

**DEPARTMENT OF THE  
ARMY PAMPHLET**

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**NO. 385-1**

**SAFETY**

**SMALL UNIT SAFETY  
OFFICER/NCO GUIDE**



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**HEADQUARTERS, DEPARTMENT OF THE ARMY**

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## SAFETY

# SMALL UNIT SAFETY OFFICER/NCO GUIDE

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**Summary.** This pamphlet has been totally revised, to provide guidance in applying policies, procedures and information for managing a unit safety program.

**Applicability.** This pamphlet applies to Active Army, the Army National Guard (ARNG), and the U.S. Army Reserve (USAR).

**Interim changes.** Interim changes to this pamphlet are not official unless they are authenticated by the Administrative Assistant to the Secretary of the Army. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

**Suggested improvements.** The proponent agency of this pamphlet is the Office of the Chief of Staff, Army. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to HQDA (DACS-SF), WASH, DC 20310-0200.

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# CHAPTER 1

## UNIT SAFETY MANAGEMENT

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### 1-1. The Unit Safety Program.

*a.* Safety protects the force and preserves resources through accident prevention and risk management.

*b.* Safety starts with readiness and readiness depends on a unit's ability to perform its mission essential tasks list (METL) to standard. This requires self-disciplined soldiers who will consistently perform to standard; leaders who are ready, willing, and able to enforce standards; training that provides skills needed for performance to standard; standards and procedures for task performance that are clear and practical; and support for task performance, including required equipment, maintenance, facilities, and services. Each leader must be aware that written standards may not exist for every task. High-risk tasks should be identified and reviewed to ensure that adequate standards exist and that unnecessary risks are eliminated.

*c.* Ready units are prepared to perform the Battlefield Operating System (BOS) functions to standard. These major functional elements provide organization and direction to the performance of soldiers (man) and equipment (machine) on the battlefield (operating environment).

*d.* When safety is fully integrated in a unit, soldier errors, equipment breakdowns, and other negative effects are minimized. Performing to standard is one of the key steps in preventing accidents.

*e.* The *commander* is the foundation of *the unit safety program*. The additional-duty safety officer/NCO advises the commander on safety policy implementation, assists unit leaders in making risk assessments, and advises on implementing risk management to protect the force.

The unit safety officer/NCO can make the difference.

### 1-2. Purpose.

*a.* This guide is written for the additional-duty unit safety officer/NCO. It provides guidance in applying policies, procedures and necessary information for managing a unit safety program for the commander. Separate chapters discuss how to get started, guidance from higher headquarters, risk assessment and risk management, surveys, reporting and investigating accidents, and protecting the force in tactical operations and combat.

*b.* The guidelines contained in this pamphlet apply to garrison, field training, and combat operations.

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### **1-3. Safety Guidance.**

*a.* Commanders and other unit leaders are responsible for the safety and quality of the unit safety program.

The success of the unit safety program depends on the recommendations of the unit safety officer/NCO to the commander, and adherence to sound risk management principles.

The unit safety officer/NCO must assist the commander by developing and implementing an integrated, imaginative, and comprehensive accident prevention program within the scope of the unit's TOE or TDA mission.

*b.* The unit safety officer/NCO is a member of the commander's staff and performs within guidelines prescribed by the commander. Commanders should delegate authority to the safety officer/NCO to direct necessary action when personnel, property, or equipment are endangered. Any recommendations made by the safety officer/NCO in the name of the commander will be in line with policy guidance provided by the commander.

### **1-4. Unit Safety Officer/NCO Functions.**



*Commander and safety officer must integrate safety into all activities*

*a.* The functions of the safety officer/NCO include, but are not limited to, the following—

(1) Detecting problem areas or hazards before trouble occurs and recommending changes to prevent potential accidents.

(2) Advising the commander on the status and adequacy of the accident prevention program within the command.

(3) Advising the commander in achieving the desired integration between risk, accident prevention, and mission accomplishment.

(4) Assisting the platoon leaders, operations officer, supply officer, and motor officer in preventing accidents, thereby increasing mission effectiveness (protecting the force).

(5) Motivating and promoting individual soldier involvement in preventing accidents.

(6) Ensuring supervisors encourage individual soldiers to provide ideas for reducing risk and protecting the force at work-planning meetings.

*b.* The effectiveness of the safety officer/NCO depends on a positive working relationship with all unit personnel. Barriers that inhibit communication could delay identification and correction of hazards. The safety officer/NCO should develop a reputation for tact and diplomacy. Methods for accomplishing this vary with personalities involved and unit mission.

