of the most highly anticipated times of the year for many soldiers—hunting season. Whether for recreation or sport, hunting brings many people into the nation's woodlands and forests each year. Unfortunately, not all hunters will leave those woodlands and forests the same way they came in. Some will leave on a stretcher; some by the assistance of a buddy; and some in a body bag. Some will be the victims of shooting accidents and some will fall from tree stands.

Why such a bleak picture? Hunting is actually one of the safer sports going, with far less injuries each year than, say, touch football, Frisbee football, or even your unit's PT program. The truth is, with the exception of a hunter being mistaken for game, most hunting injuries involve needless falling from a height. Twenty-five percent of all gun hunters and more than 80 percent of all bow hunters will hunt from an elevated platform, shooting house, or tree stand this season. Many of these hunters will be soldiers and, unfortunately, a few will be hurt this season for failing to adhere to a few basic tree stand hunting safety tips.

All avid deer hunters no doubt have been spending countless hours in the woods looking for deer sign, selecting hunting locations, poring over topographic maps, and spending a lot of time in stores picking out accessories, ammunition, clothing, and guns. You have cleaned and lubricated your firearm, checked and rechecked the zero at the local range, prepared your hunting clothing, purchased hundreds of dollars' worth of scents and lures, and now you're ready to dig that old tree stand out of the garage and throw it in the back of your pickup truck, right? WRONG!

You would never skip a preflight check of your helicopter or preventive maintenance checks and services on a military vehicle, so why are you willing to climb 25 to 30 feet up a tree in a possibly deadlined tree stand? What is a leading cause of death in South Carolina among males between the ages of 21 and 65? Falling out of tree stands! No one intentionally falls out, but when the excitement of bagging that first buck of the season hits you as you pull the trigger, it is easy to lose your situational awareness and fail to remember that the first step leads straight down 25 feet or more! And, isn't just buck fever or being an eager beaver that does some hunters in. Have you ever fallen asleep while hunting? Well, just imagine falling asleep 25 feet up after a long day of sitting in your stand.

Before you go out hunting this season in a

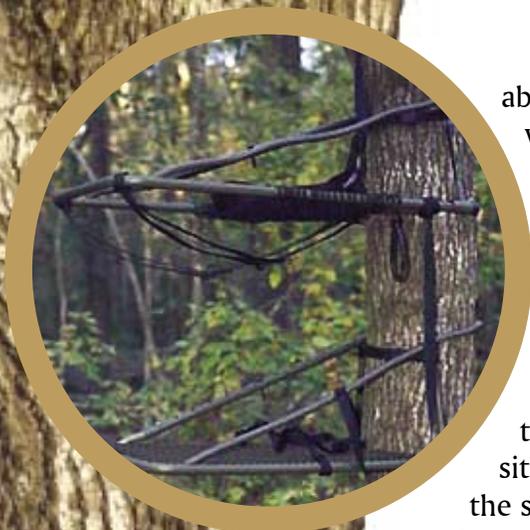
tree stand, platform, or shooting house, please adhere to the following cautions and safety tips.

If you are using a commercial tree stand, read the instruction manual. If this will be the first time you are using the stand, thoroughly read the instructions and then practice, practice, practice. Start low on the tree and become completely familiar with the features of your stand. You should be able to put the stand up blindfolded—when you go hunting in the wee hours, it will be as dark as if you are blindfolded. If the tree stand is one you've used before, look it over carefully for worn or missing hardware. All tree stands have parts and pieces that could loosen, wear, or even break with extended time and use. You must inspect your stand with every use; an unserviceable stand will fail when you least expect it.

There are essentially three types of tree stands: the climbing tree stand, the chain-on tree stand, and the tripod platform tree stand. Regardless of which type of stand you are using, it is imperative that a high-quality safety harness be used. Do not use any stand without a body harness, body strap, or safety belt. Do not use a body strap, safety belt, or harness that shows any evidence of wear, abuse, deterioration, or damage in any way. When climbing, descending, or sitting stationary in your tree stand, secure your harness so that you will not fall more than 10 to 15 inches to prevent serious chest or internal injuries. If you are using a self-climbing, two-piece tree stand, ensure that the top and bottom pieces are secured by a rope. There is nothing worse than having the lower half of your stand fall away to the ground, leaving you up a tree without a bottom stand to get back down.

Just like a helicopter, tree stands have maximum gross weight limits that are set by the manufacturer. These weight limits are often misunderstood. For example, if you weigh 240 pounds and plan on using a 250-pound rated stand (the most common size), then you stand a pretty good chance of becoming a statistic. The weight rating is

"What is a leading cause of death in South Carolina among males between the ages of 21 and 65? Falling out of tree stands!"



absolute and includes all clothing, guns, and accessories that will be in the stand with you. Common sense would dictate that you either lose some weight in a hurry or move up to a larger stand.

If you plan on using an old wooden stand you found nailed to a tree, be aware of the laws in your state about using such stands. In many places, it is forbidden to use a stand that damages the tree underneath the bark. If you elect to use a wooden stand, thoroughly inspect the boards that make up the steps, as well as the platform you will be sitting on, for warped or rotten lumber. If in doubt, don't use the stand.

If you will be using a ladder to climb to the top of your shooting platform or chain-on stand, do not climb with your bow and arrows or gun. This rule also applies for descending back down to the ground. Tie one end of a rope or strap to your belt, and the other to your hunting weapon. Once you are secure at your hunting elevation, pull up your gun or bow. Many a hunter has slipped while climbing a ladder and



become a statistic. Bow hunters have fallen on their bow or arrows, impaling themselves, and other hunters have fallen on their firearm or dropped it, resulting in an accidental shooting when the gun discharged. While climbing, keep three points of contact at all times—two feet, one hand, or two hands, one foot—on the ladder. Be wary of wet or cold weather as well as low visibility (sunrise/sunset) when climbing. Do not climb any vertical step (ladder) unless you can keep your body centered over the steps at all times. Do not climb a tree or ladder that is standing in water. The root system may be weak or the ground soft, allowing your ladder to shift or sink. If you are in a metal tree stand and you see lightning, get out of the stand immediately. Other points to consider while climbing include watching for branches and limbs, which could injure your eyes or knock you from the ladder, and watching for hornet nests as you ascend the tree.

Finally, before you head out to the woods this year, please remember that alcohol and drugs do not mix with hunting. Never hunt alone, if possible. If you must go alone, leave a map of where you will be going with a relative and an expected time that you will be back. Nearly everyone has a cellular phone, but if you do not, borrow one. A cell phone could mean not spending agonizing hours injured in the woods waiting for help to arrive. Plan on getting a lot of sleep the night before, eat well, and stay hydrated. Use a little common sense, and always use a body strap or harness. Hopefully, your next hunting trip will be a safe and successful one. 🐾



POC: MAJ David Schoolcraft, Aviation Systems and Accident Investigation Division, DSN 558-9858, (334) 255-9858, e-mail david.schoolcraft@safetycenter.army.mil



Personnel Injury

Class A

- Soldier collapsed during a PT run. Attempts to revive SM were unsuccessful.
- Soldier collapsed during PT test. SM was pronounced dead at local hospital following lifesaving efforts.
- Soldier was killed when the handgun he was cleaning accidentally discharged.
- Soldier was participating in PT run when he started having chest pains. Medical aid was summoned, and SM died at the local medical facility.

Class B

- Soldier collapsed during a three-mile PT run.
- Soldier's finger was severed when his hand made contact with a fan blade on the FMTV he was working on.

Class C

- Soldier received cuts and lacerations to his right knee while moving a refrigerator to a different floor. SM's injuries required seven stitches.
- Soldier suffered multiple leg fractures resulting from a fall while attempting to cross a one-rope bridge during PT.
- Soldier suffered fractures to his head after falling from a ladder. SM was taking building materials to a rooftop when the ladder he was standing on slipped.

- Soldier received abrasions to her head after collapsing. Collapse was caused by a lack of sleep and panic attack.

- Soldier injured ankle while performing military free-fall operations. SM failed to conduct a proper parachute landing fall with his feet and knees together.

- Soldier received fractures to his back while performing military free-fall operations. SM attempted to conduct a stand-up landing downwind and was not able to adequately slow the forward speed of his parachute.

- Soldier received shoulder and back injuries after falling from an OH-58 helicopter. SM was climbing down from the top side of the aircraft after cleaning the transmission deck and slipped and fell six feet, landing on his right side.



POV

Class A

- Soldier sustained fatal injuries when the vehicle he was riding in struck a bridge abutment head-on. The driver of the vehicle, also a soldier, received fractures to his ankle and cuts and lacerations to his head.
- Soldier was killed when his vehicle overturned and rolled several times.
- Soldier received fatal injuries when the motorcycle he was driving collided with

an all-terrain vehicle driven by a civilian.

- Soldier sustained fatal injuries when the vehicle he was driving was struck head-on by another vehicle.

- Soldier was killed when he lost control of the dirt bike he was driving, causing the bike to overturn.

Class C

Soldier received fractures to his pelvis after his vehicle ran off the roadway and overturned. SM fell asleep while driving and was not wearing a seatbelt.



ACV

Class A (Damage)

- M1A1 sustained major damage after the engine caught fire during a field training exercise.

Class A

- Soldier sustained fatal injuries when the M113A3 he was operating as part of a platoon operation fell into a water-filled ditch. SM was pinned inside and pronounced dead at the local hospital.



Other

Class A

- Soldier was scuba diving and observed signaling for help. After being located by search and rescue teams, SM was pronounced dead.

In Memoriam

Army Personnel Killed at the Pentagon
September 11, 2001

Spc. Craig Amundson

MSgt. (Ret.) Max Beilke

Carrie Blagburn

Lt. Col. Canfield D. Boone

Donna Bowen

**SFC Jose Orlando Calderon-
Olmedo**

Angelene Carter

Sharon Carver

John J. Chada

Ada M. Davis

Lt. Col. Jerry D. Dickerson

Amelia V. Fields

Gerald Fisher

Cortez Ghee

Brenda C. Gibson

Ronald F. Golinski

Diane Hale-McKinzy

Carolyn B. Halmon

Sheila Hein

Maj. Wallace Cole Hogan Jr.

Jimmie Holley

Peggie Hurt

Lt. Col. Stephen Neil Hyland Jr.

Sgt. Maj. Lacey B. Ivory

Lt. Col. Dennis M. Johnson

Brenda Kegler

David W. Laychak

Samantha Lightbourn-Allen

Maj. Stephen V. Long

Terence Lynch

Teresa M. Martin

Ada L. Mason

Lt. Col. Dean E. Mattson

Lt. Gen. Timothy J. Maude

Robert J. Maxwell

Molly McKenzie

Maj. Ronald D. Milam

Odessa V. Morris

Ted H. Moy

Diana B. Padro

Capt. Clifford L. Patterson

Scott Powell

Deborah A. Ramsaur

Rhonda S. Rasmussen

Martha M. Reszke

Cecelia E. Richard

Edward V. Rowenhorst

Judy Rowlett

Robert Russell

Chief Warrant Officer

William R. Ruth

Marjorie C. Salamone

Lt. Col. David M. Scales

Janice Scott

Michael L. Selves

Maria H. Serva

Antoinette M. Sherman

Don Simmons

Cheryle D. Sincock

Lt. Col. (Ret.) Gary F. Smith

Patricia J. Statz

Edna L. Stephens

Sgt. Maj. Larry L. Strickland

Maj. Kip P. Taylor

Sandra C. Taylor

Sgt. Tamara C. Thurman

Willie Q. Troy

Lt. Col. Karen J. Wagner

Spc. Chin Sun Pak-Wells

Meta L. Waller

SSgt. Maudlyn A. White

Sandra L. White

Ernest Willcher

Maj. Dwayne Williams

Edmond Young

Lisa L. Young



ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 10

<http://safety.army.mil>

OCTOBER 2002

PREVENTING M1 TANK FIRES

Countermeasure

CONTENTS

- 3** **DASAF's Corner**
- 4** **Shut It Down!**
- 8** **Seconds Count... to Save Lives**
- 10** **Investigators' Forum Survive the Dive**
- 12** **Don't Be a Factor in an M939 Accident**
- 14** **USASC Announces New Interactive Feature**
- 16** **News & Notes**
Passenger Capacity Reminder
AAFES Halts Sale of Ephedra
Alert Issued for Protective Suits
Turn the Defroster Off
- 18** **4th Quarter Safety of Use and Ground Precautionary Messages**
- 19** **Accident Briefs**

features



BG James E. Simmons
Commander/Director of Army Safety

LTC Richard Pryke
Publishing Supervisor

COL John Frketic
Deputy Commander

Julie Shelley
Writer/Managing Editor

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

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4905, 5th Avenue, Fort Rucker, AL 36362-5363. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use FAX 334-255-3003 (Ms. Julie Shelley) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



When the Arrows Are Pointing Up...

We didn't experience a good year in Army safety. For FY02 safety performance, the arrows representing increases or decreases in Class A accidents and fatalities are all pointing in the wrong direction—UP!

Shortly after the beginning of FY02, the call came for the Army to execute its primary mission of fighting and winning our Nation's war. This year, overall, our units have performed magnificently on the battlefield fighting this war on terrorism, protecting our installations, executing home station training, conducting training center rotations, and fielding new equipment and formations.

No one could doubt that it's been a busy year in this Army. Our deployment and redeployment rate is up compared to FY01. But hazards abound not only in combat; they are also ever-present in our training environment as well. If left uncontrolled, individual hazards can cumulatively raise risk to unacceptable levels. During FY02 we did experience some breakdowns in risk management, leadership, discipline, training, and standards, and the costly consequence has been lives lost and equipment damaged or destroyed.

A statistical summary

We experienced 206 fatalities compared to 168 last year, an increase of 23 percent. Of those 206 fatalities, 140 soldiers died in off-duty ground accidents (113 of those in POV accidents, which are still our number one killer of soldiers), 49 in on-duty ground accidents, and 17 in aviation accidents. Overall, our Class A accidents are up by about 23 percent this year and by about 17 percent over the 3-year average.

Analysis of ground fatalities reveals—

- A 143-percent increase in fatalities resulting from water activities.
- A 96-percent increase in fatalities related to training activities (11 fatalities from Army motor and combat vehicle accidents, 9 from physical exertion, 9 from explosions/fire, and 1 from a gunshot wound).
- A 53-percent increase in fatalities resulting

from motorcycle accidents.

- A 2-percent increase in fatalities resulting from POV (other than motorcycle) accidents.

Analysis of aviation accidents reveals—

- Of 26 Class A accidents, 9 involved collision with the ground.
- Six involved brownout or whiteout.
- Four involved a materiel failure.
- Four involved a tree or wire strike.
- In two accidents, crews encountered inadvertent instrument meteorological conditions.
- The majority of the accidents occurred during night and single-ship missions.

Lessons learned

The business of warfighting and training for combat is inherently dangerous. Mistakes happen. Leading soldiers is an awesome responsibility and every day is not guaranteed to be smooth and fun. Mistakes are made as soldiers do their best to execute the missions and tasks we ask them to do. A zero-defects mentality is not a good thing. In fact, it leads to soldiers being hesitant to do tough, realistic training for fear that a mistake could mar their careers. We have to give young leaders an opportunity to grow and learn from their mistakes. It's important that we, as an Army, be forgiving of honest mistakes that soldiers and leaders make, but there is no forgiveness for irresponsible behavior or allowing hazardous conditions that unnecessarily put soldiers' lives in jeopardy to escalate uncontrolled.

Leaders must be technically and tactically competent and must be involved in the planning, preparation, and execution of missions. If battalion commanders are present during training events, we have fewer accidents. That means the commander must use risk management if he or she is going to avoid the micro-management image. A particular training event may be acceptable for Company A to execute on its own, while Company B is not at a level to train unsupervised.

Understandably, commanders are busy, but e-leadership is not the Army standard! It takes personal involvement and sometimes extending some of that tough love from the "old man." If you can't be present, get your most experienced people out there supervising.

What we can do in FY03

As the remainder of the FY02 field accident data continues to come in over the next few weeks, the numbers will change slightly and we will continue our analysis of the data, searching for additional hazards and developing controls that can be put in place to prevent future similar accidents. But none of our continued research or analysis will find any single silver bullet to stop this unnecessary loss of lives and damage to our equipment and make FY03 safety performance better. Reversing this upward trend in accidents will happen only if we, as leaders, adhere to the Army standard of informed risk decisions made at the appropriate level of command and enforcement of standards and discipline.

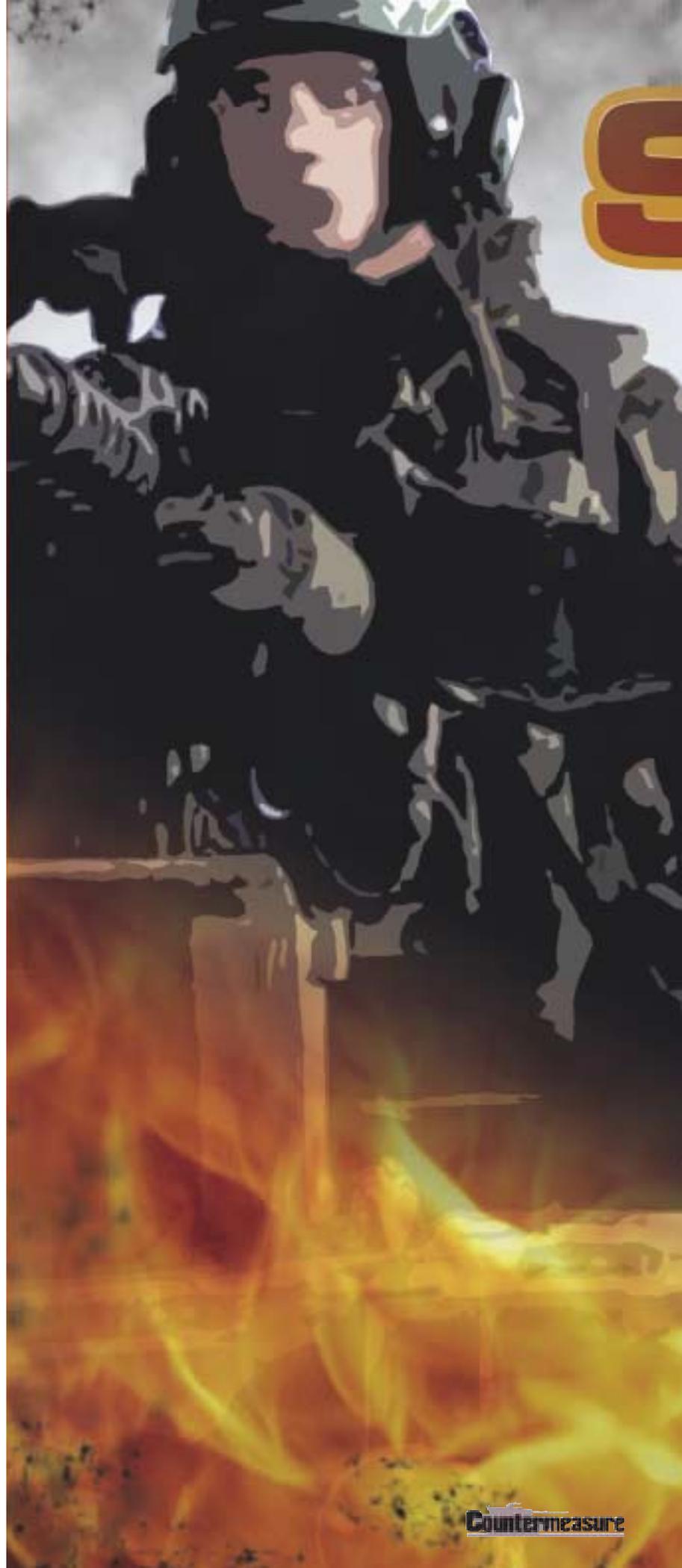
Ruthless enforcement of discipline and standards in our units is critical to improving safety performance. No Kevlar, no seatbelts, out of uniform, speeding, failing to salute a senior officer, flapping canvas—all are signs of indiscipline. A new, lower standard is set every time a leader walks by without correcting it. Increasing demands on our time does not relieve us, as leaders, of our responsibility to enforce standards and discipline.

We also know very well that flogging leaders doesn't stop accidental losses. That's not the intent here. But as an Army, we do hold leaders responsible and accountable for the safety of the soldiers entrusted to their care. With acceptance of command comes that awesome responsibility. If we, as leaders, are technically and tactically competent and are aggressively involved in planning, preparation, and execution of assigned missions, we can keep soldiers safe and do the realistic training that replicates combat conditions.