**The Following Items are the Foundation of a Successful Accident Prevention Program.**

*c.* To have a successful accident prevention program, safety officers/NCOs must—

(1) Assist in carrying out accident prevention efforts directed by higher headquarters.

(2) Review unit operations and training during planning, preparation, execution, and follow-up to detect hazards and recommend controls and methods of preventing injury to personnel and damage to equipment.

(3) Conduct surveys for hazards, using checklists and unit SOP. Maintain records of surveys. Follow-up to ensure correction of discrepancies or establishment of methods to prevent the fault from affecting performance of unit mission.

(4) Report and investigate accidents in accordance with AR 385-40.

(5) Conduct appropriate safety training.

*d.* Each of these functions is discussed in detail in the following chapters.



## CHAPTER 2

# THE UNIT SAFETY PROGRAM

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### 2-1. Starting the Unit Safety Program.

This chapter provides step-by-step procedures to get you started in the business of preventing accidents that can result in deaths, injuries, damaged or destroyed equipment, and loss of mission capability. *The key to safety success is to eliminate hazards and develop methods of reducing the risk of injury or the chance that damage to equipment will occur.*

### 2-2. Where to Begin.

a. Request an inbrief with your commander to obtain his guidance for your part in the safety program. This meeting will serve as the basis for subsequent meetings and should set the tone for your role as safety officer/NCO.

b. Request training from the installation or supporting safety office, and arrange for participation in a unit safety officer/NCO course. Ask questions, identify support resources (promotional items, training materials), and establish a good point of contact in the safety office.

c. Review your unit's overall mission. What are the key elements essential for mission success? What personnel, items of equipment, facilities, tools or supplies are important for mission success? You will want to emphasize accident prevention in all unit activities. For example, a unit should stress that personnel must perform to standards and follow established procedures in order to minimize accidents. Next, determine where the hazards exist. Use checklists to assist you in identifying hazards. Then, focus on the unit activities and missions that are immediately ahead (Examples are: the next Field Training Exercise (FTX), your unit changing from the M60A1 to the M1 tank, new or drastically changed operational procedures). Keep your focus on these areas as you collect needed information. The references in appendix A will help you identify the standards that must be followed to ensure safe unit operations.

d. Review your unit SOPs. Using the references mentioned above, evaluate how effectively safety standards have been integrated into the SOPs. Talk to the key personnel in your unit and get their opinions regarding the effectiveness of the unit safety program, and any potential accident areas. Your objectives are to detect the likelihood for an accident and minimize the chance that one will occur.

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e. Use the information you gathered from referenced publications, checklists, survey results, talking to key personnel, and reviewing accident reports to evaluate your unit's safety status. Consult with the experts in your supporting safety office. Use this information to narrow your attention to the 5 to 10 problem areas that pose the most risk to your unit, its people, equipment, and mission. Evaluate each problem area, assign priorities, and decide how to effectively present your results to the commander. Gain support from appropriate members of the organization before presenting your findings to the commander. This is where good staffing can make a difference. A professional fact based recommendation will be much better received than an emotional "fall-on-your-sword" approach. Remember the commander makes the final decision once he is advised of all the facts.

f. Now you are ready to meet with the commander and other key leaders. During this meeting you need to—

(1) Direct attention to the areas where you have detected significant hazards or problems.

(2) Recommend specific actions to eliminate or reduce hazards in these areas.

(3) Obtain the commander's approval and personal support for corrective action in these areas.

### NOTE

What are your options if the commander shows little interest in the problems you have identified? Shift your focus and effort to subordinate levels of leadership. If you have identified an overall personnel problem, you may have to seek help from the first sergeant. The executive officer can help if the problem is within the staff. Platoon leaders should be involved when their personnel or equipment are part of the problem.

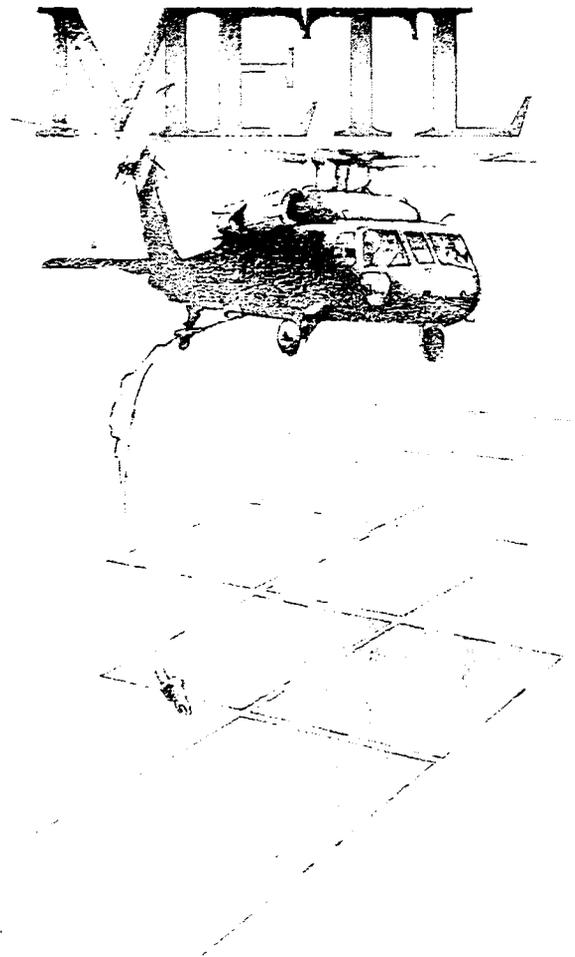
g. Other topics you may want to discuss with the commander and unit leaders include:

(1) *Support for command policies.* You can do much to make sure the commander's directives for controlling risk reach the key people who must implement them. Follow up regularly to make sure that risk controls remain in place and are achieving the desired results. During this implementation process, you will have many opportunities to convince leaders at all levels to fully carry out their safety responsibilities to protect the force. Remember, it is the responsibility of the command and subordinate leaders to execute the safety program. Your role is to make recommendations and coordinate safety activities.

(2) *Action teams.* A highly effective way to get people involved in improving safety is to form action teams that target specific safety issues. Is there a problem with people in your unit not using protective

clothing and equipment? Organize a team to review the problem and present the commander with proposed solutions. If you think it is necessary, ask the commander to head the team.

(3) *Unit training.* Get involved in the planning of all unit training and integrate safety up front. Apply the risk management process outlined in chapter 4. You have many opportunities to help the commander integrate safety standards in the performance of mission essential task list (METL) in the unit training management cycle.



*Mission Essential Task List*

(4) *New personnel.* Conduct a safety-oriented briefing for new personnel in the unit. Provide specific safety information in this briefing. Platoon and section sergeants have a responsibility in briefing newly assigned personnel on specific job related safety issues, such as

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wearing hearing protection, eye protection, protective clothing, vehicle operation, and aircraft maintenance operations.

(5) *Supporting the Army Safety Program.* Your job as unit safety officer/NCO is to support unit compliance with directives and guidelines from higher headquarters. You can also expect to receive various promotional materials such as posters, handouts, checklists, and safety packets from your supporting safety office. These items have been provided to help prevent accidents in specific operational areas. In order for this material to be effective, it must be used. As the unit safety officer/NCO, you play an important role in ensuring that these aids get to the organizations and personnel who need them. If you are experiencing a particular hazard/problem, get help from your supporting safety office.

### **2-3. Safety on the Battlefield.**

a. The unit safety officers. NCOs should continue to function in their role of protecting the force on the battlefield. Research done by the Army Safety Center indicates that there are 10 times more accidents in combat than peacetime. The result is more dead and injured soldiers from accidents than from enemy action.

b. In combat, safety efforts should be focused on applying risk management to mission completion. The safety officer/NCO should be:

(1) Involved in planning unit operations.

(2) Applying risk management techniques to identify unnecessary risks and recommending adequate control measures.

(3) Collecting information on, and reporting, all accidents. Higher headquarters may use this information to develop strategies to prevent recurrence.

c. A strong peacetime safety program will carry over into battlefield operations.

### **2-4. Other Sources of Assistance.**

a. Safety and occupational health are parallel programs with several common elements. The unit safety officer/NCO can request assistance from local occupational health personnel to assist in certain aspects of the safety program. Some areas where their expert help will benefit are: hearing conservation, vision conservation, occupational health/medical surveillance, industrial hygiene, and respiratory protection.

b. Additional sources of assistance are listed in appendix B.

## CHAPTER 3

### IMPLEMENTING GUIDANCE

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#### **3-1. Supporting the Chain of Command.**

Implementing guidance/direction from higher headquarters is integral to the prevention and/or reduction of accidental manpower and equipment loss.

#### **3-2. Why Your Support is Needed.**

*a.* The Army develops accident prevention programs and procedures as countermeasures for given problems and hazards. These programs must be implemented at the unit level by the commander and unit safety personnel and other unit leaders to ensure that the force is protected.