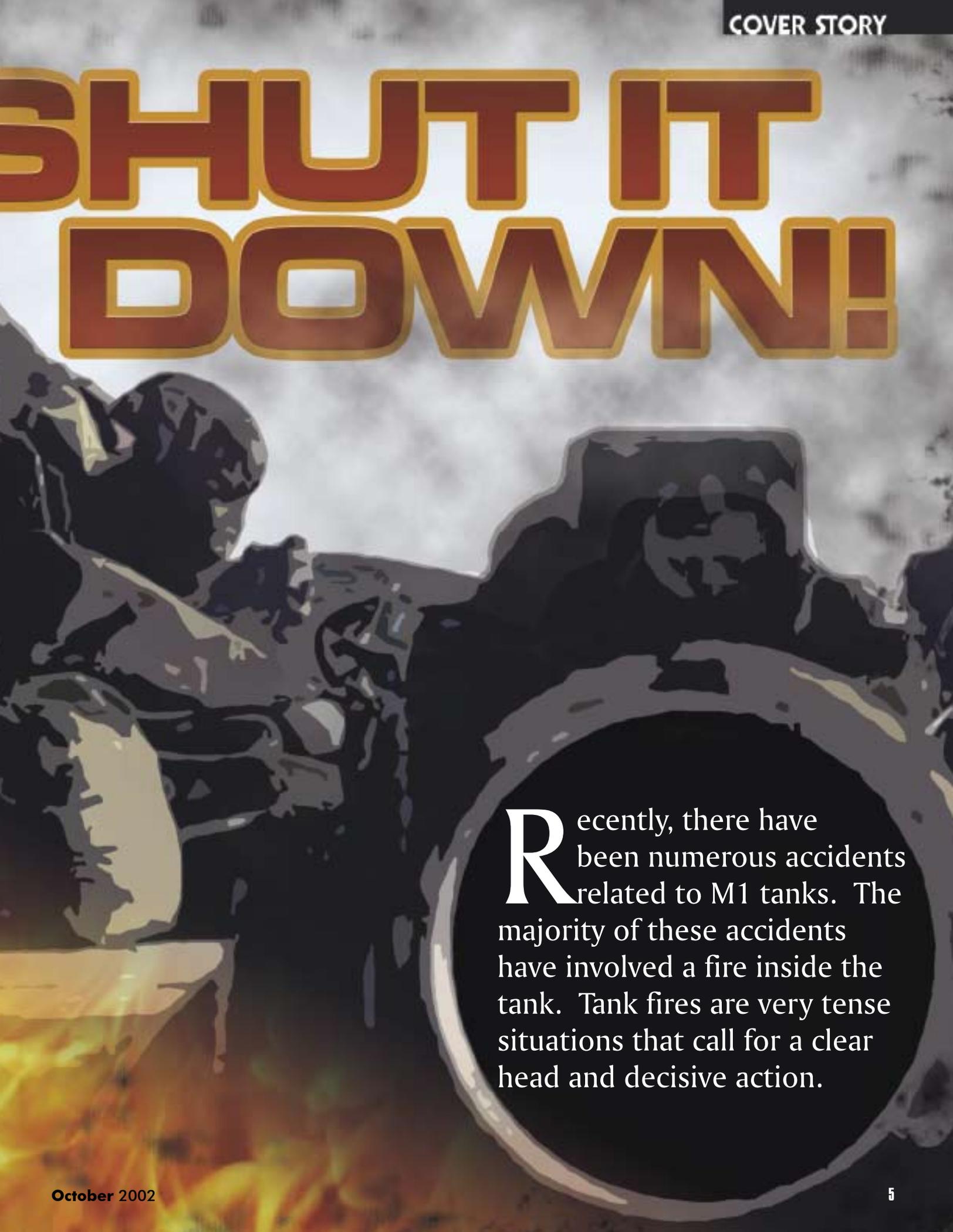
When the FY03 safety performance summary is posted, the arrows will be pointing in the right direction—DOWN—if we, as leaders, have strictly enforced standards and discipline and put the proper controls in place to mitigate risks. ☘

**Train hard, but train safely
by managing risks!**

BG James E. Simmons



SHUT IT DOWN!



Recently, there have been numerous accidents related to M1 tanks. The majority of these accidents have involved a fire inside the tank. Tank fires are very tense situations that call for a clear head and decisive action.

In most any tank-related incident during training, the first three things you need to address are evacuation of the tank, extinguishing any fire, and shutting down the engine. In many cases, shutting down the tank is a crucial part of extinguishing the fire.

M1 engines produce a lot of power and heat. Additionally, they are loaded with electrical components, fuel, and oil, none of which are conducive to a stable atmosphere in an accident scenario. So, just how do you shut down the engine on an M1 tank?

According to the operator's manual for the various M1

PROFILE: M1 ABRAMS MAIN BATTLE TANK

Since its inception in the late 1970s and fielding in early 1980, the M1 Abrams Main Battle Tank and its subsequent configurations have been the focal point of Army combat vehicles. The Abrams is a battle-proven system: in the Gulf War, Iraqi tanks proved no match for the well-designed, hard-hitting Abrams. However, the warfighting prowess associated with the Abrams has not come without a price: since 1982, a total of 38 Class A M1 accidents have been reported Army-wide, with 25 fatalities resulting from those accidents.

From FY98 to the close of FY02, there have been six fatalities resulting from accidents involving the M1; three of those fatalities occurred during FY02, and all three were caused by fires within the tank. When compared to FY01, accidents involving all Army combat vehicles (ACVs) were up 20 percent in FY02, while the 3-

year average (FY99-FY02) was up by 50 percent in FY02.

How do we, as soldiers, bring those numbers down and protect ourselves and our equipment? Attention to detail, leader involvement, knowing the standards, and enforcing those standards are the keys to safe operation in the M1 Abrams tank.

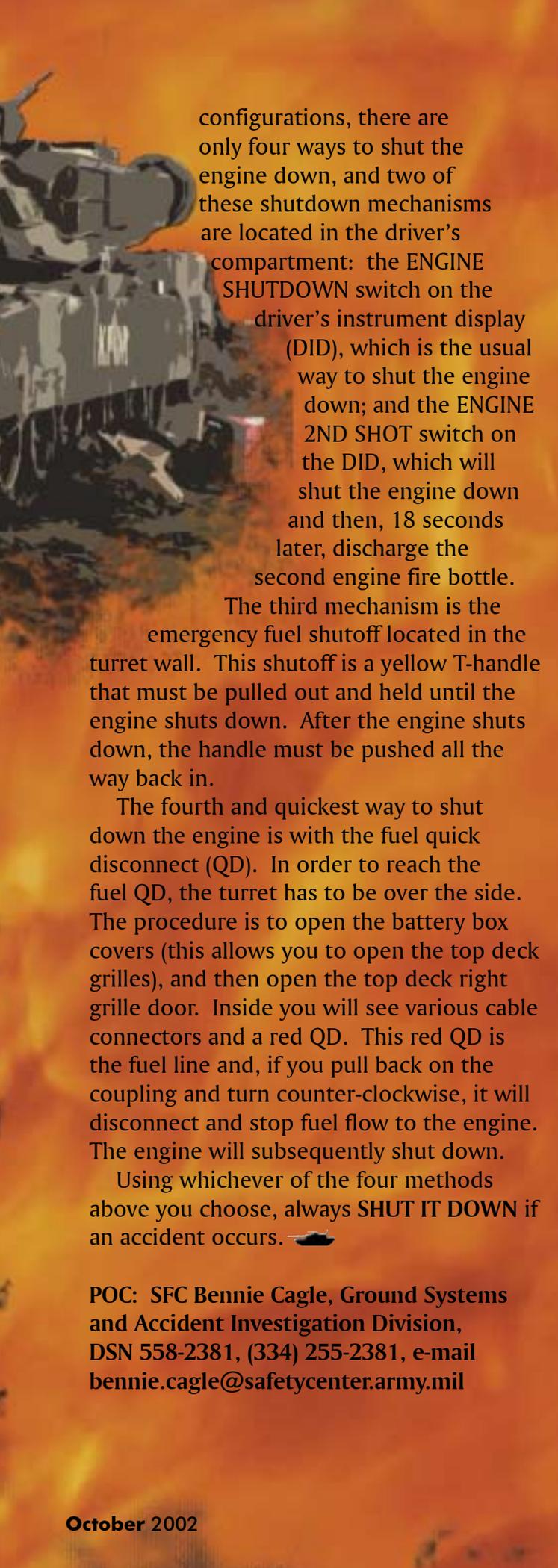
An important aspect of safety in the M1 tank, or any piece of Army equipment, lies in the most fundamental and simplest mediums of all: attention to detail and adhering to the technical manual (TM). Follow the instructions—they are provided for a reason. TMs provide not only guidance for proper operation and maintenance, but also list cautions and warnings that can prove invaluable in all phases of operation.

A leader needs to be involved in the operation and maintenance of the tank, as well as the training of the

tank crew. Leadership needs to know the standards and adhere to these standards at all times. When a leader deviates from the standard, he has just set a new standard. Leadership must enforce the standards and ensure that tank crews are operating in as safe an environment as possible.

One of the standards that is deviated from most often is uniformity. The armor crewman's uniform is designed to protect the crewman in the environment of the tank. If leaders allow crewmen to not wear items of their uniform, then the leader puts the soldier in harm's way. Leaders owe it to their soldiers to ensure that they are wearing all of their personal protective equipment.

Don't let your M1 series tank become an accident victim. M1 tanks are vital to national security. Your Abrams tank is the finest main battle tank in the world. Let's keep it that way! 



configurations, there are only four ways to shut the engine down, and two of these shutdown mechanisms are located in the driver's compartment: the ENGINE SHUTDOWN switch on the driver's instrument display (DID), which is the usual way to shut the engine down; and the ENGINE 2ND SHOT switch on the DID, which will shut the engine down and then, 18 seconds later, discharge the second engine fire bottle.

The third mechanism is the emergency fuel shutoff located in the turret wall. This shutoff is a yellow T-handle that must be pulled out and held until the engine shuts down. After the engine shuts down, the handle must be pushed all the way back in.

The fourth and quickest way to shut down the engine is with the fuel quick disconnect (QD). In order to reach the fuel QD, the turret has to be over the side. The procedure is to open the battery box covers (this allows you to open the top deck grilles), and then open the top deck right grille door. Inside you will see various cable connectors and a red QD. This red QD is the fuel line and, if you pull back on the coupling and turn counter-clockwise, it will disconnect and stop fuel flow to the engine. The engine will subsequently shut down.

Using whichever of the four methods above you choose, always **SHUT IT DOWN** if an accident occurs. 🚗

POC: SFC Bennie Cagle, Ground Systems and Accident Investigation Division, DSN 558-2381, (334) 255-2381, e-mail bennie.cagle@safetycenter.army.mil

The T-Handle

Everyone who deals with M1 tanks knows what the T-handle is. For everyone else, it is the bright red fire extinguisher handle on the outside left of the tank. There are a lot of myths about this handle. Some soldiers believe that this handle will shut down the engine. Some soldiers think that after you initiate the 2ND SHOT switch on the driver's instrument display (DID) the 2ND SHOT bottle should go off immediately, and if the 2ND SHOT bottle does not go off by the time they get on the ground, then they should pull the handle.



By pulling the T-handle, the only thing you will accomplish is discharging the 2ND SHOT halon fire extinguisher bottle—nothing more. Pulling the T-handle will not shut down the engine. If the engine is still running when you pull this handle, the halon will most likely be caught up in the airflow created by the transmission oil cooler fans and be ejected out the rear of the tank, with little or no effect.

Moving the FIRE EXTINGUISHER 2ND SHOT switch to the forward position will shut down the engine. The 2ND SHOT bottle will discharge approximately 18 seconds after the FIRE EXTINGUISHER 2ND SHOT switch is moved forward. This time delay is designed to give the engine time to shut down and to reduce airflow, allowing the halon to remain in the engine compartment. If the engine is already shut down and the FIRE EXTINGUISHER 2ND SHOT switch is moved to the forward position, the bottle will discharge immediately.

If the crew evacuates the tank after having moved the FIRE EXTINGUISHER 2ND SHOT switch to the forward position, should they pull the T-handle? If the engine is still winding down, you should let the system work and discharge the bottle electronically. If the engine has completely shut down and the bottle has not yet discharged, then you can pull the T-handle and get the full benefit of the fire suppression system.

M1 tanks can and do burn. The halon system will extinguish most fires if it is used properly. Understanding the tank and the fire suppression system will give the crew and the tank a fighting chance in a tank fire scenario. 🚗

POC: SFC Bennie Cagle, Ground Systems and Accident Investigation Division, DSN 558-2381, (334) 255-2381, e-mail bennie.cagle@safetycenter.army.mil

SECONDS COUNT...to SAVE LIVES

For soldiers, working in cold weather is a fact of life. At some point, nearly every soldier will be shivering in a tent somewhere in the world. And, as surely as winter comes, soldiers will choose to heat their tents by means of a space heater, stove, or other heating device.

Heat on a cold winter night provides many advantages for soldiers. One major benefit is that soldiers will lose less body heat and conserve more energy while sleeping, potentially improving their performance during the next day.

Despite the advantages inherent with the use of heating devices, unique hazards are also presented to soldiers, especially concerning fire and carbon monoxide poisoning. Fire can engulf a tent in 10 seconds and destroy it in 60 seconds, giving soldiers very little time to react. Conversely, carbon monoxide is odorless, colorless, and tasteless, and can quickly kill soldiers while they are sleeping, as was the case in a previous accident where two soldiers died in their sleep in a tent.

While commercial off-the-shelf (COTS) heaters and stoves may seem to be a good solution for heating problems in the field, soldiers must be trained on proper procedures before using a piece of COTS equipment. For example, locally procured COTS heaters that are unflued or unvented (i.e., no smokestack) vent exhaust fumes, including carbon monoxide, directly into living spaces. In addition, no COTS heaters on the market meet Army requirements for field environments. Standard military heaters, on the other hand, are designed to vent combustion fumes to the outside, are tested for safe field use, and should be used in the place of COTS heaters.

The following heaters are approved for Army use:

- **H-45 space heater (NSN 4520-01-329-3451):** The H-45 replaces the old potbelly M-1941. Designed to heat the general purpose and TEMPER tents, the H-45 burns liquid and solid fuels.

- **Arctic space heater (NSN 4520-01-444-2375):** The Arctic heater replaces the gasoline-burning M-1950 Yukon heater and is a lightweight, portable heater for 5-man and 10-man arctic tents. The Arctic heater burns liquid and solid fuels.

- **Small space heater (NSN 4520-01-478-9207):** The small space heater is ideal for use in smaller tents such as the 4-man soldier/crew tent. It burns liquid fuel and has a built-in tank, so no fuel can or stand is needed.

- **Convective space heater (NSN 4520-01-431-8927):** The convective space heater provides forced hot air for tents and shelters. This heater generates its own power and recharges its battery.

- **Thermoelectric fan (NSN 4520-01-457-2790):** The thermoelectric fan is a compact, self-powered unit that fits on top of any military tent heater. The fan uses some of the heat to turn the fan blades, which circulate heated air,

improve comfort, and save fuel.

To keep soldiers both warm and safe this winter and in all cold weather environments, follow these tips:

- Operate all heaters and stoves in accordance with the applicable technical manual.
- In the event of a tent fire or suspected presence of carbon monoxide, the first and most important task is to evacuate the tent.
- Heating shelters at night requires that a soldier in each shelter be on duty as a fireguard at all times when other soldiers are sleeping in the tent. A fireguard can make use of the time by cleaning his weapon and equipment, washing and shaving, and preparing hot drinks for sentries outside.
- Do not wear wet clothing while sleeping in sleeping bags in an effort to dry them.
- Do not pile combustible materials such as grass and pine needles on the tent floor for insulation, as they can catch flame easily.
- Stoves in tents with wooden floors must be placed in sandboxes.
- Always use the specified type of fuel for the heater or stove you are using.
- Each heating device and all its components must be inspected and cleaned thoroughly before storage and use. Special attention should be paid to checking for leaking valves, holes in gas cans, and proper assembly.
- Secure stovepipe opening covers with tie tapes so the covers will not contact the stovepipe.
- Use enough stovepipe sections so that one complete section is above the highest point of the tent. Ensure that stovepipe sections are vertical and do not contact any part of the tent.
- Be sure to leave enough air space between the tent wall and the heater or stove—if heating devices are situated too closely to the tent wall, they can ignite the tent.
- If the flame is accidentally extinguished, wait until the burner cools before relighting. An explosion could occur.
- Fuel should not be taken inside a tent warmed by fire. The fuel can for the heater must be located outside the tent as far from the tent as the fuel hose allows.
- Do not exchange the heater unit fuel can unless the heater is turned off.
- Do not smoke or drop cigarette butts around combustible materials or go to sleep with a lantern or candle burning.
- Do not open a stove or heater while it is still hot, even after a flame-up has subsided. Fresh air will feed a fire and reignite it.
- Adding water to a gas fire will cause the fire to flame up and spread.

- Do not remove a hot stove or heater from the tent; hot surfaces can contact tent flaps and set them aflame.
- Even in extreme cold, do not operate heaters at full capacity. An overheated stovepipe could ignite the tent, and high temperatures can warp grates and damage other components.
- Provide sufficient ventilation for fresh air to enter the tent at all times.
- Ensure fire extinguishers are available in every tent that has a stove or heater.
- Have a fire plan ready and rehearsed.
- Ensure emergency agencies such as fire departments and paramedics have access to all structures using heaters and other flame sources.
- Do not leave stoves or heaters unattended. As fuel levels decline, pressure drops and the drip valve must be readjusted to maintain the proper flame.
- When lighting a heater or stove, always turn your face away from the chamber door. If a flash occurs, it will most likely happen when the fuel first ignites.

- Keep stoves clean, but always practice safety when doing so! The practice of hitting a stovepipe and pouring in a little water to clean out soot is extremely dangerous; throwing blanks into a burning stove to clean out carbon buildup in the stovepipe is even worse.
- Do not touch heater or stove metal parts when temperatures are below freezing without protective gloves. Skin may freeze upon contact and cleave from the flesh.
- Use caution when handling sharp-edged pipes to avoid cuts.

In any dangerous situation, the first response is to save soldiers' lives—soldiers lose their lives in inches and seconds. In a tent fire, there are no seconds to spare. 🚒

Article compiled from the Center for Army Lessons Learned web site, <http://call.army.mil>, and the October 2002 issue of *PS Magazine, The Preventive Maintenance Monthly*, www.logsa.army.mil/psmag/pshome.html

KILL the CHILL-SAFELY

Soldiers know that extreme caution should be used when firing up a space heater in the field; many tents have gone up in flames as a result of negligence or lack of training. However, what soldiers may not know is that many of the same precautions that apply to using space heaters or other heating devices in the field are also relevant for the home.

Heating devices, specifically space heaters, are the leading cause of home fires during December, January, and February. Two out of every three home fires associated with heating equipment involve devices other than central furnaces or water heaters. When used improperly, space heaters—whether gas- or kerosene-fueled or electric, fixed or portable—can lead to fires, as can wood stoves and fireplaces. Just as in the field, space heaters also present another grave hazard beyond fire: carbon monoxide poisoning. Portable kerosene heaters, which are illegal in some states, have the highest death rate per household. Room gas heaters pose a similar risk of death from unvented carbon monoxide.

In 1998 alone, all forms of home heating caused 49,200 reported

fires, 388 deaths, 1,445 injuries, and \$515 million in property damage. Typically, these fires occurred because devices weren't cleaned regularly, were placed or installed too close to combustible materials, had basic flaws in construction or design, or were improperly fueled.

To keep your family safe and avoid tragedy this winter, follow these basic safety tips:

- **Space heaters need space.** Portable space heaters need a 3-foot (1-meter) clearance from anything that can burn and should always be turned off when leaving the room or going to sleep.
- **Look for certification.** When buying a new unit, make certain it carries the mark of an independent testing lab. Be sure that a qualified technician installs the unit or checks that the unit has been installed properly.
- **Stay current on cleaning and maintenance.** Wood and coal stoves, fireplaces, chimneys, chimney connectors, and all other solid-fueled heating equipment need to be inspected annually by a professional and cleaned as often as the inspections indicate.
- **Block sparks.** Use a sturdy fireplace screen to keep sparks from

flying into the room.

- **Fuel smart.** Portable kerosene heaters must be fueled only in a well-ventilated area free of flame and other heat sources, and only when the device has cooled completely. Use only the type of kerosene specified by the manufacturer for that device, and never use gasoline instead of kerosene. Also, be sure that portable kerosene heaters are legal for home use in your state.