*b.* Reporting and investigating accidents has an impact at Army level. Armywide accident reports provide essential data from which problem areas are identified. For example: After reviewing accident reports prepared by unit safety officers/NCOs, the Army recognized that a significant number of sports injuries were happening on baseball fields. Injuries were occurring as runners slid into bases that were fixed in place. A program was established to replace fixed bases with breakaway bases. The installation of these breakaway bases has significantly reduced this type of injury. Before making a decision of this kind, the Army needs evidence to justify such a change; this evidence was provided by accident reports filed by safety officers/NCOs. Many other accident reports involving aircraft, tanks, and other equipment have resulted in design changes and operational manual changes. Identification of problems and implementation of corrective actions depend heavily on safety officers/NCOs. Use of the information from accident reports saves the Army millions of dollars each year by helping to protect the force and increase mission capability.



## CHAPTER 4

# RISK MANAGEMENT AND RISK ASSESSMENTS



*To do or not to do? That is the question.*

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### 4-1. Controlling Risk.

Military training involves such things as weapons, explosives, complex equipment, tactical vehicles, aircraft, airborne operations, and contingency operations. It has the potential for serious accidents. As the unit safety officer/NCO, your job includes a responsibility to assist in the control and management of such risks. You measure the risks and make recommendations to the commander for controlling these hazards.

The chain of command makes risk decisions. The safety officer/NCO assists the commander in assessing risks and makes recommendations to reduce/eliminate the risk.

## **4-2. Risk Management vs. Risk Assessment.**

*a.* Risk management is a tool that helps leaders make sound decisions in a logical manner. It enables leaders at all levels to do exactly what the term implies—manage risks. Safety risk management is a specific type of risk management.

*b.* Risk management is a five-step process that is easily integrated into the decision-making process outlined in FM 101-5, Staff Organization and Operations. This decision-making process readily lends itself to risk management.

*c.* Risk assessment is a part of risk management. It can range from simple to complex. A risk assessment causes leaders to identify hazards and threats and place them in perspective relative to the mission or task at hand. Logically, one cannot identify the risk without first defining the hazards.



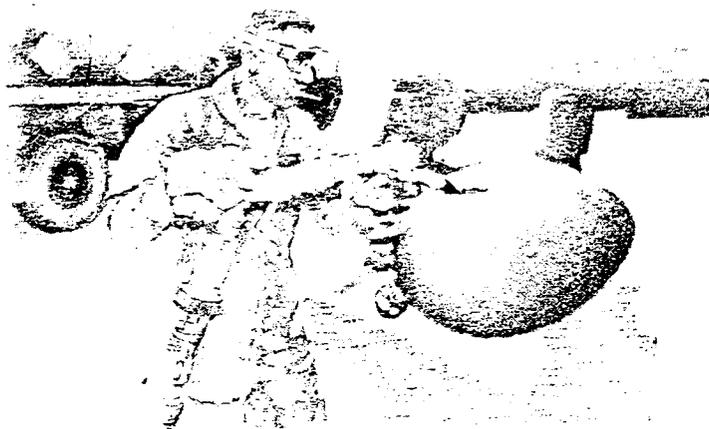
*There is a big difference between a risk and a gamble. "Risk" implies a certain calculated, controlled element of danger. "Gamble" is just dealing the cards and taking your chances.*

## **4-3. Managing Risk.**

Following are the five steps to sensible risk management.

*a. First, identify hazards.* Hazards are potential sources of danger that could be faced while performing a task or mission. For example: A river crossing is anticipated while conducting a foot patrol. Some of the environmental factors that define the hazards are water depth, current speed, water temperature, obstacles on and under water, and changes in weather. Some of the human factors are swimming ability of the soldiers and fatigue.

b. *Second, evaluate the hazards.* Ensure each hazard is analyzed to decide the probability of it happening, and the severity of the results if it should occur. Exercising judgment on how to eliminate or reduce hazards to lessen the overall risk is inherent in the risk assessment process. The goal is to categorize the risks associated with the operation into the following categories: extremely high, high, medium, or low risk.



*"Risky Business"  
Smoking while servicing an Aircraft*

c. *Third, risk decision.*

(1) Leaders are expected to weigh the risks against the benefits of performing an operation; however, the consideration is more often mission-first. Keep in mind that unnecessary risk can be just as great a hindrance to mission accomplishment as enemy action.

(2) Decisions to accept risks must be made at the command level equal to the degree of risk. Guidance should be established as to what level of command makes which risk decisions. For example, extremely high-risk squad actions may be elevated to the company commander for acceptance or denial. A brigade commander may direct that company-level risk decisions be made by the company commander if the risk is low, battalion commander if the risk is medium, and brigade commander if the risk is high. In the case of battalion-level decisions, the chain may go from battalion to brigade to division.