- **Follow the instructions.** When turning a heating device on or off, be careful to follow the manufacturer's instructions. When buying heaters, look for devices with automatic shutoff features.

- **Allow plenty of breathing room.** Be sure any gas-fueled heating device is installed with proper attention to ventilation, and never put unvented gas space heaters in bedrooms or bathrooms. In addition, liquefied petroleum (LP) gas heaters with self-contained fuel supplies are prohibited for home use by National Fire Protection Association (NFPA) codes. 🚒

Adapted from NFPA news release, www.nfpa.org

Survive the Dive

What happened?

While a floating repair station was located on a major river for conducting maintenance operations on a dam, a diver was drawn into a water flow field produced by differential pressure and forced through an intake port located on a dam pier. The diver was then pinned by the water pressure in a culvert within the pier. As a result, the diver sustained fatal injuries when he remained within the culvert until the differential pressure was equalized and he was extracted.

Why did it happen?

A number of factors contributed to this accident. The intake shutter that was previously placed over the intake port was not properly seated with the associated lockout/tagout (LO/TO) procedures in accordance with (IAW) published regulations. As the shutter was placed into position below the surface of the water, it stopped its vertical descent and the assumption was made that the intake shutter was properly seated. However, an opening remained between the bottom of the shutter and the lower edge of the intake port. Therefore, when the diver approached the partially covered pier intake port, he was

drawn into the water flow field produced by the differential pressure created by the opening and forced through the port and into the culvert.

LO/TO procedures for the manual operation of this dam system were not established to ensure positive control of hazardous energy (water). Therefore, maintenance personnel did not have the necessary procedures to validate that the intake shutter was properly seated. A risk management method was used for this maintenance operation that required coordination between the individual developing the risk management worksheet and others familiar with the operation. However, adequate coordination was not conducted. The need for manual LO/TO procedures was not identified, procedures were not developed and implemented, and the position of the shutter was not verified. Maintenance personnel were not familiar with this dam system, nor were they provided with adequate LO/TO procedures in order to ensure safe operations.

Although a dive plan was developed, the diver was instructed to conduct a task outside the plan. The regulatory guidance directed that a dive must be terminated and a revised dive plan developed and approved by the dive

Mission:

Conduct poiree dam caulking operations in preparation for beartrap repair.

Hazards

- Lack of lockout/tagout (LO/TO) training and procedures for the beartrap system
- Complacency during dive operations resulting in noncompliance with the dive plan
- Inadequate coordination during development of the activity hazard analysis

Controls

- Ensure that LO/TO procedures are established in accordance with (IAW) Engineer Regulation (ER) 385-1-31 in order to control all forms of hazardous energy
- Ensure that personnel responsible for LO/TO receive the necessary training to properly implement LO/TO procedures
- Ensure compliance with Corps of Engineers Lakes and Rivers Louisville Regulations (CELRLR) 385-1-43 for development of the activity hazard analysis
- Ensure compliance with ER 385-1-86 by enforcing the responsibilities of the dive supervisor and other dive personnel

coordinator if changes to the dive plan were identified. The diver was directed to check for leaks at the intake port, a task outside the dive plan, by an individual other than the one responsible for supervising the dive. However, the individual responsible for supervising the dive allowed this procedure to occur. Additionally, other caulking procedures were not used at this intake port before a diver entering the water IAW published regulations.

While it did not directly contribute to this accident, a number of other maintenance, procedural, and inspection deficiencies were present for this dive team. The bailout bottles used as an emergency air supply were not hydrostatically tested within the required time period, maintenance records were not available, and there was no dive flag present at the dive site. Regulators on the bailout bottles did not have pressure gages. Although not required, pressure gages allow a diver to check oxygen levels while submerged. Additionally, the primary surface air source was inadequate to support a standby diver if the first diver had a free-flowing regulator.

What to do about it?

1. Comply with regulatory requirements to

ensure that LO/TO procedures are developed and available during repair station maintenance operations, and also ensure that the required requisite training is implemented in order to control all forms of hazardous energy.

2. Ensure that risk management is thoroughly planned, to include the necessary coordination, in order to identify hazards and implement the control measures necessary to mitigate the risks associated with repair station maintenance operations.

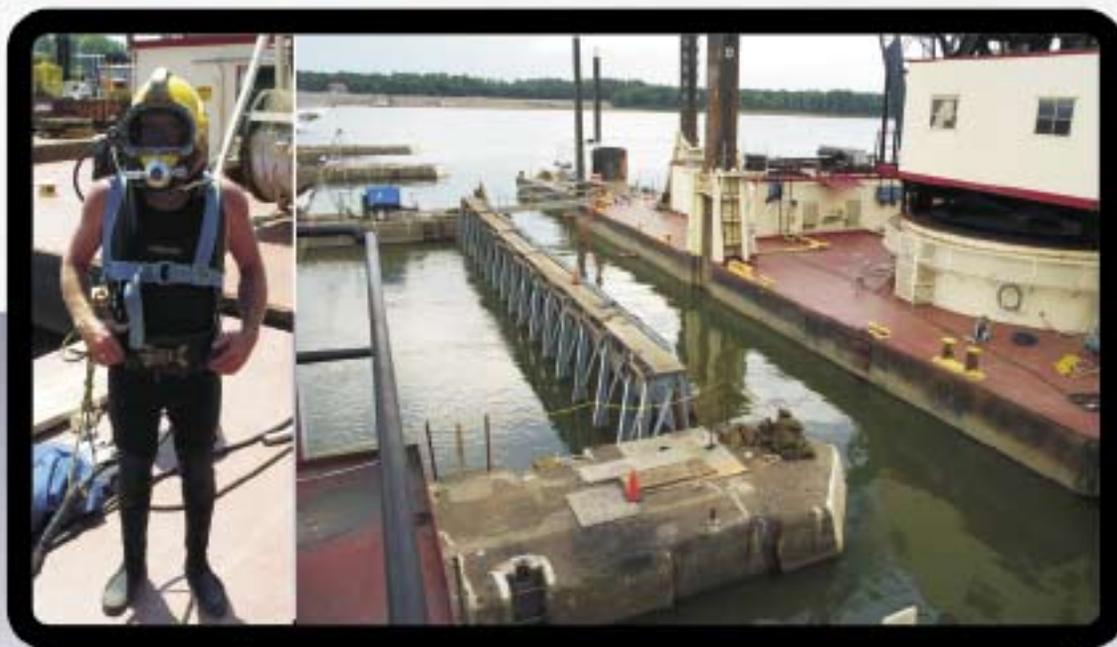
3. Ensure that all dive team members understand their respective responsibilities and comply with the dive plan IAW the published regulatory requirements.

4. Ensure that diving operation inspection programs are in place and conducted IAW published regulatory requirements.

5. Consider an enhanced level of safe diving operations by adding pressure gages to bailout bottles, and by providing an independent air source for the standby diver.

HAVE A SAFE DIVE! 

POC: Ground Systems and Accident Investigation Division, DSN 558-3562, (334) 255-3562



RESULT - 1 Fatality

Don't Be a Factor in an M939 Accident

The M939 series 5-ton truck was involved in another fatal accident recently. However, the truck wasn't the lone culprit. Along with the 5-ton were the usual accomplices: wet weather, light loads, poor supervision, no risk management, and no knowledge of existing hazards associated with the M939 series 5-ton.

The Army identified certain hazards associated with the M939 series truck in 1995 and informed units in the field through Ground Precautionary Message (GPM) 96-04. Army leadership applied more controls to reduce hazards by identifying a maximum speed limit of 40 mph in Tank-Automotive Command (TACOM) Safety of Use Message (SOU) 98-07. This change was incorporated into Technical Manual (TM) 9-2320-272-10, with Change 1.

The Army determined the fix for reducing these hazards across the force was a modification work order (MWO) to place antilock braking systems on the entire M939 fleet. For the basic M939 fleet, the Army also decided to replace existing non-directional, cross-country tires with radials (TACOM SOUM 98-07). Yet, this endeavor is taking time to complete. Until its completion, leaders MUST be informed and proactive about addressing the hazards associated with this common system used by numerous units across the Army EVERY time they use it.

Despite these efforts, units continue to operate M939 series vehicles in the very conditions the messages warn against. Leaders must know the hazards associated with the environments they are operating in and address them through appropriate control measures. The known hazards are:

Driving too fast for conditions.

Until the MWO is complete, M939 trucks are not to be driven above 40 mph, which means 40 mph is the extreme limit. Driving too fast for conditions creates an environment for compounding the effects of the other hazards listed below. Unit leaders must evaluate and re-evaluate the conditions the truck will be used in and apply the appropriate controls.

Applying excessive pressure to the brake pedal.

Tailgating can create an extremely hazardous condition when drivers overreact to vehicles braking to their front. Over-braking can lock up the wheels, causing the engine to stall. This can lead to loss of control of the vehicle.

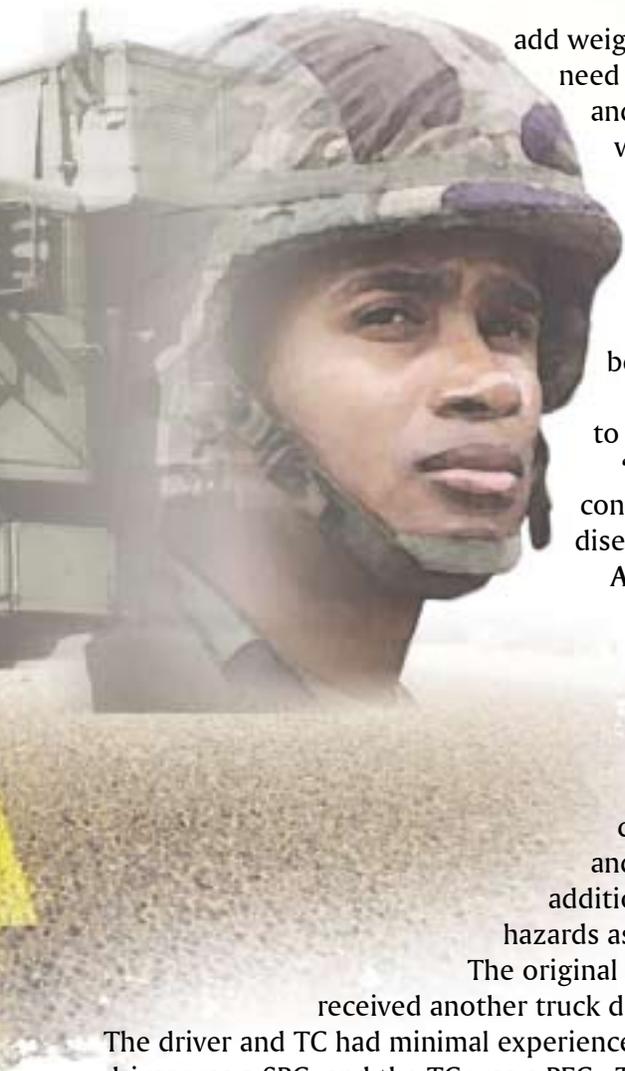
Operating on asphalt roads in damp or wet conditions.

Damp or wet conditions contribute to the vehicle losing traction when the brakes are applied suddenly and with too much pressure. Drivers must slow down when damp or wet conditions exist, and leaders MUST re-evaluate the need to operate the truck in these conditions and, at a minimum, implement additional control measures and inform their drivers of the increased risks.

Operating with light loads on asphalt roads.

The M939 series truck was developed for heavy loads and off-road conditions. The accidents we see so often are M939 series trucks operating on asphalt roads. The trucks are generally hauling cargo on or around post, or they are hauling soldiers to and from training and details (see Army Regulation (AR) 385-55, *Prevention of Motor Vehicle Accidents*, for guidance on hauling soldiers). This does not mean you need to





add weight to the truck to operate it safely, but it does mean that leaders need to recognize the increased risk of operating in these conditions and enforce speed limits and safe distances between vehicles, as well as inform drivers of the increased risks. Information and knowledge about the system is half the battle of operating any equipment safely. Soldiers will not know if leaders do not.

Other hazards.

In addition to the ones listed above, the following hazards must be considered:

Tailgating. Leave enough room between yourself and the vehicle to your front to brake correctly and safely.

“Cruise control.” Do not use the hand throttle as a “cruise control.” When used in such a manner, the hand throttle will not disengage when the brakes are applied.

Air pressure. Do not let air pressure get below 60 psi.

Briefly, I will lay out the existing conditions of the most recent accident and let you, the reader, do the risk assessment.

A junior NCO was tasked with responsibility for supervising a detail at a remote location. He was given this task on Friday for a Monday execution. The detail was to last for two weeks and consisted of soldiers from three separate platoons. The battalion and company assigning the mission were reacting to late taskings. In addition, none of the soldiers involved in the detail knew of the existing hazards associated with the M923A2. Their TM was dated 1984.

The original truck was deadlined during the conduct of the detail. The soldiers received another truck dispatched by another driver.

The driver and TC had minimal experience on the M923A2. The driver was a SPC, and the TC was a PFC. The truck had inoperable windshield wipers.

The NCO did not go to training with his detail on the day of the accident—he met them later and he drove his POV. No leaders applied the principles of risk management to this detail. They considered it routine.

The truck was following the NCOIC back to main post on an asphalt road. The weather was wet and damp. The NCOIC was following a bus when the bus driver applied his brakes. The NCOIC applied his brakes, followed by the driver of the M923A2. The vehicle started skidding and left the roadway. It overturned, killing the driver and two passengers in the back of the truck. The TC and one passenger in the rear of the truck were ejected during the accident sequence and sustained minor injuries.

Given this scenario and the information provided above, this accident was predictable, but it was also PREVENTABLE. We know the hazards associated with the M939 series 5-ton truck. Identify those hazards, acknowledge them, address them, and elevate them to the appropriate authority to get a decision. Then have a safe day. 🍀

POC: Ground Systems and Accident Investigation Division,
DSN 558-3562, (334) 255-3562



USASC Announces New

A new feature is now available for searching words or phrases in the Army Safety Management Information System (ASMIS) accident database. This capability utilizes several search techniques within the database description and narrative fields. The narrative fields for ground reports include the sequence of events, tasks and errors, corrective action, materiel failure, and environmental text. The narrative fields for aviation reports include the synopsis, summary, analysis, findings, and recommendations text.

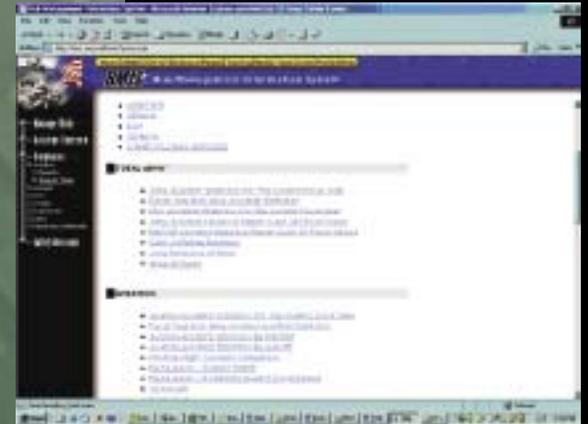
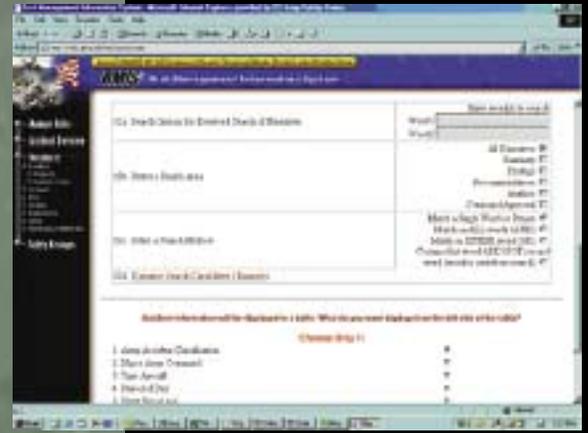
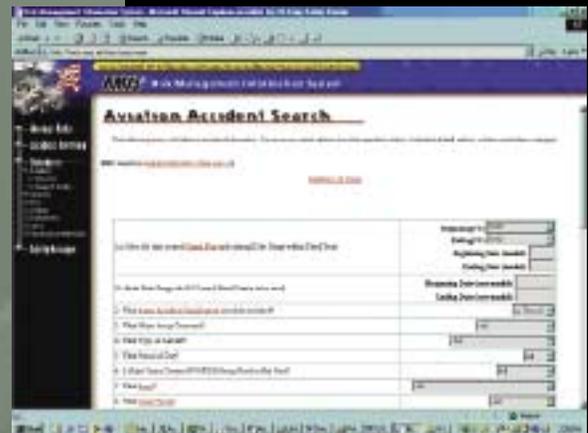
To access the search option, simply go to the Risk Management Information System (RMIS) web page (<http://rmis.safety.mil>) and enter your RMIS user ID and password. If you do not have an account, you can apply for one with the "Request ID" button.

Once you are on the RMIS main web page, click on the "Databases" field on the left side. Next, select "Aviation" or "Ground" on the list, and then click on "Search Tools."

The "Search Tools" option allows you to search either a parameterized-type query or a broad word search on all accident records. The first screen of the "Search Tools" selection displays the query options that are available. Default options are shown for each question and can easily be changed by selecting a different item from each drop-down box. By carefully choosing the answers to define your search, you can improve the response time of your query and obtain better results.

The last question shows the word search capability, and the bottom half of the query screen shows the display options for your result.

You can enter a word or phrase in the first box, or you can enter two separate words in each box that describe what you are looking for. The database provides a variety of query types with unique capabilities for effective text retrieval. For example, the phrase "power management" matches the narrative text that contains both words together. Also, the last section of the search question includes a help feature with examples. After you have made your selections, click on "Retrieve Information" at the bottom of your screen.



Interactive Feature

This database search engine is case insensitive; for example, you can enter “tank,” “Tank,” or “TANK.” You also can use wildcard matches, such as the “%” sign. In addition, the system can normalize known misspellings and uses word derivations such as “destroy,” “destroys,” or “destroying.” The third part of the search question allows for compound or Boolean-type queries such as “and,” “or,” or “not.” The second example on the left shows a search on the words “rollover” and “roll over” using the “OR” query for either of these two words to be found in the narrative text.

The second part of the query question allows you to select what type of narrative to use for the search; the default is “All Narratives.” You can select more than one type of narrative when not selecting “All Narratives.” Be aware that if you select all narratives, the result time could be quite long. Additionally, the query may return a case where the text is found in one type of narrative (i.e., analysis) and the narrative type is not currently displayed on the web report form on the screen. Future improved web accident forms will include more blocks and narratives from all of the various accident reports.

The groups of records returned from the search are then displayed on the next page in a matrix format based on the options you selected on the previous screen. You can subsequently narrow down to specific accident records of interest by selecting the number in the matrix box for “Accident Count.”

The next screen displays the case number and a short description of the accident. The text search occurs on the database narrative fields, not on the short description displayed or the actual blocks on the accident forms. Once you click on the case number, the actual accident report case will be displayed. You can search the screen display with the Windows Explorer “Find” tool to look for the word or phrases you searched on. You can also save the file to your local computer or print out the report.

We are always looking for new ways to deliver accident data in a well-designed format that reflects the breadth and depth of the ASMIS database. We welcome your feedback. If you have any questions or need assistance, please call our Help Desk at (334) 255-1390 or send e-mail to helpdesk@safetycenter.army.mil.

POC: LTC Mike Reed, Director, Support Directorate,
DSN 558-9280, (334) 255-9280,
e-mail mike.reed@safetycenter.army.mil

Passenger Capacity Reminder

The passenger-carrying capacities listed in the table below are for normal passenger-carrying operations and are consistent with safety policies and design features of the vehicles. The passenger capacities apply only when the vehicle is properly equipped with permanent or temporary seats (refer to Army Regulation (AR) 385-55, *Prevention of Motor Vehicle Accidents*, if there is any doubt).

Passengers who are not crew members and are carried in the cab of the vehicle are limited to the number of available seatbelt positions.

The passenger capacity of sedans, vans, station wagons, and other administrative vehicles is limited to the number of seatbelt positions.

Refer to the operator's manual and AR 385-55 for vehicles not listed.

Do not crowd passengers on bench-type seats in cargo beds. Unless specified by local policy, passengers can be transported on post without fixed seats for short distances (under 10 miles), provided that each passenger remains seated wholly within the body of the vehicle and the body is equipped with stakes or sideboards.