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The benefits of taking the risk must be greater than the possible consequences.

*d. Fourth, implement controls.* Included in this step is leader action to reduce or eliminate hazards. Controls may be as substantial as writing an SOP, or as simple as conducting a briefing. In the river-crossing scenario, the leader would brief his subordinates on specific safety requirements. Then each subordinate would brief back the requirements to ensure that everyone understands.

*e. Fifth, supervise.* Supervision goes beyond ensuring that people do what is expected of them. It includes following up during and after an operation to ensure that all went according to plan, reevaluating the plan or making adjustments to accommodate unforeseen issues, and incorporating lessons learned for future use in a similar operation.

*f. The safety officer/NCO.* Should be involved in all phases of risk management, playing a key role in risk assessment and the recommendations made to the commander. After the commander makes a decision, you should assist in developing, implementing, and monitoring the controls to reduce or eliminate hazards. The safety officer/NCO should also capture lessons learned material during the operation for use afterwards.

**Safety Officers/NCOs should always be included in operational planning.**

## CHAPTER 5

### SURVEYS

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#### 5-1. General.

*a. Accidents don't just happen.* They are caused by unsafe acts or conditions. One of the first things a safety officer/NCO should do is conduct a thorough survey of the unit's activities and facilities, and review its accident/casualty history. This provides an overall picture of where the unit has been and where it is headed. Survey findings can pinpoint unsafe conditions and trends.

**Performing to standards is a major step in preventing accidents**

*b.* Surveys can help safety officers/NCOs determine if unit personnel are performing to standards. Surveys are preventive measures.

*c.* It is important that surveys have a positive effect on the unit. Your surveys should be designed to determine if everything is satisfactory; not to determine how many things are wrong. Commanders should seek to instill safe attitudes in unit personnel and provide safe work procedures and work areas. Commanders should also be a part of the survey process; it is essential that improper/unsafe acts be corrected on the spot.

#### 5-2. Benefits of Surveys.

Adequately planned safety surveys will allow safety officers/NCOs to—

*a.* Detect unsafe acts and hazards which can be eliminated or controlled.

*b.* Emphasize the need for personnel and machinery safeguards.

*c.* Sell the safety program by promoting a positive, helpful attitude.

*d.* Encourage personnel to inspect and police their own work areas.

*e.* Communicate with unit personnel and seek to understand the hazards they face.

#### 5-3. Successful Surveys.

To be successful, your survey program will require—

*a.* A schedule of what to inspect and when. Inspect hazardous and high-accident-occurrence areas often.

*b.* Use of safety survey checklists. They help ensure the survey is methodical and thorough.

*c.* Record keeping. Previous survey records show you where improvement has been made and areas still needing improvement. Use these to prepare for the survey of your unit.

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*d. Follow-up.* Report findings and recommendations to the unit commander, with a plan to ensure deficiencies are corrected as soon as possible. Follow up on these and report to the commander on a regular basis.

### **5-4. Planning and Conducting Surveys.**

All areas should be inspected annually as required in AR 385-10. Your supporting safety office can provide assistance. High-hazard areas should be inspected more frequently. During surveys, you should be concerned with equipment and work area conditions, unsafe personnel practices, and unsafe job practices. Recommendations should eliminate or minimize the hazard without adversely affecting the mission. There are four stages in conducting surveys.

*a. Prioritize.* Look at areas/operations that have the highest potential for loss.

*b. Use checklists.* Use of a safety survey checklist (some are available from the U.S. Army Safety Center) is recommended for unit evaluations. Locally developed checklists tailored to your unit are also helpful. These checklists should include references whenever possible.

*c. Survey.* Look closely at the unit facilities and area, talk to people, and keep good records.

*d. Correct the problem.* Once the survey is completed, brief the leaders on the findings. The safety officer/NCO should make recommendations and assist with the corrective actions, which should begin immediately. Follow up to make sure that assigned tasks are completed.

### **5-5. Assistance and Training.**

It is essential to get help from supervisors and maintenance personnel during safety surveys. You may want to consider using survey teams to increase soldier participation and ensure comprehensive coverage. Whenever possible, the commander should participate in the survey as an indication of personal safety program support.

**Use checklists during surveys. They will keep you on track.**

## CHAPTER 6

# REPORTING AND INVESTIGATING ACCIDENTS

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*Accident Investigation in progress*

**Accident:** An unplanned event that causes personal injury, illness, or property damage.

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### **6-1. Accident Notification and Reporting.**

Your unit should have a plan for reporting all accidents. When notified there has been an accident, the safety officer/NCO reports the accident to the next higher safety office, then takes the appropriate action to investigate or assist with the investigation in accordance with AR 385-40 and local procedures.