The driver, as well as the TC and senior occupant, is responsible for the safety of the personnel riding in their vehicle. Drivers will refuse to move a vehicle if anyone is in an unsafe position or the vehicle has too many passengers. 🚚

Derived from Technical Bulletin (TB) 9-639, *Passenger-Carrying Capacity of Tactical and Administrative Vehicles Commonly Used to Transport Personnel*, 9 November 1988

Vehicle Type 	Passenger Capacity
2 1/2-ton Cargo Truck	14
2 1/2-ton Extended Cargo Body Truck	18
2 1/2-ton Dump Truck	10
5-ton Cargo Truck	16
5-ton Extended Cargo Body Truck	20
5-ton Dump Truck	12
5/4-ton HMMWV Troop Carrier	8
5/4-ton HMMWV Cargo/Troop Carrier	4
5/4-ton M880, M881, or M882	8
Semi-trailer Personnel Van	80

NOTE: The passenger capacity listed above does not include the operating crew.

AAFES Halts Sale of Ephedra

The *Stars and Stripes* recently reported that the Army and Air Force Exchange Service (AAFES) began pulling all supplements containing the natural stimulant ephedra from store shelves “due to recent concerns from major commands within the military community,” according to AAFES spokesman Fred Bluhm. Last spring a soldier at Fort Hood, Texas, died during physical training from an apparent heart attack. According to a base memo, the soldier was likely taking a nutritional supplement containing a combination of ephedra and caffeine. Another Fort Hood soldier on a similar supplement was recently treated in the emergency room there for a heat-related injury during physical training.

The safety of ephedra is widely debated. Ephedra is a natural herb that gives the body an energy boost, and caffeine prolongs the burst, speeding up metabolism, depressing appetite, and increasing heart rate, which leads to weight loss. According to Staff Sgt. Peter Burriesce, an aerospace physiologist with Yokota's 374th Medical Group, “It gets the heart rate up, holds it there for a long period of time.” The physiological response is similar to the effects of running, except much less oxygen is produced. If ephedra is taken in too large a quantity, the result can be stroke or a cardiovascular shutdown, Burriesce said. 🚚

Adapted from military.com press release, www.military.com

Alert Issued for Protective Suits

Any service members issued chemical protective suits for possible action in Iraq may want to check the package to make sure they are not among 250,000 potentially defective garments that remain unaccounted for.

If the label says the suit was made by "Isratex," or if it has a lot number of either DLA100-92-C-0427 or DLA100-89-C-0429, soldiers may want to ask for a different set of protective garments.

All garments made by the now-bankrupt Isratex company have been recalled. In a recent hearing, members of the House Government Reform Committee expressed concern about the possibility that troops heading for Iraq could end up with the flawed suits.

Department of Defense officials have said they have no evidence the suits have been destroyed and no way to track them if they have not been destroyed. However, logistics experts believe the missing suits have long since been used for training, then discarded.

The suits are packed in sealed packages that are supposed to clearly show the lot number, manufacturer, and date of production. Officially called battle dress overgarments, the suits were made by Isratex in 1989 and 1992 in both desert and woodland camouflage patterns.

The chemical protective suits passed initial quality-control screening, but in 1999 underwent rigorous testing in preparation for court action against Isratex management. At that time, inspectors found seven "critical" defects in a sample of 500 units. The defects included holes or poor stitching. Whenever a single critical defect is found in suits, the entire lot must be removed from combat inventories. The defects were found in the 1992 suits—lot number DLA100-92-C-0427. Suits made in 1989—lot number DLA100-89-C-0429—have passed all quality-control inspections, but have also been recalled because they were made by Isratex.



The suits are used mainly by the Army and Air Force, which scoured their overseas inventories in 2000 after news reports about the potentially defective garments. 🐾

Adapted from *Army Times* news release, www.armytimes.com

Turn the Defroster Off

M1 tankers: do you have a problem with frost on the eyepiece of your gunner's primary sight (GPS)? Just flip on the GPS defroster. In a few minutes your problem will clear up. But if you forget to turn off the defroster, you will have a new problem.

The defroster does not turn itself off when the frost is gone—it keeps right on running. And, a long-running defroster will overheat and crack the daylight window on the GPS.

So, this winter season, when the frost is gone, be sure to turn off the defroster. 🐾

Adapted from the October 2002 issue of *PS Magazine*, *The Preventive Maintenance Monthly*, www.logsa.army.mil/psmag/pshome/html

4th Quarter Safety of Use and Ground Precautionary Messages

The following is a list of selected safety of use messages (SOUMs) and ground precautionary messages (GPMs) issued by the Army Tank-Automotive Command (TACOM) and Communications and Electronics Command (CECOM). Complete copies of the SOUMs and GPMs are available on the Army Electronic Product Support Bulletin Board via their Internet web site at <http://aeprs.ria.army.mil/>.

SOUM-02-007, MSG
231928ZJUL02, subject: NBC system protection system for all Abrams tanks M1A1, NSN 2350-01-087-1095, T13168, and M1A2/M1A2 SEP, NSN 2350-01-328-5964, T13305. POCs: Ms. Berniece Dubay, DSN 786-8215, (586) 574-8215, e-mail dubayb@tacom.army.mil; and Mr. Murad Khan, DSN 786-6743, (586) 574-6743, e-mail khanm@tacom.army.mil.

SOUM-02-008, MSG
261421ZJUL02, subject: NBC system protection system for all Abrams tanks M1A1, NSN 2350-01-087-1095,

T13168, and M1A2/M1A2 SEP, NSN 2350-01-328-5964, T13305. POCs: Ms. Berniece Dubay, DSN 786-8215, (586) 574-8215, e-mail dubayb@tacom.army.mil; Mr. Murad Khan, DSN 786-6743, (586) 574-6743, e-mail khanm@tacom.army.mil; and Ms. Barb Hawotte, DSN 793-6609, (309) 782-6609, e-mail hawotteb@ria.army.mil.

SOUM-02-009, MSG
241838ZSEP02, subject: Hydraulic pump case drain quick disconnect (QD), part number 12467260, NSN 4720-01-473-3069, for all Abrams tanks M1, NSN 2350-01-061-2445, T13374; M1A1, NSN 2350-01-087-1095, T13168; and M1A2/M1A2 SEP, NSN 2350-01-328-5964, T13305. POCs: Ms. Berniece Dubay, DSN 786-8215, (586) 574-8215, e-mail dubayb@tacom.army.mil; and Mr. Jack Phillips, DSN 786-2374, (586) 753-2374, or e-mail phillija@tacom.army.mil.

SOUM-02-010, MSG
251853ZSEP02, subject: XM104 Wolverine, heavy assault bridge, LIN H82510, NSN 5420-01-

430-5403. POCs: Mr. Ken Foster, DSN 786-5557, (586) 574-5557, or e-mail fosterk@tacom.army.mil; Ms. Donna Morgan, DSN 786-5213, (586) 574-5213, or e-mail morgand@tacom.army.mil; Mr. Jon Taylor, DSN 786-6056, (586) 574-6056, or e-mail taylorj@tacom.army.mil; LTC Thomas Svisco, DSN 786-7586, (586) 574-7586, or e-mail sviscot@tacom.army.mil; Mr. Mike Athey, DSN 738-7731, (254) 288-7731, or e-mail atheym@hood-emh3.army.mil; and Ms. Barb Hawotte, DSN 793-6609, (309) 782-6609, or e-mail hawotteb@ria.army.mil.

GPM-02-022, MSG
111336ZJUL02, subject: XM104 Wolverine, heavy assault bridge, LIN H82510, NSN 5420-01-430-4227. POCs: Mr. Ken Foster, DSN 786-5557, (586) 574-5557, or e-mail fosterk@tacom.army.mil; Ms. Donna Morgan, DSN 786-5213, (586) 574-5213, or e-mail morgand@tacom.army.mil; Mr. Alex Bodner, DSN 786-7586, (586) 574-7586, or e-mail bodnera@tacom.army.mil; and Mr. Mike Athey, DSN 738-7731, (254) 288-7731, or e-mail atheym@hood-emh3.army.mil.



ACV

Class C

- Soldier sustained minor injuries to his arm after the Howitzer he was riding in pitched to one side on a muddy tank trail, knocking SM (the track commander) into a nearby tree. SM's arm was caught between the tree and the Howitzer.

- Soldier sustained bruising to his ribs when the M1068A2 he was riding in pitched to the right. SM's injuries were caused when he was knocked against the track commander's hatch rail.



AMV

Class C

- Soldier received minor injuries to his right leg when the HMMWV he was riding in hit a bump, throwing SM against the .50-cal mount and gunner's hatch.

- Soldier received minor back injuries after he slipped and fell approximately 6 feet from the hood of a 5-ton truck. SM had been conducting maintenance on the truck and had maintained three points of contact on the truck up to the time of the accident.



Personnel Injury

Class A

- Soldier drowned after jumping off a boat during off-duty hours. SM had reportedly been drinking before the accident.

- Soldier had just completed PT test and was cooling down

when he passed out. SM was taken to the local hospital, where he was pronounced dead.

- Soldier had just completed the run portion of his APFT when he collapsed on the track. SM was pronounced dead by paramedics.

- Soldier collapsed after conducting PT indoors on his unit's treadmill. SM was transported to the local hospital, where he died a short time later. SM had shown signs of chest pains before collapsing.

Class B

- Soldier was participating in an FTX when he was struck in the groin area by a star cluster, resulting in a PPD injury.

Class C

- Soldier received burns when he tossed an anti-tank weapons effects signature simulator (ATWESS) training device. SM was burned when he lit exposed powder from the ATWESS device with a match.

- Soldier received fractures to his ankle while attempting to avoid an animal during a training exercise.

- Soldier sustained a laceration to his forehead when he hit a 1270 communications modem in his shelter. SM was in the process of securing his LBV and Kevlar at the time of the accident.

- Soldier sustained minor injuries to his ankle when he jumped from a generator he had been refueling. SM failed to maintain three points of contact with the equipment.

- Soldier received injuries to his head when he leaped from the

stairs outside his barracks and hit a crossbar supporting an overhead awning. SM fell backwards and hit his head on the concrete steps, causing a blood clot that required surgery.

- Soldier sustained fractures to his coccyx after he failed to conduct a proper parachute landing fall during a non-tactical day Hollywood jump.

- Civilian cut her middle finger while cutting a plastic foil-wrapped pallet with a knife.

- Soldier sustained injuries to his head after he collided with a pedestrian while riding his bicycle.

- Soldier received a broken toe and a laceration after the front leg of an M149A1 water trailer collapsed and struck her left foot.

- Soldier sustained minor injuries to his head after he hit an environmental conditioning unit after coming off break.



POV

Class A

- Soldier was killed when the motorcycle he was operating struck a POV turning left into his path.

- Two soldiers were killed when the POV they were riding in left the roadway, struck a guardrail, and overturned.

- Soldier was killed when he lost control of his POV due to hydroplaning and it struck another vehicle. SM was ejected from the vehicle.

ALWAYS

SHUT IT DOWN

if an accident occurs

4 Ways to Shut the M1 Engine Down

- **ENGINE SHUTDOWN** switch on the driver's instrument display (DID)
- **ENGINE 2ND SHOT** switch on the DID
- **YELLOW T-HANDLE** emergency fuel shutoff located in the turret wall
- **FUEL QUICK DISCONNECT (QD)**, the quickest way to shut down an M1 engine



ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 11

<http://safety.army.mil>

NOVEMBER 2002

POV SPECIAL ISSUE

ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

CONTENTS

- 3** DASAF's Corner
- 4** POV Accident Prevention: Changing Attitudes and Behavior
- 6** FY 2002 Roll Call
- 12** Watching My Girls Grow Up
- 15** Accident Briefs
- 16** Coming Soon to A Post Near You!
- Plus** Two Pull-Out Posters
Motorcycle Safety Inspection Checklist
Mandatory Personal Protective Equipment & Requirements



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

BG James E. Simmons
Commander/Director of
Army Safety

LTC Richard Pryke
Publishing Supervisor

COL John Frketic
Deputy Commander

Julie Shelley
Writer/Managing Editor

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4906, 5th Avenue, Fort Rucker, AL 36362-5353. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use FAX 334-255-3003 (Ms. Julie Shelley) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



The Holiday Season and Reflection

We are each privileged to serve in the finest Army our country has ever known. For more than 220 years, this great Army has existed to fight and win our Nation's wars. Today we are more than a year into this war on terrorism, and I can tell you—without any hesitation—that all of our soldiers and units have performed magnificently both on the battlefield and in training as we prepare for combat.

As we enter this holiday season, reflecting on the events of the past year gives us an even greater appreciation for the tremendous job you do every day. We have prosecuted this war in some of the most dangerous terrain on the face of the earth, in possibly the most unforgiving aviation environment the Army has ever encountered. Because of your efforts and skills, our Army has been successful where others before us have failed. We have succeeded and will continue to succeed because great soldiers like each of you were able to effectively manage risks involved in those operations. Your skills in identifying and assessing hazards and being able to define and implement controls to reduce risks helped us to be successful with minimal losses.

I personally thank you for your willingness to serve and for the great job you are doing. And, I would be terribly remiss if I failed to also thank the families and friends who support you and allow the Army to use your skills and talents as we continue to prosecute this war on those who wish us harm.

Many of you will enjoy the comforts of home and the joys of being with family this holiday season. If you are traveling, I urge you to be extra cautious, as POV accidents are still the number one killer of our soldiers. Be extra vigilant in identifying, assessing, and controlling hazards. A moment's lapse in awareness can easily result in tragedy.

For those who are deployed in support of Operation Enduring Freedom or to any of the many other points around the world with an American Army presence, know that our thoughts and prayers are with you.

To all of you who each day put your life on the line to defend this great country, have a safe and happy holiday season and know that we, as a Nation, are truly grateful for your service. 🇺🇸

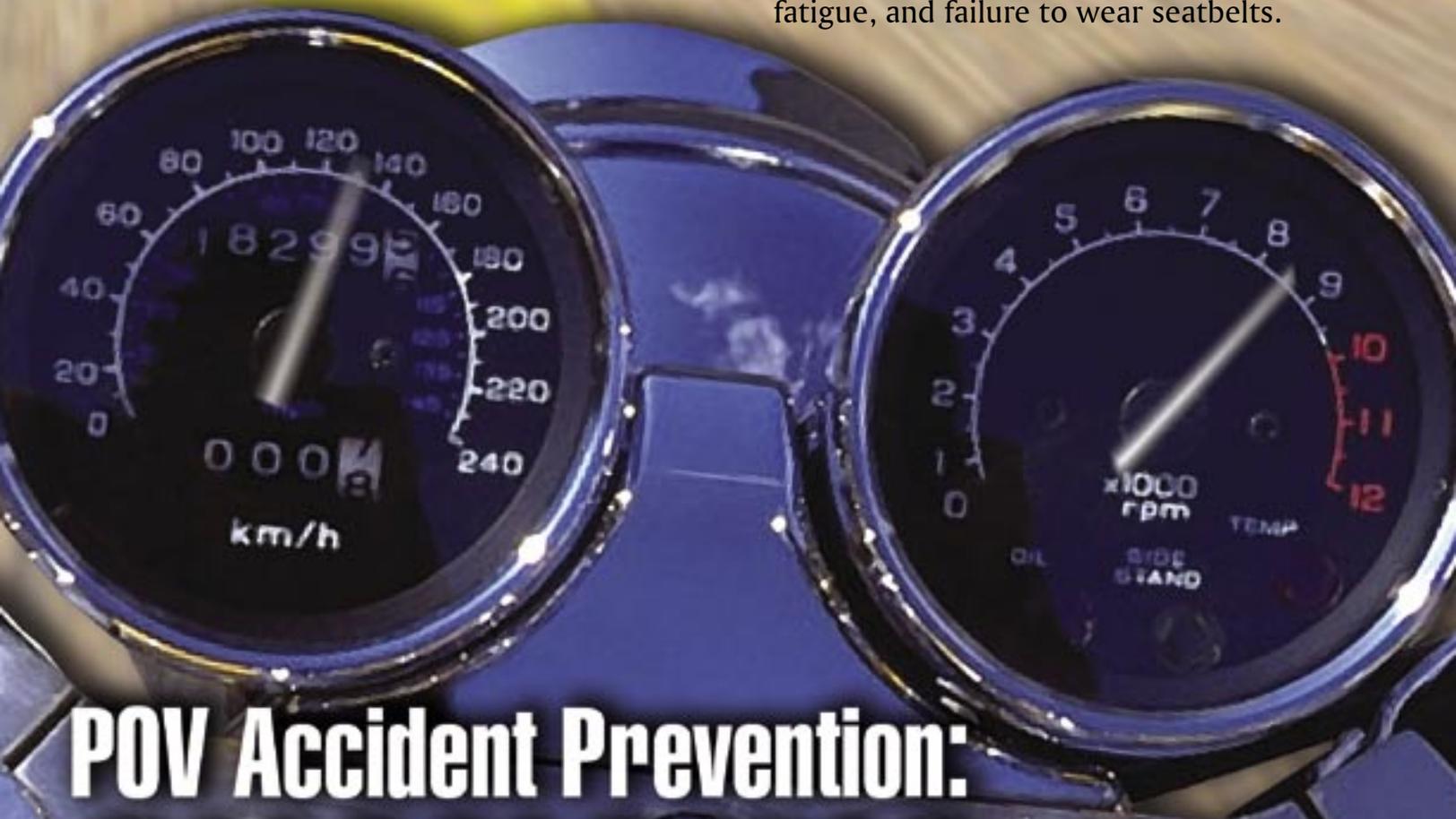
Train Hard, Be Safe!
BG James E. Simmons

A handwritten signature in black ink, appearing to read "James E. Simmons".

The majority of Army fatalities still result from POV accidents. Our Army's senior leadership repeatedly has challenged all of us to redouble our efforts and get our arms around this needless drain on readiness. Across the Army, we've made valiant attempts with good success in some units. But, overall,

we've all found that this has proven to be a difficult mission to accomplish.

Of the 206 total Army fatalities in FY02, 113 were the result of POV accidents. This figure represents an unacceptable 14-percent increase above the 99 POV fatalities recorded in FY01. Causal factors continue to include aggressive driving, speed, fatigue, and failure to wear seatbelts.



POV Accident Prevention: **CHANGING ATTITUDES AND BEHAVIOR**

The biggest increase in fatalities is attributed to motorcycle accidents—a 54-percent increase over last year. Motorcycle-specific accident causes include aggressive driving, speed, alcohol, and failure to wear a helmet. A major contributing factor is that many of these soldiers did not attend the Motorcycle Safety Course. As leaders, it is incumbent upon us to mandate that any soldier riding a motorcycle complete this course BEFORE they operate a motorcycle.

Although the Army's traffic fatality rate is about 20 percent less than the nation's, past POV accident analysis shows that the Army's accident experience closely mirrors the nation's when it comes to age, gender, and types of accidents. For example, Army male drivers under the age of 25 are the most likely age group to become involved in fatal accidents because they often tend to underestimate the hazards and overestimate their personal abilities. It's that "I'm young, I'm invincible, I'll live forever" mentality. Sadly, young soldiers often are not as invincible as they think they are.

The big difference between the Army and the general public, of course, is that we, as leaders, can exert more control over soldier behavior. We owe it to our soldiers to work diligently to change their attitudes and behavior regarding POV safety, and the individual in the best position to effect that change is the squad leader.

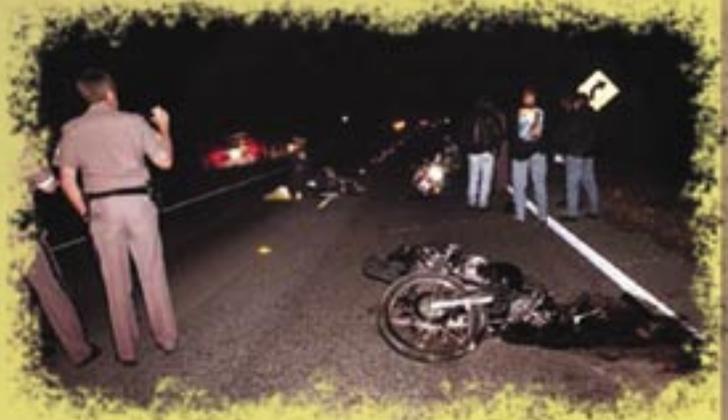
The squad leader knows which soldiers are out late at night, which soldiers are always rushing, and what kind of cars they drive. The squad leader also knows that those soldiers are taking risks. He or she has to get in the head of that soldier and intervene.

Attitude and behavior will not be changed with unit safety briefings alone. Policies may state that safety briefings are mandatory, but that does not change behavior. At safety briefings, soldiers may not be paying attention. Sometimes they are thinking about other things. Changing attitudes and behavior will happen only with education, training, and intervention.

There are a lot of intervention measures that leaders can use in units. One example: when bringing soldiers in from the field, clean up the equipment and hold soldiers overnight before releasing them. Soldiers are tired from stress and little sleep while in the field. As a commander, you can hold the unit for a rest and recovery

period so that your soldiers won't be fatigued when hitting the highways. It may not make the soldiers happy, but it could prevent an accident.

It isn't just fatigue from a long week in the field that is a major cause of POV accidents. Another is soldiers rushing to get back to the PT formation on Monday morning. They often depart from their weekend destination late on Sunday night or in the early morning hours on Monday. Focused on getting back in time, they



sometimes push it a little too hard and end up killing themselves at 0200 or 0300. The squad leader should know which of his or her soldiers will do this and has a moral responsibility to help change these soldiers' behavior.

"Every Drive Counts" is a new video that links the macho event of jumping out of aircraft and driving a vehicle. The central message is that just like every jump counts, every drive counts. Produced by the Army Safety Center in conjunction with the Airborne School, this additional intervention tool is available at installation safety offices and local training service centers.

In the Army team, trust is critical. We, as leaders, have to build trust with soldiers. But communication in the form of lip service will not cut it. Soldiers quickly discern the leaders who truly care. Using intervention techniques such as holding the unit may not make you a popular commander, but that is acceptable as long as you are a *respected* commander. We must never forget that soldiers will judge us not by our words, but by what we do. Sometimes tough love is necessary, but it is well worth your being a bit unpopular if it saves a life. 🐻

—BG James E. Simmons, Director of Army Safety



FY 2002 ROLL CALL

This issue of *Countermeasure* recounts the soldiers who died in POV and motorcycle accidents in FY02. Most of these fatalities cite the same causes of speed, fatigue, alcohol, traffic rule violations, and not wearing seatbelts over and over again. These are vivid testaments to the fact that there are no new causes, just new victims—year after year after year. Yet, just identifying hazards won't save a soldier's life...leader involvement is key in gaining control and stopping this tragic loss of life. If you need help in establishing a POV safety program, call us. Remember that your safety and well-being are important to us here at the Safety Center, as well as the Army and our Nation.

E3, Male (19), 63W10: Soldier was killed when the vehicle he was riding in was involved in an accident. Causes of the accident are unknown.

E4, Male (24), 75FLDHO: Soldier died when another vehicle crossed the centerline, striking SM's vehicle head-on. The other driver is suspected of DUI.

E7, Male (39), 11B: Soldier sustained fatal injuries while driving to drill when another vehicle crossed the centerline, striking SM's vehicle head-on.

E1, Male (21), 19D: Soldier was killed during the early morning hours while speeding in excess of 80 miles per hour while racing another vehicle. SM lost control of the vehicle and skidded 325 feet before striking a guardrail. The driver was killed, and a passenger was found unconscious and remains in a coma. Both the driver and passenger were at a club drinking the night before the accident.

E5, Male (28), 75H: Soldier died when he lost control of his vehicle and struck a telephone pole.

E4, Male (24), 31U: Soldier sustained fatal injuries when the right rear tire of the vehicle he was riding in exploded and the vehicle overturned, ejecting him. SM suffered massive head injuries, which resulted in death. SM was one of five soldiers involved in the accident.

E5, Male (36), 13K: Soldier was killed when his motorcycle struck another vehicle while crossing an intersection. SM was not wearing reflective equipment at the time of the accident.

E3, Male (20), 11B: Soldier died when the vehicle he was riding in ran off the roadway and struck a guardrail. SM was not wearing a seatbelt. The driver of the vehicle, also a soldier, was driving while fatigued, was not wearing a seatbelt, and suffered serious injuries in the accident.

E5, Male (22), 13B: Soldier sustained fatal injuries when his vehicle crossed the roadway into the opposite lane and collided head-on with a tractor-trailer. SM's family member, a passenger, also was killed. It is believed that SM was driving while fatigued at the time of the accident.

E4, Male (39), 91C: Soldier operating a motorcycle was killed when he failed to stop for a red light. A passenger received serious injuries in the accident.

E5, Male (30), 31U: Soldier died when a 15-ton cement truck executed an illegal U-turn and crossed the centerline into the path of his motorcycle. SM was thrown from the motorcycle, and his body struck a light pole along the right side of the highway.

E5, Male (24), and E4, Male (22): Soldier sustained fatal injuries after he lost control of his vehicle while entering a curve speeding. SM's vehicle crossed the centerline and collided with a tractor-trailer. There were four passengers in the rear of the vehicle, with only three seatbelts available. In addition to the driver, one of the passengers, also a soldier, was killed in the accident.

E4, Male (20): Soldier was killed when the vehicle he was riding in crossed the centerline into oncoming traffic. SM was not wearing a seatbelt.

The driver and two passengers, also soldiers, received minor injuries in the accident.

E6, Male (33), 91R: Soldier died when the motorcycle he was operating struck a guardrail.

E4, Male (20), 11B: Soldier sustained fatal injuries when the vehicle he was driving failed to negotiate a gradual curve, left the roadway, over-corrected, rolled an undetermined number of times, and came to rest upside down on its roof. SM was ejected out the right front passenger window and was not wearing a seatbelt.

E3, Male (19), and E3, Male (21), 75P: Soldiers were killed when the vehicle they were riding in crossed the roadway, ran off the road shoulder and up an embankment, and struck a tree. The driver of the vehicle was not licensed and had been drinking when he lost control of the vehicle.

E4, Male (26), 31U, and E4, Male (20), 11B: Soldiers died when the vehicle they were street racing left the roadway, struck a utility pole, and overturned, coming to rest on its roof. Alcohol is suspected in the accident.

E3, Male (21), 35E: Soldier sustained fatal injuries when he fell asleep at the wheel and collided head-on with another vehicle on a foggy morning. Two other soldiers also were involved in the accident.

O4, Male (45), 66H0D: Soldier was killed in a one-vehicle accident en route to unit training.

E5, Male (21), 67T20: Soldier died when his friend lost control of the vehicle he was driving and crashed into an oncoming car.

E4, Male (28), 13B: Soldier sustained fatal injuries when his vehicle crossed the centerline and struck an oncoming vehicle. SM was not wearing a seatbelt, and autopsy results indicated that SM had a blood alcohol content of .262.

E3, Male (21), 63S1P: Soldier was killed when the vehicle he was riding in crossed into the opposite lane while speeding into a curve, resulting in a head-on collision.

E3, Male (23), 92G: Soldier died when his vehicle collided head-on with another vehicle that was driving in the wrong lane. The driver of the other vehicle also was killed.

E3, Male (20), 63W: Soldier sustained fatal injuries when he jumped from the vehicle he was riding in and was run over by the same vehicle. SM was not wearing a seatbelt, and alcohol was involved.

E1, Male (21), 12B: Soldier was killed when he lost control of his vehicle and ran off the road, striking an embankment and large rock. SM was speeding and attempting to pass another vehicle at the time of the accident, and was not wearing his seatbelt.

E3, Male (18), 73C: Soldier died when the vehicle he was riding in swerved, struck a guardrail, exited the roadway, vaulted, landed on four wheels in the center median, and then dropped into a deep culvert, eventually landing upside down and catching on fire. SM was trapped in the vehicle and burned to death. The driver, also a soldier (E3), received serious injuries and lost his leg.

W4, Male (54), 153BC: Soldier sustained fatal injuries on the way home from annual training when another vehicle crossed the centerline and struck his vehicle. The other driver stated that he fell asleep at the wheel before the accident.

E4, Male (30), 62B: Soldier was killed when he lost control of the vehicle he was driving on ice while speeding. SM's vehicle was struck by another vehicle and crossed over the centerline into oncoming traffic, where it was struck head-on by another vehicle.

E3, Male (19), 63B: Soldier died when he lost control of his vehicle, ran off the road, and struck a pole.

E5, Female (30): Soldier sustained fatal injuries when she jumped from a moving vehicle. Both the SM and the driver had been drinking.

E5, Male (25), 91W: Soldier was killed when the driver of the vehicle he was riding in attempted to pass another vehicle while speeding, lost control of the vehicle, and ran off the road. The vehicle rolled several times. The driver had been drinking.

E4, Male (24), 88M: Soldier died when his vehicle was struck head-on by a semi-truck while attempting to pass another semi. Two of SM's friends also were killed in the accident.

E4, Male (23), 67T: Soldier sustained fatal injuries after the vehicle he was driving left the roadway and struck a tree head-on. SM had left a Super Bowl party and was operating his POV at high rate of speed. SM was not wearing a seatbelt and had been drinking.

O3, Male (26), 13A00: Soldier was killed when his vehicle was involved in a head-on collision.

E1, Male (18), and E1, Male (18), 19K: Two soldiers died in a multiple-car accident. Causes are unknown.

E7, Male (37), 18B: Soldier sustained fatal injuries when he lost control of his motorcycle, crossed the centerline, collided with a concrete light pole, and was thrown head-first into the pole, hitting a concrete control box with his forehead. SM was speeding at the time of the accident.

E5, Male (27), 31U: Soldier was killed when the driver of the vehicle he was riding in lost control of the vehicle, crossed into the opposite lane, and struck a power pole with the rear end of the vehicle. The driver was admitted to the hospital for fractures to the vertebrae in his neck.

E4, Male (23), 63T: Soldier died when he ran a red light on his POV, clipped another vehicle, and struck a median in the early morning hours. The vehicle rolled and came to a stop on its roof on the side of the road. SM was not wearing a seatbelt and was partially ejected from the vehicle and crushed during the rollover.

E6, Male (26), 11B: Soldier sustained fatal injuries when he was attempting to enter a crowded driveway on a motorcycle and saw that another motorcycle and a female pedestrian blocked the entrance. SM veered abruptly to avoid hitting the parked motorcycle and the pedestrian and, while attempting to jump the curb, lost control of the motorcycle and struck a palm tree.



E3, Male (19), 13B: Soldier and passenger were killed in a single-vehicle accident. The driver of the vehicle was DUI and speeding at the time of the accident.

E5, Male (34), 96R: Soldier died when the vehicle he was driving hit a guardrail, flipped, and landed upside down in a canal 15 to 20 feet deep while attempting to pass another vehicle. SM was on leave and driving in the early morning hours with no headlights on.

E3, Male (18), 52C: Soldier sustained fatal injuries while driving back to home station after dropping his girlfriend off in another state. SM failed to negotiate a curve and over-corrected his vehicle, which veered back on the roadway into oncoming traffic.

E6, Male (31), 14S: Soldier was killed in a vehicle accident on his way to drill. The accident was caused by zero visibility due to smoke produced by a grass fire.

O1, Male (23), 12A: Soldier died after his vehicle rear-ended a semi-truck while attempting to pass a line of vehicles. The police report indicates that following too closely and inattentive driving were the causes of the collision with the trailer.



E4, Male (22), 63J: Soldier sustained fatal injuries after his vehicle collided head-on with another vehicle in the early-morning hours. SM was speeding on his way back to home station at the time of the accident.

E4, Male (43), 13B: Soldier was killed when he over-corrected and rolled his vehicle, striking a tree. SM was intoxicated and driving at a high rate of speed while attempting to pass another vehicle at the time of the accident.

E2, Male (23), 63A: Soldier died when he lost control of his vehicle while speeding. SM was ejected from the vehicle during the accident.

E7, Male: Soldier sustained fatal injuries when he lost control of the motorcycle he was operating and ran off the roadway, striking a road sign.

O3, Male (34), 65D: Soldier was killed when he swerved the motorcycle he was driving to miss a dog and hit a culvert. SM was not wearing a helmet.

E3, Male (21): Soldier died in an early morning, single-vehicle accident. SM was driving after light to moderate physical activity and had had no rest at the time of the accident.

E5, Male (38), 54B: Soldier sustained fatal injuries when his POV left the roadway and struck a bridge abutment.

E5, Male (27), 63D: Soldier was killed when a family member who was driving the vehicle he was riding in lost control of the vehicle. SM's family member was speeding and attempting to change lanes at the time he lost control, sending the vehicle into a skid and overturning it. SM was going to the airport to return to home station at the time of the accident.

E4, Male (20), 14J: Soldier died when his POV was involved in a multiple-car accident. SM's vehicle crossed the center lane, collided with two vehicles, and caught fire.

E3, Male (20), 11B: Soldier sustained fatal injuries when the vehicle he was riding in ran off the road for unknown reasons. All four of the vehicle's occupants were ejected. SM was not wearing a seatbelt at the time of the accident.

E5, Male (39), 92Y: Soldier was killed when the motorcycle he was driving struck a median in the middle of an intersection. SM was not wearing a helmet and was under the influence of alcohol at the time of the accident.

E5, Male (27), 77F: Soldier died when he ran a stop sign on a motorcycle and was hit by another vehicle. SM was not licensed to operate a motorcycle and was not wearing a helmet at the time of the accident. Speed also could have been a factor in the accident.

E4, Male (36), 11B: Soldier sustained fatal injuries after he failed to maintain his lane and veered to the right of the roadway.

The vehicle's front wheel struck the face of the concrete median and ejected SM onto the roadway. Overconfidence, a high rate of speed, and alcohol consumption were factors involved in the accident.

E4, Female (19), 43M: Soldier was killed while stopped to render assistance at an accident site. An oncoming vehicle struck a pole, causing the pole to strike SM.

E6, Male (36): Soldier died when he lost control of his vehicle while attempting to make a turn. SM was driving during the early morning hours when he made a 90-degree right turn, turning wide and to the left in order to make the turn. SM's vehicle veered too far left and hit the left curb, causing it to go out of control.

E3, Male (21), 61W: SM sustained fatal injuries when the POV he was riding in ran off the roadway and into a ditch, overturning an unknown number of times.

E6, Male (27), 14R: Soldier was killed when the motorcycle he was driving left the roadway and struck a concrete wall and metal pole. SM was not wearing a helmet at the time of the accident.

O2, Male (28), 88A00: Soldier died when he lost control of the motorcycle he was driving while negotiating an interchange between two highways. SM struck a road sign and a vehicle before being pinned and dragged underneath a second vehicle. SM was driving at night, speeding, and not wearing a helmet at the time of the accident.

E4, Female: Soldier sustained fatal injuries when she lost control of her vehicle. Both the SM and civilian driver involved in the accident were killed.

E5, Male (27), 77F: Soldier was killed when he lost control of his motorcycle in a curve and rear-ended a moving pickup truck. SM was exceeding the posted speed limit and traveling at an estimated 105 mph at the time of the accident. SM was not wearing required safety equipment and was driving without a license and MSF card. Alcohol use is suspected in the accident.

E4, Male (27), 88N: Soldier died when the motorcycle he was operating was struck by a POV at an intersection.

E4, Female (20), 75F: Soldier sustained fatal injuries when the POV she was riding in was involved in an accident. Causes are unknown.

E1, Male (20), 19K: Soldier was killed when he lost control of his vehicle as he approached a curve in the road while speeding. SM's vehicle left the roadway and struck several trees, and then split apart in two pieces. SM was ejected from the vehicle.

E2, Male (19), 63S: Soldier died when he reportedly ran a stoplight on his POV and collided with a police vehicle.

E2, Male (21), 11X: Soldier sustained fatal injuries when the vehicle he was riding in was involved in a head-on collision.

E5, Male (33): Soldier was killed when the vehicle he was driving was involved in a head-on collision.

E4, Male (22), 92G, and E3, Female (23), 92G: Two of four soldiers died when the driver of a POV lost control of the vehicle and struck a tree. Of the fatalities, neither the driver nor the passenger were wearing seatbelts.

E5, Male (23): Soldier sustained fatal injuries when the motorcycle he was operating struck a concrete median head-on.

These are vivid testaments to the fact that there are no new causes, just new victims—year after year after year.

E5, Male (33), 88M: Soldier was killed when his vehicle was involved in a nine-car pileup caused by low visibility due to fog and smoke from a nearby forest fire. SM had been on leave with his parents, who also were killed in the accident.

E4, Male (25), 45B10: Soldier died when he lost control of his motorcycle and struck a curb. SM was not wearing a helmet.

E2, Male (24), 92G: Soldier sustained fatal injuries when he lost control of his POV, ran off the road, and struck a telephone pole. SM was speeding when he lost control of the vehicle.

E1, Male (21): Soldier was killed when the motorcycle he was riding collided with a vehicle and spun out of control.

E3, Male (26), 31L: Soldier died when he lost control of his vehicle. The vehicle ran off the road and hit a tree.

E6, Male (36), 92G: Soldier sustained fatal injuries when the motorcycle he was driving struck the front of a commercial truck at a high rate of speed. The truck was attempting to make a left-hand turn at an intersection at the time of the accident.

O2, Male (33): Soldier was killed in a single-vehicle accident. Causes are unknown.

E5, Male: Soldier died when his POV was rear-ended by another vehicle while stopped at a traffic light.

O2, Male (25), 12A: Soldier sustained fatal injuries when his vehicle struck another vehicle making a left turn.

E3, Male (20), 13B: Soldier was killed when he pulled into the path of a semi-truck on his POV, resulting in a collision.

O4, Male (37), 31A: Soldier died when he fell asleep at the wheel and crossed the centerline. SM was driving after being up and working for more than 24 hours.

E3, Male (21), 11B: Soldier sustained fatal injuries when he was hit by a semi-truck while walking. SM was under the influence at the time of the accident.

E3, Male (21): Soldier was killed when he lost control of and was thrown from the motorcycle he was driving.

E3, Female (25): Soldier died when she was involved in a head-on collision.

E7, Male (40), 91M: Soldier sustained fatal injuries when he lost control of his motorcycle while negotiating a curve. SM was speeding and had been drinking when he ran off the road and hit a tree.

E3, Female (19), 55B: Soldier was killed when the vehicle she was riding in passed a semi-truck, drifted off the shoulder, over-corrected, and rolled several times. SM was sleeping in the back seat of the vehicle at the time of the accident and was ejected, landing in the median.

E4, Male (21), 63H: Soldier died when his vehicle left the roadway, entered a ditch, became airborne, and hit the ground and then a tree.

E1, Male (19), 88M: Soldier sustained fatal injuries when he over-corrected his vehicle after it ran off the road on his way to drill. SM's vehicle skidded across the roadway, became airborne, and landed down a steep embankment. SM was not wearing a seatbelt.

O5, Male (61), 65D: Soldier was killed when he was struck by a vehicle while walking to his POV. SM was leaving for weekend drill at the time of the accident.

E6, Male (37), 88H: Soldier died when the driver of the vehicle he was riding in lost control of the vehicle, ran off the road, and struck a tree.

E4, Male (23), 54B: Soldier sustained fatal injuries when his POV struck a bridge abutment head-on.

E6, Male (31), 67T: Soldier was killed when his vehicle rolled several times.

E3, Male (19): Soldier died when the motorcycle he was operating collided with an ATV four-wheeler.

O1, Male (22): Soldier sustained fatal injuries when another vehicle struck the POV he was driving head-on.

E5, Male (25), 11B: Soldier was killed when he lost control of his dirt bike.

E3, Female (19), 55B: Soldier died when her POV left the roadway and struck an abandoned vehicle.

E4, Male (25), 88M: Soldier sustained fatal injuries when he lost control of his motorcycle and collided with a guardrail.

E7, Male: Soldier was killed when his motorcycle struck a POV turning into his path.

E5, Male (36), and E3, Male (23): Two soldiers died when their POV ran off the road, struck a guardrail, and overturned.

E4, Male (23): Soldier sustained fatal injuries when the pickup truck he was riding in went over the guardrail of an overpass and overturned onto the road below. SM was riding in the rear of the pickup at the time of the accident.

E4, Male (23), 88M: Soldier was killed when the vehicle he was riding in left the roadway, crashed through a ramp, and entered a reservoir. SM was trapped under the water and drowned.

E5, Male (28), 31P: Soldier died when he lost control of his POV due to hydroplaning and it struck another vehicle. SM was ejected from the vehicle.

E5, Male (41), 92A: Soldier sustained fatal injuries when he was ejected from his POV in a single-vehicle accident.

E4, Male: Soldier was killed when the vehicle he was riding in crossed the center median and struck a parked car.

E5, Male (29): Soldier died when he exited a moving car.

E4, Male (23): Soldier sustained fatal injuries while illegally crossing an autobahn. 🚗



The story I am about to tell is much the same as any other that one would expect to see in a safety publication. The typical “it was just like any other day” line would apply to this story, except for one thing—this time, it involved me.

I am a company Aviation Safety Officer (ASO), and I address motorcycle safety in each month’s safety meetings. This past summer I coordinated a Motorcycle Safety Foundation class, which was taught exclusively for our unit personnel. We were all taking the correct steps to ride our motorcycles safely. Throughout the

the double-yellow line on this two-lane road in order to pass me just as I turned left. The right front of the other guy’s car cut through my left rear shock and continued up the left side of my motorcycle, opening it up like a tin can. The inside of the engine was exposed, the gas tank caved in, the foot pegs were ripped off, and my left leg was nearly severed. On impact, I went up into the windshield and over the top of his car, while my motorcycle went under the right front tire. The driver continued on his merry way as I lay bleeding to death in the opposite lane of traffic.