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### **6-2. Pre-Accident Planning.**

*a.* A pre-accident plan lists actions to be taken if an accident occurs. A good plan will include care for injured personnel as well as actions to help an investigation board do its job better. (A sample Preaccident Plan is at App D)

*b.* A pre-accident plan should include, but not be limited to, the following items:

- (1) Lifesaving actions and prompt evacuation of injured personnel.
- (2) Notification through the chain of command.
- (3) Security of accident scene. This includes accident site photos whenever possible. Security of the site is critical to allow an investigation board to see the site in its original condition.
- (4) Identification of witnesses and people involved.
- (5) Procedures and policy regarding the collection of body fluid samples (blood and urine) by medical personnel. This action is time critical as soon as possible after the accident, when drugs or alcohol are suspected.
- (6) Procedures to take fuel and oil samples from equipment involved in the accident.
- (7) Procedures to secure personnel records for persons involved in the accident, and the maintenance records for equipment involved in the accident.

### **6-3. Classifications of Accidents.**

Who investigates an accident that happens in your unit depends upon the accident classification. This is determined by the dollar cost of the property damage and/or the severity of the personal injury. In AR 385-40, the Army provides the following accident and incident classifications:

*a. Class A accident.* An accident in which the resulting total cost of reportable property damage is \$1,000,000 or more; an Army aircraft or missile is destroyed, missing or abandoned; or an injury and/or occupational illness results in a fatality or permanent total disability.

*b. Class B accident.* An accident in which the resulting total cost of reportable property damage is \$200,000 or more, but less than \$1,000,000; an injury and/or occupational illness results in permanent partial disability, or when five or more personnel are inpatient hospitalized (admitted to the hospital).

*c. Class C accident.* An accident in which the resulting total cost of reportable property damage is \$10,000 or more, but less than \$200,000; a nonfatal injury that caused any loss of time from work beyond the day or shift on which it occurred; or a nonfatal illness or disability that causes loss of time from work (e.g., 1 workday) or disability at any time (lost-time case).

*d. Class D accident.* An accident in which the resulting total cost of reportable property damage is \$2,000 or more, but less than \$10,000; or a nonfatal injury that does not meet the criteria of a Class C accident (no-lost-time case).

*e. Class E incident (aircraft only).* An incident (material failure/malfunction, human or environmental cause) which interrupts/prevents a mission when intent to fly exists. Conditions are:

- (1) property damage must be less than \$2,000;
- (2) no lost/restricted-time case;

(3) a single component/part failure which resulted from fair wear and tear (FWT) (part cost not a factor). The FWT rule is excluded when the failed part causes/contributes damage to another component, system or equipment. (Example: battery failure results in an engine hot start). Should additional damage or injury be incurred during continued sequence of events, the accident classification will be reported based on the total damage cost or injury severity.

*f. Foreign object damage (FOD) incident.* Reportable incidents are confined to aircraft turbine engine damage as a result of internal or external FOD, where that is the only damage. These incidents will be reported in accordance with AR 385-40. Put "FOD Incident" in the classification block on the report.

#### **6-4. Investigating Accidents.**

*a. Why investigate?* The main reason to investigate an accident is to prevent it from happening again. This procedure includes finding out why the accident occurred, and recommending actions intended to prevent future accidents of that type from happening. The commander is depending on the safety officer/NCO to identify accident causes and contributing factors and to make recommendations to prevent future accidents.

*b. Who investigates?* The accident classification will usually determine who investigates. There are three possibilities for the investigation of Class A and B accidents: (1) the Army may send a special board from the Army Safety Center under the Centralized Accident Investigation (CAI) concept, (2) the MACOM may send, or direct, a board to investigate, (3) or the installation could designate a board to investigate the accident. Class C accidents and below will normally be investigated by the unit safety officer/NCO. Contact your supporting safety office for assistance and keep your chain of command informed.

*c.* To conduct a thorough investigation requires a plan that will lead to determining the cause of the accident. A simple but effective plan uses the "3-W" concept of accident investigation. The three W's are:

- (1) What happened?
- (2) What caused it to happen?



*Accident Investigation Board Deliberation*

(3) What can be done to prevent it from happening again? More information on accident investigations is contained in AR 385-40 and DA Pam 385-95.

#### **6-5. Determining What Happened.**

Determining *what* happened may be the easiest part of the investigation. Look closely at the accident scene, get information from people involved in the accident and from witnesses, write a thorough narrative of the events that happened just prior to and during the accident. Do not try to fill in the blank spots with your imagination. Get the facts.

### **6-6. Determining What Caused It to Happen.**

Deciding *why* an accident happened is sometimes the most difficult part of any accident investigation. Accident causes can fall into three broad categories: human error, material failure, or environmental factors. Human-error accidents are caused by a failure of one or more of the following: individuals, leaders, training, standards, and support. While it is true that most accidents are caused by human error, do not overlook material and the environment as cause factors.



*Who? Me?*

### **6-7. Causes of Human Error.**

The major causes of human-error accidents are:

*a.* The standard is known, but is not followed by the soldier. The soldier has been properly trained and knows the correct procedures but chooses not to follow them. Human error causes the accident.

*b.* The standard is known, but is not enforced. When leaders do not enforce standards, soldiers will develop their own standards (short cuts), and the risk of an accident increases. In this case, leader failure results in the soldier using unsafe procedures.

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c. Training standards exist but are not known, or ways to achieve them are not known. A training shortfall exists when the soldier has been inadequately trained to standard.

d. The training standard is not clear or practical or does not exist. When this happens, the command (or the Army) has not provided adequate standards.

e. Required support is lacking. This happens when equipment is improperly designed or not provided; maintenance, facilities, services, or personnel are inadequate.

### **Remember**

Identify human error for the purpose of preventing accidents. Focus on the types of human errors that were made, why they were made, and changes that are needed to prevent recurrence.

## **6-8. Unsafe Conditions.**

Many accidents are the result of faulty equipment, unsafe facilities, or poor maintenance. Unsafe conditions in the work environment often involve oil spills on maintenance facility floors, exposed electrical wire, flammables stored in unauthorized containers, or tripping hazards. During an investigation, it is important to ask: What unsafe conditions were present? How long did the unsafe conditions exist prior to the accident? Who knew the unsafe conditions existed? When you know the answers to these questions, it will be easy to determine what needs to be done to correct the unsafe conditions.

## **6-9. Making Recommendations.**

When you know why the accident occurred it will be easy to make recommendations to your commander.

A good recommendation is realistic and can be implemented at all levels.

For example, a soldier receives an eye injury while sharpening a chisel on a bench grinder. The soldier was not wearing eye protection.

a. Your investigation should answer the following questions:

(1) Was the bench grinder safe for use?

(2) Was eye protection provided?

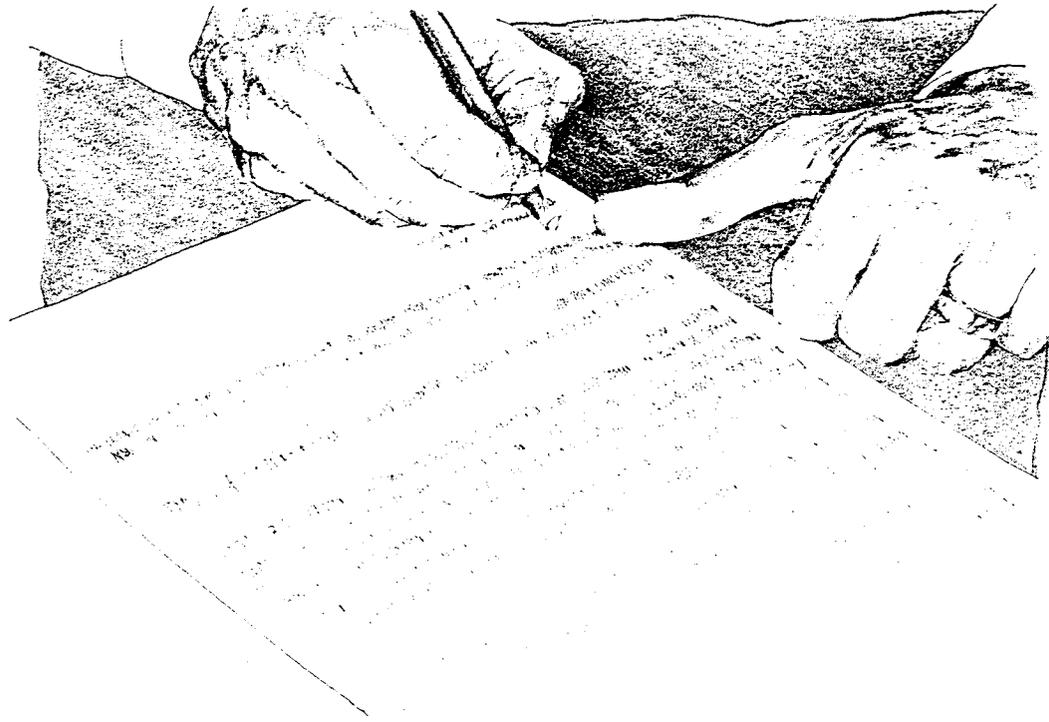
(3) Was the requirement to wear eye protection known and enforced?

b. Each *no* answer represents a problem that needs a recommendation to prevent repeat accidents. Recommendations should not prevent the soldier from sharpening his chisel but allow it to be done safely.