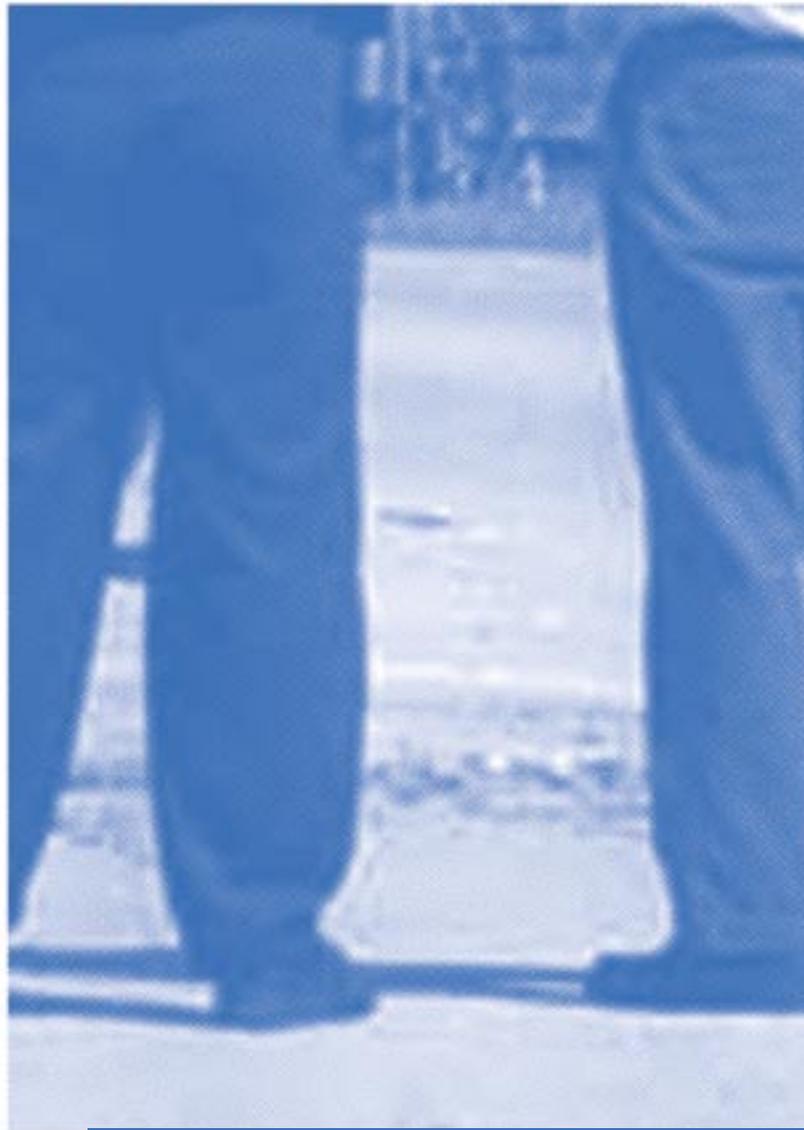
WATCHING MY GIRLS GROW UP

course, the instructor mentioned the “other guy” as a hazard we would face. As it turns out, it was the other guy that found me one fateful night. I just didn’t know it.

At work that day, the mission was an end-of-stage evaluation for two pilots completing their readiness level progression in the company. Just like any other day, we executed the flight debrief following the mission. We then sat around for several hours explaining to our two newest pilots what life would be like in their day-to-day duties. After that, just like any other day, I hopped on my motorcycle and headed home. As I neared my neighborhood, I slowed, signaled, and turned left...just like any other day. The events that followed would forever alter my life and the lives of those around me.

About 30 minutes after I left work, my wife received a phone call informing her that I had suffered a serious injury in an accident just six houses from home. When she arrived at the scene, my injuries were too grotesque for her to look at. When she asked me what had happened, I simply did not know. To this day, I still have difficulty recalling what happened, although I am starting to remember bits and pieces. What I have learned of the night’s events, I hope others will learn from.

The car behind me had decided to cross



After being discovered by passers-by, I was taken to the military hospital on post and later flown to a university hospital approximately 200 miles away. That is where my left leg was amputated approximately 9 inches below the knee. As my wife was being driven to the university hospital she received her second shocking phone call in a matter of just a few hours, informing her of the loss of my leg.

How could this happen? I had done everything right. I attended a Motorcycle Safety Foundation course, wore the proper personal protective equipment (PPE), and abided by all the laws. But the other guy was out there that night and just happened to be behind me. I went from being an athletic

34-year-old to an amputee just trying to deal with reality.

The driver that struck my motorcycle that evening was apprehended a few miles down the road, driving home as if nothing had happened. Driving home with an imprint of my head on his windshield. He has been indicted on numerous charges and is awaiting trial. It was one of many alcohol-related incidents and not his first DUI.

Since the accident, I have had a lot of time to reflect and listen to what people around me have to say. A lot of what I hear is enlightening, but some is absolutely shocking. I hear a lot of discussion and controversy regarding the use of helmets and other





protective gear. Please read the next sentence slowly and read it numerous times.

The reason I am here to write this

article is because I was wearing ALL of the PPE required to be worn while riding a motorcycle.

I have had several people tell me that if they were to lose a leg, they would rather just die. These same people have families. I promise you that the road to recovery has been and continues to be extremely difficult, especially for my family. But I guarantee you that they would rather deal with the road to recovery than the road to the cemetery. That is why I agreed to write this story.

As I mentioned before, I am an ASO. Before, I would always discuss motorcycle and POV safety in meetings, but now I have an understanding that I hope the readers of this article will never reach. I am much more adamant about getting others to understand the importance of PPE. A traumatic event like this affects so many more people than just the victim. Believe me, I know. Had it not been for our friends and people we did not even know that well, this would have been so much more difficult. So, if you are reading this and thinking only about yourself, you are thinking WRONG!

Not too long ago, I saw the photos of my motorcycle and the other guy's car for the very first time. His windshield looked like someone had thrown a bowling ball at it. Unfortunately, the bowling ball was in the form of my head. Without a doubt, my helmet saved my life. Don't get me wrong, my scalp was sore for a while, but I did not suffer a major head injury. No skull fractures, no open wounds. I was just sore, a small price to pay considering what could have happened.

I also was wearing protective eyewear, a leather jacket, long pants, boots, leather gloves, and reflective material. As a result, I had no "road rash," no other broken bones,

and my hands were not even injured. I have had a few people tell me that in certain situations, any amount of safety equipment will not save you. That may be correct, but this is my answer to him or her: *You do not have the luxury of choosing how and when the other guy meets you in an accident.* So, if you don't look as cool because you have "helmet head" and your hair is messed up, bring a hat. If wearing the proper PPE improves my chances of surviving and being there for my family, then give it to me.

I sustained an amputated leg. As tragic as that sounds, that was pretty much the extent of it. The recovery has been trying at times, more so for my family and friends than me. To them, I apologize. I have learned that I am a work in progress and I accept that. This accident has definitely forced me to redefine the priorities in my life. Trust me, I would rather have the equipment that God gave me, but following the accident, so many other things in my life have gotten better. I was lucky—I was given a second chance.

I am up walking around on two legs again, thanks to some talented surgeons and an extremely talented prosthetist. I was able to go on vacation with my family for some much-needed "family healing" time. I returned to my duties as company ASO within a few months of losing my leg and, if I have my way, I will fly for the U.S. Army again. I am able to go to dinner or a movie with my wife and even take the trash out and cut the grass so she doesn't have to.

At the end of the day, I drive home on that very road and make the same turn that I made that night. Each time, I see the blood stain that is still on the road from my injury. Each time I look at that stain, I simply smile. I smile because, just like any other day, I'm watching my girls grow up. 🐾

**POC: CW3 Dana E. Jones,
dj.jones4@us.army.mil**



Personnel Injury

Class B

■ Soldier's finger was amputated after it was caught in the rear mounting bracket of an engine pack in an M577A2. SM had been installing the engine pack at the time of the accident.

■ Four soldiers received noise injuries to their ears, one soldier sustained burns to his head and injuries to his eyes and nose, and one soldier received cuts and lacerations to his head after an explosion involving two 120mm mortars and two 81mm inserts. SMs had been inspecting the mortars and inserts for classification and turn-in at the time of the accident.

Class C

■ Soldier sustained a strain to his neck after the OSV trainer truck he was riding in jostled on steep terrain. SM hit his ballistic helmet on the turret of the vehicle when he was thrown forward after the vehicle made an abrupt stop.

■ Soldier received fractures to his arm after the lock ring and split ring discharged from the M985 tire he was re-inflating. SM had not removed the tire and placed it in a tire cage before re-inflation.



POV

Class A

■ Soldier was killed when the pick-up truck he was riding in went over the guardrail of an overpass and overturned onto the road below. SM was not wearing a seatbelt and was ejected from the vehicle. The driver of the vehicle

and another passenger, both soldiers, were hospitalized for injuries sustained in the accident.

■ Soldier was killed when he was ejected from his POV during a one-vehicle accident.

■ Soldier was killed when the POV he was riding in left the road, crashed through a ramp, and entered a reservoir. SM was trapped under the water and drowned. The driver of the POV, also a soldier, was uninjured.

■ Soldier was killed when the POV he was riding in crossed the center median and struck a parked car. The driver of the vehicle, a civilian, was not injured.

■ Soldier sustained permanent brain damage resulting from a skull fracture after he exited a moving vehicle. SM's injuries were caused after he struck his head on the roadway. Alcohol reportedly was involved in the accident.

■ Soldier was killed when he was struck by a POV while crossing a road.

Class B

■ Soldier's leg was amputated as a result of injuries sustained when he lost control of his POV and the vehicle overturned.

■ Soldier and his wife, also a soldier, were injured when he lost control of his vehicle on the way to work. SM1's leg was amputated above the ankle. The degree of injury to SM2 was not reported.

Class C

■ Soldier sustained injuries when he lost control of his POV and the vehicle overturned,

ejecting him. SM was pinned by the vehicle and received a crushed pelvis and head injury. The passenger, SM's girlfriend, was 39 weeks pregnant and required a caesarean section; both the passenger and child have recovered.

■ Soldier received injuries to his leg when his POV left the roadway and struck the road shoulder. SM was attempting to pass another vehicle on a two-lane highway at the time of the accident.

Class D

■ Soldier sustained cuts and lacerations to his head after he rear-ended a moving vehicle on a five-lane interstate highway. SM had been attempting to change lanes at the time of the accident.



Other

Class A

■ Soldier was pronounced dead at his home by paramedics after attempts to revive him were unsuccessful. SM's wife called paramedics after she was unable to wake him.

■ Soldier drowned after he ran into the woods behind a club and fell into a river.

■ Soldier drowned in a hotel jacuzzi. SM was found by a guest at the hotel.

Class C

■ Soldier sustained fractures to his nose while playing goalie during a soccer game. SM had leaned over to pick up a ball and was hit by another SM. 

COMING SOON

TO A POST NEAR YOU!

Check here to find out when the U.S. Army Safety Center Mobile Training Team will present the Risk Management Course at your facility.

LOCATION

FORT KNOX, KY
FORT CARSON, CO
FORT DRUM, NY
FORT LEWIS, WA
SCHOFIELD BARRACKS, HAWAII
FORT BLISS, TX
CAMP PARKS, CA
FORT LEONARD WOOD, MO
CAMP CASEY, KOREA
CAMP ZAMA, JAPAN
FORT WAINWRIGHT, ALASKA
FORT RICHARDSON, ALASKA

DATES

6-10 JANUARY
6-10 JANUARY
27-31 JANUARY
3-7 FEBRUARY
24-28 FEBRUARY
10-14 MARCH
10-14 MARCH
24-28 MARCH
7-11 APRIL
14-18 APRIL
21-25 APRIL
28 APRIL-2 MAY



U.S. ARMY SAFETY CENTER

If you do not see your facility represented here, call your Installation Safety Office and ask them to schedule a training visit at your installation. For more information on the Risk Management Course or any of our other safety courses, please contact

SFC Patricia Stoker
DSN 558-9854 (334-255-9854)
patricia.stoker@safetycenter.army.mil



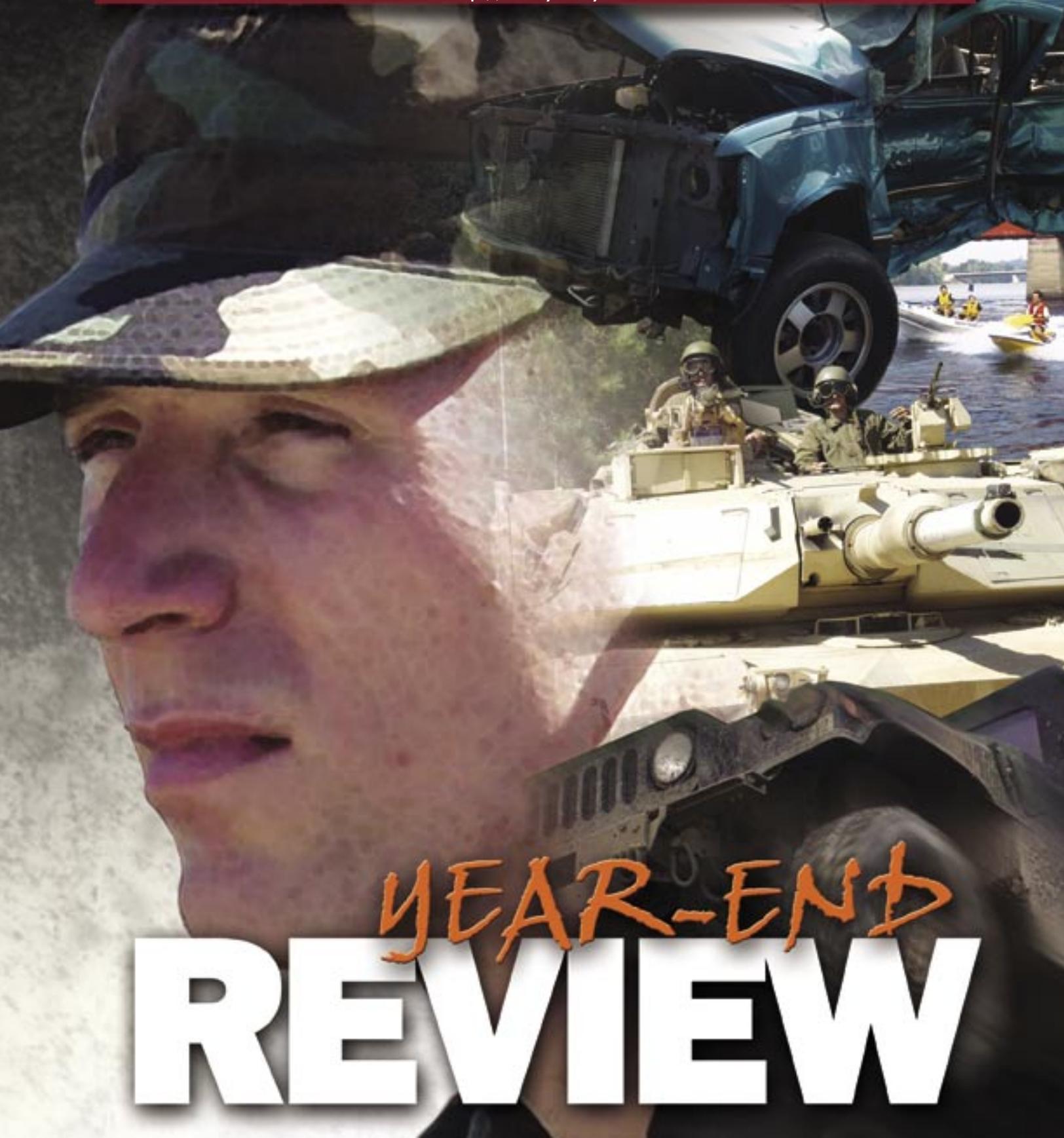
ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

VOL 23 NO 12

<http://safety.army.mil>

DECEMBER 2002



YEAR-END

REVIEW

Countermeasure

CONTENTS

- 3** DASAF's Corner
- 4** FY02 Army Ground Accident Wrap-Up
- 7** Slips Happen
- 8** Commander's Safety Course: The Road Ahead
- 10** Snooze BEFORE You Drive
- 12** Countermeasure CY 2002 Index
- 14** Over the Hills and Through the Woods
- 16** Safety and Occupational Health Course Schedule
- 18** Scrutiny Pays for Cadet Command
- 19** Accident Briefs

features



4



8



14



BG James E. Simmons
Commander/Director of
Army Safety

LTC Richard Pryke
Publishing Supervisor

COL John Frketic
Deputy Commander

Julie Shelley
Writer/Managing Editor

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

Blake Grantham
Graphic Design

Countermeasure is published monthly by the U.S. Army Safety Center, Bldg 4906, 5th Avenue, Fort Rucker, AL 36362-5353. Information is for accident prevention purposes only and is specifically prohibited for use for punitive purposes or matters of liability, litigation, or competition. Address questions about content to DSN 558-2688 (334-255-2688). To submit information for publication, use FAX 334-255-3003 (Ms. Julie Shelley) or e-mail countermeasure@safetycenter.army.mil. Address questions about distribution to DSN 558-2062 (334-255-2062). Visit our website at <http://safety.army.mil/>.



Gearing Up Again—Safely

For many of us, the holidays are once again warm memories of celebrations with family and friends. For those of you deployed around the world, I trust you felt our gratitude for the tremendous sacrifices you and your families make every day for our country.

I am confident that we all are refreshed, re-energized, and eager to kick off the new year. But a word of caution is in order as operations at our training bases and in our theaters of operation get back into full swing. Environmental conditions—brownout and this season's snow and ice—can complicate even routine operations and missions. Last year we had one Class A aviation accident with 16 injuries and three on-duty Class A ground accidents with two military fatalities and one civilian fatality during the month of January.

The aviation accident occurred during an NVG, multi-ship, terrain-flight approach to a known dusty landing strip. The CH-47D landed on its aft landing gear as a dust cloud enveloped the aircraft. As the forward landing gear made ground contact, the aircraft rolled into an irrigation ditch. As a result, the aircraft rolled right and the nose pitched down, causing the rotor systems to contact the ground. Fortunately there were no fatalities, but 16 personnel were injured and the aircraft was destroyed.

On the ground side, a tank commander was pinned and sustained fatal injuries when his armored combat vehicle overturned while en route back to a cantonment area. The second Army fatality occurred when a National Guard Bureau soldier driving his POV home from duty following annual training was struck by a POV driven by a civilian who had fallen asleep at the wheel. In the third on-duty ground accident, the driver of a 5-ton Army motor vehicle was making a U-turn and struck a POV. The civilian driver received fatal injuries.

As we gear back up to full speed, I ask that each of you watch the hazards. They are present in our theaters of operation, they are present on the highways in our POVs, and they are present during each of our training events. If your risk management skills got a little rusty during the break, get your mindset back on those five simple steps it takes to effectively manage risks in whatever situation you are operating.

Accidents and injuries are preventable if each of us makes a concerted effort to identify and control hazards in even our most routine tasks. Conditions are constantly changing, and we must always be mindful that as those conditions change new hazards come up. Stay alert and stay focused. We can reduce those four Class A on-duty accidents and three fatalities to zero this January. 🇺🇸

Train Hard, Be Safe!
BG James E. Simmons

A handwritten signature in black ink, appearing to read "James E. Simmons".

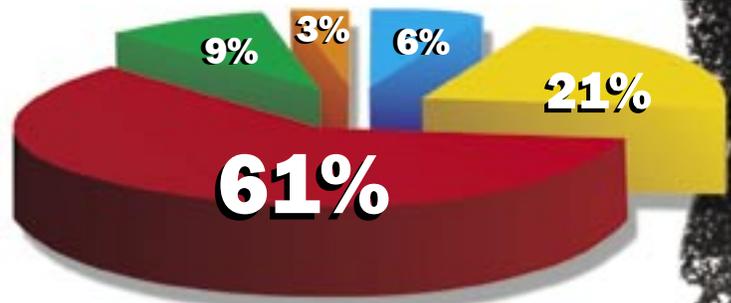
FY02 ARMY GROUND ACCIDENT WRAP-UP



“How Did We Do?”

Overall, the Army experienced an 18-percent decrease in Class A through C ground accidents in FY02 from FY01. However, there was a 15-percent increase in Class A ground accidents from FY01. Increases occurred in Army vehicle accidents (including wheeled and tracked vehicles), personnel injury (PI) accidents, and privately owned vehicle (POV) accidents.

FY02 Class A Through C Army Ground Accidents



Privately Owned Vehicle (POV)

Of the 189 Army fatalities in FY02, 113 (60 percent) of those occurred in POVs. POV accidents continue to be the most common cause of accidental death in the Army. The 113 fatalities for FY02 represent an increase of 14 over FY01 losses of 99. The most disturbing trend here was the increase in motorcycle fatalities, from 16 in FY01 to 25 in FY02, an increase of 56 percent. The most common reported cause of fatal POV accidents continues to be excessive speed. Other causes that continue to contribute to these fatal accidents are failure to stay alert or attentive while driving and driving while fatigued. Failure to use required safety equipment, such as seatbelts, also continues to be involved in fatal POV accidents. Although driving under the influence of alcohol and drugs was not as prevalent in non-motorcycle accidents, it was a causal factor in many of the motorcycle accidents.

These factors continue to contribute to the loss of our soldiers, and command involvement to change this adverse trend is critical. Leaders must get involved and emphasize safety and risk management both on and off duty. The U.S. Army Safety Center (USASC) has provided a toolbox of potential controls (POV Toolbox - 3rd Edition) for use in developing or expanding POV accident prevention programs. This toolbox contains detailed information on controls and examples and can be downloaded from the Army Safety Program homepage on the Internet at <http://safety.army.mil>. Since no single control can target all hazards or be guaranteed to be 100 percent effective, it is important to develop a program with a variety of controls.

Personnel Injury (PI)

PI accidents accounted for the largest number of Class A through C Army accidents this fiscal year. In FY02, 1,138 accidents fell into this category, compared to 1,397 in FY01. This figure represents a 19-percent decrease. The most frequent activities performed during the course of these PI accidents included: parachuting—29 percent; physical training (e.g., confidence course, running, and jogging)—15 percent; sports activities—13 percent; and

“human movement” (e.g., walking, running, climbing, and mounting)—11 percent.

Although the story on PI-related Class A through C accidents is good news, the same is not true for Class A accidents and fatalities. In FY01 the Army experienced 35 Class A PI accidents, resulting in 33 fatalities. However, in FY 02, there were 43 Class A accidents that resulted in 45 fatalities. Of these 45 deaths, 14 were on-duty fatalities and 31 were off-duty fatalities. Of the 14 on-duty fatalities, 9 involved physical training activities (5 participating in PT testing and 4 running or jogging). Of the 31 off-duty fatalities, 19 involved sports activities. Almost all (18) of these fatalities involved water activities (7 swimming, 7 boating, 2 scuba diving, and 2 fishing from a watercraft). Frequent causal factors in these water activity fatalities were errors in judgment and alcohol.

Army Motor Vehicle (AMV)

There were 166 Class A through C AMV accidents in FY02, down 38 percent from FY01. Most (72 percent) of these accidents involved tactical vehicles, with high mobility multi-purpose wheeled vehicles (HMMWVs) being the most frequent (36 percent). Government sedans and station wagons were the most frequent (12 percent) commercial vehicles involved in AMV accidents.

Although the decrease in Class A through C AMV-related accidents is good news, the same is not true for Class A accidents and fatalities. In FY01, the Army experienced 12 Class A AMV accidents that resulted in 9 fatalities. In FY02 there were 19 Class A accidents that resulted

in 16 fatalities. Tactical vehicles accounted for seven of the fatalities, with five involving the HMMWV. Commercial vehicles accounted for nine of the fatalities, over 2-ton commercial trucks accounted for four, sedans and station wagons accounted for three, and short-term lease vehicles accounted for two fatalities.

ACCIDENT EXAMPLE: Three soldiers were in an M1025 HMMWV on their way to a meeting. The operator was following too closely to the vehicle to their front and when he approached a traffic jam and had to apply the brakes, the vehicle fishtailed. The operator lost control of the HMMWV and struck another vehicle. The HMMWV flipped over and one of the passengers was fatally injured.

Army Combat Vehicle (ACV)

There were 48 Class A through C ACV accidents in FY02, down 24 percent from FY01. The majority of these accidents involved either the M1 tank (35 percent) or carriers (29 percent). Although Class A through C accidents were down compared to FY01, FY02 saw an increase of one Class A accident and one fatality over FY01. There were six Class A ACV accidents in FY02, resulting in five fatalities. One Class A accident involved an armored vehicle launched mine clearing line charge (MICLC) that caused two civilian fatalities. As with the Class A through C accidents, the vehicles involved in the remaining five FY02 Class A accidents were M1 tanks and carriers.

Explosives

Although explosives accidents do not account for a large portion of the Class A through C accidents and fatalities, an increase in Class A accidents and particularly fatalities involving explosives was observed in FY02. There were only 37 Class A through C accidents in FY02 compared to 34 in FY01, but the Class A accidents rose from 1 to 5 and fatalities from 4 to 10 in FY02. This increase was due primarily to three accidents that involved multiple fatalities.

ACCIDENT EXAMPLE: Two soldiers were fatally injured and 13 others received non-

fatal injuries in a 105mm artillery accident when a round impacted short of its intended target. While conducting a calibration mission, an artillery unit did not follow established firing procedures while conducting live fire. Numerous factors were involved in this accident: the firing mission was inadequately planned due to fatigue and lack of experience, it was not adequately supervised, and there were insufficient MOS-trained and qualified personnel to support the mission.

Conclusion

Overall, there has been a decrease in the number of Class A through C accidents from FY01 to FY02. However, there has been an increase in the number of Class A accidents and fatalities. As with previous years, POV accidents account for the majority of fatalities (60 percent), with PI in second place with 24 percent. AMV and ACV accidents account for a total of 11 percent, and explosives accidents account for the remaining 5 percent.

It is critical that individual soldiers and leaders at every level take positive action to reverse this increase in Class A accidents and fatalities. Every soldier must take responsibility for his or her actions and manage risks in their on- and off-duty activities. Leaders at all levels must be tactically and technically proficient and enforce standards. Command involvement at the appropriate level is key. Solid command support and emphasis on risk management and by-the-book operations up and down the chain of command is a must.

Each leader and soldier must remember that he sets the example for his troops and fellow soldiers. Make sure you set the right example. 

Editor's note: These statistics are current from the USASC database as of 5 December 2002. Delayed reports could change these figures somewhat in the coming months.

POC: Operations Research and Analysis Division, USASC, DSN 558-1496, (334) 255-1496, e-mail jon.larsen@safetycenter.army.mil

SLIPS HAPPEN

Recently, the Army experienced an accident involving the M1A1 Abrams Main Battle Tank. While the loader was preparing to load a round during tank table VIII of a gunnery operation, he slipped on the turret floor and fell forward, putting his left hand on the already retracting ammunition ready door to stop his fall. His glove was caught on the locking mechanism and when the door opened fully, the loader's fingers were caught in the gap between the door and the bulkhead. As a result, the loader's index and middle fingers were partially amputated, and he suffered severe fractures to his ring finger.

There are numerous cautions and warnings posted in the tank and technical manual (TM) regarding the hazards associated with putting your hands near a moving ammunition door. While the loader was aware of these hazards, he put his hand on the already retracting ammo door as a reflex to his fall. He did not have time to retract his hand due to the rapid movement of the doors.

Several days before the accident, the azimuth servo in the gunner's station had a major hydraulic leak, so maintenance personnel replaced the servo and repaired the leak. After repairs were completed, the floor of the turret was not cleaned thoroughly, leaving behind residual fluid. The paint and non-skid surface on the turret floor had long since worn away, exposing bare metal that provided the perfect environment for the residual fluid to become a slip hazard.

Due to shortages of crew members in the unit, the loader was required to be the loader for two tanks during the gunnery. The night before the accident, the loader had only two hours of sleep. The accident vehicle was not the loader's assigned vehicle and although he was aware of the residual fluid on the turret floor, he made no attempt to clean it up.

While waiting to fire, the loader used the little bit of downtime he had to get some much-needed rest.

This accident could have been avoided if the crew would have ensured that the turret floor was free of hydraulic fluid after maintenance on the azimuth servo was conducted and if the turret floor had been maintained properly. The preventive maintenance checks and services (PMCS) listed in TM 9-2350-264-10-1 specifies that all exposed metal surfaces or worn non-skid surfaces should be painted with the appropriate paint and non-skid compound listed as item 18 in Appendix D of TM 9-2350-264-10-2. While the accompanying non-skid diagrams in the current PMCS depict only the outside areas of the tank and loader's seat, the non-skid compound also should be used on the turret floor. A change to the TM is currently in the works to correct this oversight.

It is also important to note that when painting any vehicle, you should use TM 43-0139 to find the appropriate paints and procedures for that vehicle. If you still have questions, contact your local Logistics Area Representative (LAR) for assistance.

In addition to the accident vehicle, other M1 series vehicles were found to have exposed metal and worn non-skid surfaces in the turret area, setting the stage for this accident to repeat itself. While the hydraulic fluid on the floor had a role in this accident, the impact it made was compounded by the fact that the non-skid surface was non-existent. Other agents such as water and mud can be just as dangerous if the non-skid surface is worn away. What does your turret floor look like? 

POC: Ms. Peggy Adams, Ground Systems Technical Quality Assurance, U.S. Army Safety Center, DSN 558-2256, (334) 255-2256, e-mail peggy.adams@safetycenter.army.mil

Every commander is the safety officer for his or her unit and is personally responsible and accountable for the safety of soldiers and the safe conduct of unit activities in operations and training. As the Army Safety Officer, the Chief of Staff, Army (CSA) has repeatedly emphasized the importance of aggressive involvement of commanders in the safety of their units.

The CSA directed the development of a Commander's Safety Course (CSC) to ensure commanders have the knowledge and tools to effectively manage their unit safety programs and to incorporate risk management into all unit planning and activities. Specifically designed to provide safety tools to assist in creating and implementing an effective safety program, commanders now have available, through the online CSC, risk management tools that can help

automates the risk management process described in Field Manual (FM) 100-14, *Risk Management*, and uses a database of shared risk management worksheets that allow the exchange of knowledge and experience Armywide. Risk management worksheets will be shared by the U.S. Army Training and Doctrine Command (TRADOC) Distance Learning Web site and the USASC Risk Management Information System (RMIS). The USP tool transfers conceptual information for drafting a unit safety program into practical applications in the unit. This particular tool also allows users to access guidance from internal and external sources through the Internet and to check their USP against a model safety program and checklist.

Beginning 1 October 2002, the CSA has directed that company-grade officers successfully complete the CSC before assuming command

Commander's Safety Course:

The Road Ahead

them reduce accidents among soldiers and civilian employees, both on and off duty. The CSC leverages multimedia, web-based distance learning technology and is accessible and easily retained for everyday use. Alternately, the CSC is available as a CD-ROM.

The CSC incorporates refresher training on risk management and three tools—resource navigator, risk management, and unit safety program (USP)—for commanders to use in implementing safety programs and managing risk within their units. Equivalent to 30 classroom hours, the courseware contains five modules: Army safety, driving safety, unit safety, resource navigator, and risk management. The courseware includes progressive checks on learning and tests for each module that certifies the student as having completed the course.

The tools may be downloaded and used as risk management resources in the unit. The resource navigator enables the commander to quickly access risk management and safety resources from internal and external sources such as Army Knowledge Online (AKO) and the U.S. Army Safety Center (USASC). The risk management tool



(Implementing Message from HQDA WASH DC//DAMO-TRZ//141224ZAug02, Subject: Commander's Safety Course). Brigade commanders will certify successful completion. Brigade and battalion-level commanders must complete the CSC before attending the Fort Leavenworth Pre-command Course.

The CSC is located at: https://www.aimsrdl.atsc.army.mil/secured/accp_top.htm. Commanders may register for the course at https://www.aimsrdl.atsc.army.mil/secured/accp_top.htm or <https://www.atrrs.army.mil>. Some 1,200 students are currently enrolled. Upon completion of the course, students will be awarded a certificate of completion as their course record.

All Army leaders are encouraged to complete the CSC and use the tools. First Sergeants and other non-commissioned officers, enlisted personnel, safety officers/NCOs, facility managers, shop chiefs, and other federal civilian employees may enroll in the CSC for self-development at <https://www.atrrs.army.mil>.

Future plans include incorporating the CSC into the U.S. Army Sergeants Major Academy

(SMA) curriculum. This action will support the existing three common core tasks that have been revised for the SMA.

Although the USASC is the course proponent, TRADOC will continue an active role in the ongoing development of Version 2. The updated version will enhance the entire Army's ability to manage risks by expanding the capabilities of current tools and providing commanders with additional risk management tools and real-time hazard and risk data for decisionmaking.

Already established as the model for all future distance learning safety projects, Version 2 of the CSC will further refine the courseware to enable a better exchange of information. TRADOC is currently submitting an FY03 unfunded requirement (UFR) to secure funding for development and fielding of CSC Version 2. 🇺🇸

POC: Dr. Brenda Miller, Chief, Training Division, USASC, DSN 558-3553, (334) 255-3553, e-mail brenda.miller@safetycenter.army.mil



Snooze BEFORE

During the holiday season, many soldiers will be looking forward to an extended leave period and time with their family and friends. While you may be eager to begin this period of rest and relaxation, don't be in a rush to jump in the car after a long day of soldiering. The extended hours soldiers face and the associated lack of sleep could equal danger on the open highway.

It is difficult to attribute crashes to sleepiness because there is no test to determine its presence, as there is for intoxication. In addition, there are no standardized criteria for making the determination of driver sleepiness, and there is little or no police training in identifying drowsiness crash factors.

The National Highway Traffic Safety Administration (NHTSA) estimates that approximately 100,000 reported accidents annually (about 1.5 percent of all crashes) involve drowsiness or fatigue as a principal causal factor. A conservative estimate of related fatalities is 1,500 annually, or 4 percent of all traffic crash fatalities. At least 71,000 people are injured in sleep-related accidents each year, and NHTSA estimates that these crashes represent \$12.5 billion in monetary losses annually.

You Drive

Drowsiness or fatigue could play a role in crashes attributed to other causes as well. About 1 million crashes annually—one-sixth of all accidents—are thought to be produced by driver inattention. Sleep deprivation or fatigue makes such lapses of attention more likely to occur.

Unfortunately, a lot of people drive sleepy. In a 1999 National Sleep Foundation (NSF) poll, 62 percent of all adults surveyed reported driving a car or other vehicle while feeling drowsy in the prior year. Of those surveyed, 27 percent reported that they had, at some time, dozed off while driving, and 23 percent of adults stated that they know someone who experienced a sleep-related crash within the past year.

You can't control your own sleep and, if you're tired, you can fall asleep at any time. Just as you can fall asleep at any time, you can also fall asleep anywhere and that includes on the road. While driving, people tend to fall asleep more often on high-speed, long, boring, rural highways. All drivers are at risk of a sleep-related accident if they are:

- Sleep-deprived or fatigued (awake for 20 hours or more or 6 hours of sleep or less in a 24-hour period).
- Driving long distances without rest breaks.
- Driving through the night, the early afternoon, or other times when they are normally asleep.
- Taking medication that increases sleepiness or drinking alcohol.
- Driving alone.
- Frequent travelers (e.g., business travelers).

Sleep-related crashes are most common in young people, who tend to stay up late, sleep too little, and drive at night. A North Carolina state study found that 55 percent of crashes involving drivers who fell asleep at the wheel involved people 25 years old or younger, with a peak age of occurrence of 20. Of those accidents, 78 percent of the drivers were male. Shift workers, people with more than one job, and commercial drivers are also susceptible to sleep-related accidents.

Prevention is the key for avoiding sleep-related crashes on the road. Before you begin a trip, you should follow these rules for safe, alert driving:

- Get a good night's sleep. The average person requires about 8 hours of sleep per night, although this figure varies from individual to individual.
- Plan to drive long trips with a companion. Passengers can help look for early warning signs of fatigue or switch drivers when needed. Passengers should stay awake to talk to the driver.
- Schedule regular stops of every 100 miles or two hours.
- Avoid alcohol and medications (over-the-counter and prescribed) that could impair performance. Alcohol interacts with fatigue and increases its effects, just like drinking on an empty stomach.

What should you do if you feel fine when you start your trip, only to get that drowsy feeling just a little down the road? First of all, look for the warning signs of fatigue, which include:

- Forgetting the last few miles driven.
- Drifting from lane to lane or hitting rumble strips, and jerking your car back into your lane.
- Experiencing wandering or disconnected thoughts.
- Yawning repeatedly or rubbing your eyes.
- Having difficulty focusing or keeping your eyes open.
- Tailgating, missing traffic signs, or missing turns.
- Having trouble keeping your head up.
- Impatient, irritable, and restless feelings.

Recognize when you are in danger of falling asleep—you cannot predict when you may nod off. Respond to the symptoms of fatigue by finding a safe place to stop for a break. Pull off into a safe area away from traffic and take a brief “power” nap (15 to 45 minutes) if you are tired. Drink coffee or another source of caffeine to promote short-term alertness, but be aware that it takes about 30 minutes for caffeine to enter the bloodstream. **TURNING YOUR RADIO UP AND ROLLING DOWN THE WINDOWS WILL NOT KEEP YOU AWAKE!** The *only* cure for drowsiness is sleep.

Before you get in your car this holiday or any season, make sure you have enough rest to complete your trip safely. Eight hours might seem like a long delay, but it is still shorter than forever. 

Article adapted from material found on the NSF Web site, www.sleepfoundation.org

January

Any mission, any time, any place... Safety is Readiness First Priority

DASAF's Corner: "Safety Is Readiness First Priority"
Planning: Key to Safe Deployment
Chocking and Securing Unattended Vehicles
Take Proper Precautions When Servicing Split-Ring Rims
Sports Injury Prevention—Key to Combat Readiness
A Cold Night in Saudi Arabia
Accident Briefs
A Few Words About Anthrax
News & Notes: "Surfacing Leaks in the Tanker Fleet (HEMTT Fuel-Line Elbow)"
Is Your Eyesight Worth Not Wearing Your Safety Glasses?

February

Safe Annual Training

DASAF's Corner: "Thanks For What You Do Every Day"
Plan Annual Training With Safety In Mind
Written in Blood
Medical Condition? What Medical Condition?
"Get-there-itis" Kills
NCO Corner: "Safety is Important to Soldiers"
Training and Risk Management: "Commanders Safety Course Mandatory Before Taking Unit Command"
Range Safety Begins Before You Get There
Accident Briefs
News & Notes: "Army Knowledge Online Features Countermeasure"
"U.S. Army Safety Center Points of Contact"

Safety Messages (1QFY02)
Drive to Arrive

March

Fatigue... A Soldier's Enemy

DASAF's Corner: "The Number One Killer of Soldiers"
Fatigue... A Soldier's Enemy
GSA Vehicles Are Top Accident Producers
Ground Guiding Army Vehicles
Stop, Look, Listen, and LIVE!
Kevlar Helmet Tested Safe to Wear
POV: "Check Your Six"
Reserve Component Safety: "Drill Weekend Safety"
NCO Corner: "Enforcing Standards Saves Lives"
An Electrifying Experience
Plan Ahead For Summer Hazards
Maintenance Advisory on Army Space Heater
POV Toolbox

April

Beat the Heat: Special Hot Weather Issue

DASAF's Corner: "Decision Making at the Appropriate Level"
Managing Heat Stress
You Can Drink TOO Much Water
Fluid Replacement Guidelines
Protect Your Skin
Boating Safety
Boat Smart From the Start
NCO Corner: "Sergeant's Time"
POV: "Only a Few Seconds"
Investigators' Forum: "Stick to the Plan"
Training and Risk Management: "Mobile Training Teams Come to You... the Price is Right"
Accident Briefs
News & Notes: "Small Unit Guide"

"AAFES Recalls Dehumidifiers"
"Printer Recall"
Bicycle and Helmet Safety

May

Half-Time Report Featuring Mid-Year Ground Accident Safety Performance

DASAF's Corner: "Combined Arms Training"
Safety Center Half-Time Report
Good Drivers Get Killed Too
Buckle Up America/Operation ABC Mobilization
More News on Ford Explorers and Firestone Tires
Investigators' Forum: "Lack of Supervision and Failure to Pay Attention Lead to Accidents"
10 Reasons to Wear Eye Protection
Careful With Those Tools
How Does Your Grinder Look?
Prevention of Heat Injuries
During a Deployment to Kuwait
2QFY02 TACOM Safety Messages
Accident Briefs
Seatbelts Save Lives!

June

Stopping Explosives Accidents

DASAF's Corner: "Let's Make It a Safe Summer"
Army Explosives Accidents
Unexploded Ordnance Recognition 101
Do the Right Thing
Safety Alert Notice—120mm Mortar
Ammunition Information Notice (AIN) 40-02, Subj: M134
Safety Alert Notice—105mm Howitzer
Investigators' Forum: "Carry the Torch"
NCO Corner: "Sergeant Major

of the Army Sends..."
 Tell Us About Your NCOs
 Training & Risk Management:
 "Prepare, Be Aware, Be There"
 Safety Is Our Shared Mission
 News & Notes: "Power Lawn
 Mowers Recalled"
 "GSA to Feds: Don't Talk and
 Drive"
 "Farewell"
 "Thanks"
 Keep Focused on Your Driving

July

Airborne!

DASAF's Corner: "Enjoying
 Summer Activities—Safely"
 Feet and Knees Together!
 Rucksack Brochure—Pack for
 Performance
 Every Drive Counts
 POV: "Big Rigs—Respect 'Em
 or Suffer the Consequences"
 USAREC Accident Numbers
 Going Down
 Get Your Cold Weather Equip-
 ment NOW
 Hurricanes
 Heat Index
 Accident Briefs
 Safety Alert Notice on Drown-
 ings

August

Ground Risk Management

DASAF's Corner: "Recognizing
 Outstanding Soldiers and Civil-
 ians Is Important"
 Speed Kills...Again
 A Chain Reaction
 Investigators' Forum: "M1A2
 Tank NBC Fire"
 POV: "Gasoline and Static
 Electricity—A Bad Combina-
 tion"
 NCO Corner: "Keep Our Sol-
 diers Safe and Straight"

Hurricanes Family Disaster
 Plan
 Protect Yourself Against West
 Nile Virus
 BSC—The "S" Stands for
 Safety
 Accident Briefs

September

Cold Weather Safety

DASAF's Corner: "The Basics
 of Accident Prevention"
 Cold Weather: Know the
 Threat
 Cold Weather Injuries Chart
 Winter Driving: Are You
 Ready?
 Getting Things Started in Cold
 Weather
 Ammunition Safety Risk
 Assessment and Management
 Get to Know Your Privately
 Owned Weapon!
 Bag One for Safety
 The Numbers...Hunting Acci-
 dent Factors
 Think Before You Climb
 Accident Briefs
 In Memoriam

October

Preventing M1 Tank Fires

DASAF's Corner: "When the
 Arrows Are Pointing Up..."
 Shut It Down!
 Profile: M1 Abrams Main
 Battle Tank
 The T-Handle
 Seconds Count...To Save Lives
 Kill the Chill—Safely
 Investigators' Forum: "Survive
 the Dive"
 Don't Be a Factor in an M939
 Accident
 USASC Announces New Inter-
 active Feature
 News & Notes: "Passenger

Capacity Reminder"
 "AAFES Halts Sale of Ephedra"
 "Alert Issued for Protective
 Suits"
 "Turn the Defroster Off"
 4th Quarter Safety of Use and
 Ground Precautionary Mes-
 sages
 Accident Briefs

November

POV Special Issue

DASAF's Corner: "The Holiday
 Season and Reflection"
 Special Section: "Changing
 Attitudes and Behavior"
 FY 2002 Roll Call
 Poster: "Motorcycle T-CLOCK
 Inspection"
 "Mandatory Personal Protective
 Equipment and Requirements"
 Watching My Girls Grow Up
 Accident Briefs

December

Year-End Review

DASAF's Corner: "Gearing Up,
 Again—Safely"
 FY02 Army Ground Accident
 Wrap-Up
 Slips Happen
 Commander's Safety Course:
 The Road Ahead
 Snooze BEFORE You Drive
 Countermeasure CY 2002
 Index
 Over the Hills and Through the
 Woods
 Safety and Occupational Health
 Course Schedule
 Scrutiny Pays for Cadet Com-
 mand
 Accident Briefs

My story starts on a beautiful winter day in the year of our Lord 1970. I woke up this day very early, one—because it was Christmas; two—I was visiting my father in Massachusetts; and three—because we were going tobogganing today. I was 10 years old and life could not have been much better. I always looked forward to wintertime in the northeast, largely due to all the winter sports that were available. At this tender age I knew nothing of terms like risk management, preventive maintenance checks and services, risk assessment, or any of the multitudes of other terms we use on a daily basis in the Army. As it turns out, I found at an early age what happens when you don't apply those principles to everyday event planning.

I remember getting up before everyone else, dressing, eating breakfast, and then jumping on my father to wake him up so we could get out the door. (That was my first unsafe act!) As the rest of the group slowly got ready, I waited patiently by the car. Finally, everyone piled into the car and we were on our way, all eight of us crammed into the family station wagon with the toboggan strapped to the roof.

When we finally arrived at the hill of our choice, we all jumped out of the car and began unstrapping the toboggan. It was a miracle we didn't kill someone just getting it off the car's roof! For those of you unfamiliar with a toboggan, it is basically an oversized sled, and ours was about 8 feet long and weighed somewhere around 100 pounds. There was enough space to fit all eight of our crew, and then some, on it at the same time.

After we finally got the toboggan on the ground, we all participated in pulling it up the hill, which seemed at least a mile high. When we got the toboggan to the top of the hill, we all piled on as my father sat at the wheel. (I forgot to mention that the only major difference between a sled and a toboggan is the toboggan has a steering wheel in the form of a bicycle handlebar.)

At first we went screaming down the hill, all laughing and having a great time. This went on for a few hours until some of us got tired, the first being my 5-year-old brother. He agreed to stay at the bottom of the hill and watch as everyone

Over the Hills and Through the Woods

A person is seen from behind, sitting on a toboggan and sliding down a snowy hill. The toboggan has a steering wheel made of bicycle handlebars. The background is a bright, snowy landscape.

else continued to have fun. After a while, my father finally said we had had enough and this would be our last run. When we got to the top that last time, we pushed extra hard to get a good start and again went screaming down the hill. Since we had pushed so hard at the top, we carried more speed at the bottom and ended up going a lot further than we had gone before. Keep in mind that all this time, my little brother still was waiting at the bottom of the hill for us. Unfortunately, this part of the hill was very icy and my father lost control of the toboggan. And who was directly in the path of the out-of-control beast? None other than my little brother.

We slammed into him as my father frantically tried to steer away, while at the same time yelling at him to move. I expected to see my little brother go flying through the air as we hit him, but instead he stuck like glue to the handlebar and was dragged for a while until we could finally stop. My father, along with the rest of us, was in a panic because it appeared as though the handlebar had gone right through my brother's head. There was blood all over the place, and I thought he was dead. Fortunately, he received only a gash

on his head and was not badly hurt, even though the handlebar had penetrated the pile cap he was wearing. One hospital visit and a few stitches later, we were on our way home.

The lessons learned from this accident are many. If proper pre-mission planning was used by my father, he never would have tried to take eight kids by himself on this trip—a few adults were in order for this mission. Secondly, he did not conduct a proper safety check of the equipment we were using; the steering handle had a grip missing, which is the reason why my little brother was injured the way he was. And last, but certainly not least, my father never should have allowed my brother to be anywhere near the path of the toboggan. If he were not there, he never would have been hurt.

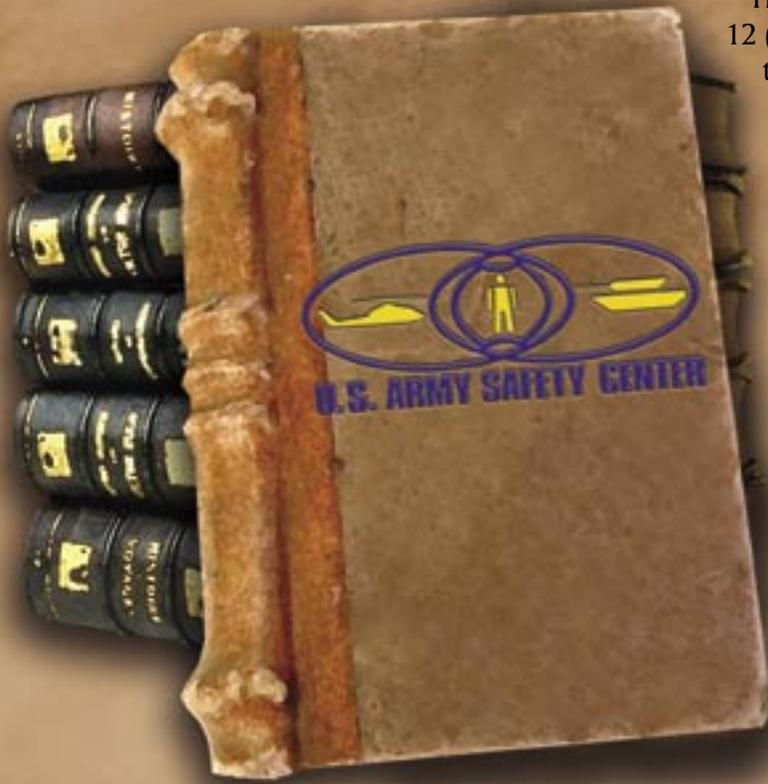
As you can see, just a few simple steps taken by my father that day would have changed completely the outcome of our otherwise fun-filled day. I think my father learned something, because the toboggan was fixed that same day and he never again took all of us out for rides by himself. 🛷

**POC: CW4 Paul Gaudette, Florida National Guard,
e-mail paul.gaudette@us.army.mil**



Safety and Occupational

The U.S. Army Safety Center (USASC) now has more credits! This past September, USASC underwent an accrediting review by the American Council on Education of all safety and occupational health courses. The results were excellent! This is a “good news” story for the field, safety professionals, and for USASC. We can now provide a greater opportunity for safety and occupational health interns and safety professionals.



The following is Phase One of the 2003 Career Program-12 (CP-12) training program. This training program is tailored for safety and occupational health interns, but it is also designed to meet the requirements of safety professionals and military members who need safety training. The complete course schedule is posted on the USASC web site (<http://safety.army.mil>) under the CP-12 hyperlink. Also on the Web site is a course catalog that contains course descriptions of all classes offered. To enroll, both civilians and military members should call DSN 558-3943 (334-255-3943) or e-mail Ms. Jenell Fuller (jenell.fuller@safetycenter.army.mil) to request a slot in a desired class. An original DoD Form 1556 must be brought to class to obtain required signatures. Successful completion of all course requirements will entitle students to request college credit for most individual classes through the American Council on Education. A Master of Science in Industrial Technology Engineering and Safety Management can be earned through this program of instruction. 🚀

POC: Dr. Brenda Miller, Chief, Training Division,
USASC, DSN 558-3553, (334) 255-3553,
e-mail brenda.miller@safetycenter.army.mil

INTERN TRAINING PHASE I JANUARY – MAY 2003

OSHA #	Course	Date	Source
	Intern Orientation	6 Jan	USASC
	How the Army Runs	7-8 Jan	USASC
	Supervisor Training Workshop** (*Required for Intern Supervisors)	8 Jan	USASC
	Writing Techniques	9 Jan	USASC
	Briefing Techniques	10 Jan	USASC/WOCC
	Problem Solving	13 Jan	WOCC
	Research Methods	14-15 Jan	USASC
	Theory & Application of Accident Prevention	6-17 Jan	USASC
	Human Factors	17 Jan	USASC
	HOLIDAY	20 Jan	

Health Course Schedule

<u>OSHA #</u>	<u>Course</u>	<u>Date</u>	<u>Source</u>
	Safety Program Leadership & Mgmt	21-23 Jan	TEEX
	MACOM Briefings	24 Jan	MACOM Dir
OSHA 501/600	Industrial Application of Regulatory Initiatives	27-30 Jan	TEEX
OSHA 845	RECORDKEEPING	31 Jan	TEEX
	Risk Management	3-5 Feb	USASC
	Operational Safety	6-7 Feb	FORSCOM
	Quantitative Methods in Safety Mgmt	10-12 Feb	TEEX
	System Safety	13-14 Feb	TEEX/USASC
	HOLIDAY	17 Feb	
OSHA 204A	Advanced Machinery Safeguarding	18-21 Feb	TEEX
OSHA 225/1225	Contemporary & Army Ergonomics	24-28 Feb	TEEX
OSHA 309A	Electrical Hazard Control	3-5 Mar	TEEX
	CAPSTONE I – Ft. Benning, GA	6-7 Mar	N/A
	Health Physics & Radiological Health	10-11 Mar	Army Safety Ofc
	Farley Nuclear Plant Visit	12 Mar	
	Environmental Law	13-14 Mar	TEEX
	Legal Aspects of Safety	17-20 Mar	TEEX/USASC
	Intro to Accident Reporting	21 Mar	USASC
	Fire Safety in Building Design	24-26 Mar	TEEX
	Training Techniques	27-28 Mar	TEEX/USASC
OSHA 201A	Hazardous Materiel Control and Response Methods	31 Mar-4 Apr	TEEX
OSHA 521	Recognition, Evaluation, and Control of the Occ Environment	7-11 Apr	TEEX
	CAPSTONE II	14-18 Apr	N/A
	Accident Investigation and Analysis Techniques	21-25 Apr	TEEX
	Board President's Course (Evenings)	21-25 Apr	USASC
OSHA 510	Hazard Recognition in Built Environments	28 Apr-2 May	TEEX
	Motor Vehicle and Transportation Safety	5-8 May	TEEX
	Career Development	9 May	USASC
	Intro to Range Safety	12-14 May	TRADOC
	Research Project Briefings	15 May	
	INTERN GRADUATION [Phase I]	16 May	

“Wellness, well-being, and safety.” That’s how Col. Paul Willis, Commander, Second ROTC Region, U.S. Army Cadet Command, described his priorities for conducting training at this year’s annual Army ROTC Leader’s Training Course in Fort Knox, KY.

These priorities were taken to heart by the cadre and cadets who participated in the 2002 Leader’s Training Course. The excellent safety record at the Leader’s Training Course earned Second Region special recognition this year—the prestigious Certificate of Achievement in Safety from the U.S. Army Training and Doctrine Command (TRADOC).

initial physical screening exams that identified those who had medical conditions or allergies that might place them at increased risk, to supplying immediate first aid for any minor injuries and manning morning sick call, the camp medical team made sure the cadets stayed healthy and ready to train.

Even the dining facilities got into the safety act, providing good-tasting sports drinks that encouraged cadets to drink more fluids and remain adequately hydrated. Dehydration and associated serious heat-related injuries traditionally have always presented problems during hot-weather military training. However, due to the intense



SCRUTINY PAYS FOR CADET COMMAND

The course, formerly known as Basic Camp, is designed to provide a physically demanding, rigorous training camp for college students who wish to pursue further officer training at Army ROTC battalions on their campuses. Successful completion of the course qualifies graduates to enroll in the Advanced ROTC Course and complete officer training as part of their academic studies.

According to Maj. Frank Skirlo, the Camp Safety Officer for this year’s course, the overall lack of significant accidents or injuries was due to the aggressive risk management practices that were always in place at all camp training sites.

“Throughout the camp, Maj. Skirlo was constantly inspecting training areas,” Charles Betoney, Cadet Command’s Safety and Occupational Health Manager, said. “His overall methodology focused on the more risky training first, and then on to the less risky training sites.”

While the physically challenging training events facing cadets had risks associated with them, Maj. Skirlo, who serves as an Assistant ROTC Professor of Military Science at Colorado State University during the school year, was the extra set of eyes that helped training committees guarantee nothing catastrophic happened, according to Mr. Betoney.

Camp medical personnel also provided essential services to reduce the number of potential incidents and injuries to cadets. From providing

scrutiny by all training cadre at the course, there was only one minor heat-related injury during the entire camp that resulted in a cadet requiring only 24 hours of rest before returning to duty.

Maj. Skirlo attributed this success to the “team approach to safety at all levels” during the course. He said that not only were cadre members sensitized to the physical condition and behaviors of their cadets, but the cadets in training also learned and internalized the Army risk management process, preparing them for future leadership roles.

Clearly, the efforts paid off. With nearly 1,200 cadets in training, the overall reduction in lost-time training incidents decreased by 52 percent compared with the number of injuries during the previous year. Only two cadets were released from camp due to training injuries, a remarkable accomplishment considering the intensity of the training, the number of people involved, and the fact that virtually none of the cadets had prior military experience.

Col. Rodney A. Phillips, the Cadet Command’s Chief of Staff, presented the award in ceremonies at Fort Knox following completion of the course.

POC: Mr. George Whitley, Headquarters, Cadet Command, Fort Monroe, VA, (757) 788-4617, e-mail whitleyg@monroe.army.mil



Personnel Injury

Class A

- Soldier was killed when he was hit by a round fired from his weapon. SM was on guard duty at the time of the accident.

Class C

- Soldier sustained a concussion after he fell and struck his head on an object while he was entering a shower in his quarters.

- Soldier received fractures to his back while participating in a night, non-combat airborne operation. SM had exited the aircraft successfully but became entangled with another SM at a high altitude. SM1 did not have time to prepare for landing after freeing himself from SM2 and landed on his back.

- Soldier sustained injuries to his head after he hit the mirror frame of an Army truck while performing PMCS checks on a fleet of vehicles.

- Soldier sustained fractures to his leg after he landed on his canteen and cup during a parachute landing fall. SM was reported to have come down sideways during his descent.

the path of an oncoming M931 AMV.

- Soldier was killed when his pickup truck overturned while four-wheeling in a quarry. SM was thrown from the vehicle.

- Soldier was killed when his POV left the roadway and overturned in a culvert. SM was on his way to weekend drill.

- Soldier was killed when his POV hydroplaned, ran off the roadway, and struck a telephone pole.

- Soldier was killed when his motorcycle struck an SUV while negotiating a left turn in an intersection.

- Soldier was killed when the POV he was riding in overturned. The driver of the POV, a civilian, was uninjured.

- Soldier was killed when he lost control of his POV and struck a tree on the way home from work.

- Soldier was killed when his motorcycle collided with a POV that was being backed into a driveway.

- Soldier was killed when his motorcycle was struck at an intersection by an SUV.

- Soldier was killed when the POV he was driving ran off the roadway, crossed the right lane, hit another POV, went airborne, and then struck

a dump truck. The civilian drivers of the second POV and dump truck were uninjured.

- Civilian national was killed when he was struck by a POV driven by a Department of the Army Civilian.

- Soldier was killed when his POV overturned.

Class C

- Soldier sustained a strain to his neck after a recycling truck hit his vehicle while he was backing out of a driveway. The recycling truck dragged SM's vehicle a number of feet before stopping.

- Soldier received fractures to his wrist and cuts and lacerations to his head and nose after he was struck by a POV. SM was running to catch up with another group of soldiers crossing the street.

- Soldier sustained a strain to his neck after he was rear-ended by a commercial truck. SM was at a complete stop in the left lane waiting to turn at the time of the accident.

- Soldier received injuries to her head when she was struck by a POV while running on a public street.



POV

Class A

- Soldier was killed when he lost control of his motorcycle and crossed into

Tips for Safe Winter Driving

The Three P's of Safe Winter Driving:

PREPARE *for the trip;*

PROTECT *yourself; and*

PREVENT *crashes on the road.*

PREPARE

Maintain Your Car:

Check battery and tire tread, keep your windows clear, put windshield washer antifreeze in the washer reservoir, check your antifreeze.

Have On Hand:

flashlight, jumper cables, abrasive material (sand, kitty litter, even floor mats), shovel, snow brush and ice scraper, warning devices (like flares) and blankets. For long trips, add food and water, medication and cell phone.

Stopped or Stalled?

Stay with your car, don't over exert, put bright markers on antenna or windows and shine dome light, and, if you run your car, clear exhaust pipe and run it just enough to stay warm.

Plan Your Route:

Allow plenty of time (check the weather and leave early if necessary), be familiar with the maps/directions, and let others know your route and arrival time.

Practice Cold Weather Driving!

- During daylight, rehearse maneuvers slowly on the ice or snow in an empty lot

- Know what your brakes will do: stomp on antilock brakes, pump non-antilock brakes

- Stopping distances are longer on water-covered ice and ice

- Don't idle for a long time with the windows up or in an enclosed space

PROTECT YOURSELF

- Buckle up and use child safety seats properly
- Never place a rear-facing infant seat in front of an air bag
- Children 12 and under are much safer in the back seat
- Sit back 10 inches from an air bag

PREVENT CRASHES

- Drugs and alcohol never mix with driving
- Slow down and increase distances between cars
- Keep your eyes open for pedestrians walking in the road
- Avoid fatigue – Get plenty of rest before the trip, stop at least every three hours, and rotate drivers if possible