**Recommendations must help accomplish the mission—safely.**

Recommendations that cannot be accomplished at your level should be forwarded to the next higher command level. Keep your safety office informed.

## 6-10. Preparing the Accident Report.



*Documenting and writing the report is very important*

*a.* DA Form 285, the Army Accident Report, is a detailed report that allows the Army to gather accident data and determine if unfavorable trends are developing. This allows the Army to make changes in equipment design or training to correct adverse trends. For example, a soldier is injured when a mine simulator explodes while the soldier is preparing to attach it to a tree and install a trip wire. You find that the soldier did not use correct procedures in preparing the simulator.

*b.* When your report reaches the Army Safety Center it is entered into the data base. There could be 30 or 40 other reports of mine simulator accidents in the data base. This could indicate that the Army needs to change the design of explosive simulators to reduce the risk of a malfunction; develop new training standards for the simulator; or write more specific instructions.

*c.* Accident reports prepared by you are vital to your unit's safety program, and the Army safety program. Read the instructions attached to the DA Form 285, and fill in all applicable blanks.

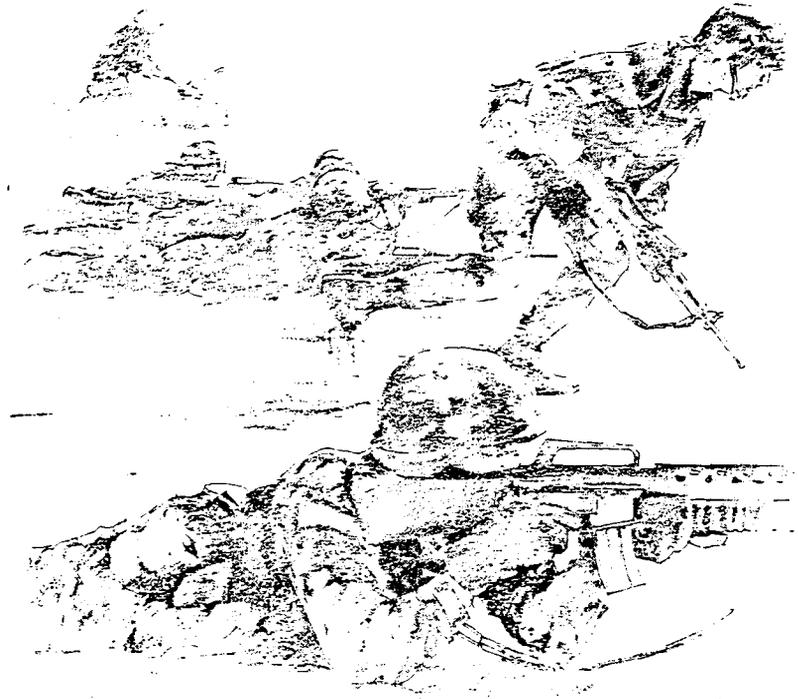
*d.* If the accident cause was material failure, an Equipment Improvement Report (EIR) or Quality Deficiency Report (QDR) should be

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submitted in accordance with DA Pam 738-750 or DA Pam 738-751. The unit maintenance officer and the command logistics assistance officer (LAO) can assist in doing this.

## CHAPTER 7

# SAFETY IN COMBAT AND TACTICAL OPERATIONS



*Protecting the force is more vital in combat*

**Fact:** Combat mishaps increase in direct proportion to the length and intensity of the battle.

Each accident that occurs in combat reduces the unit's mission effectiveness.

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### **7-1. Accidents in Combat.**

*a.* Accidents and injuries increase during combat and tactical operations. An analysis of combat accidents shows a pattern of repetition in the types of mishaps, their causes, and the conditions surrounding them. Lack of sleep or failure to follow procedures characterize many accidents in combat and tactical operations.

*b.* Accident reporting requirements apply during combat and tactical operations. The lessons learned from combat mishaps are vital for development of countermeasures to prevent future mishaps.

**7-2. Common Accidents.**

During combat and tactical operations, it is critical that a concerted effort be made to reduce hazards to soldiers and equipment in order to protect the force and preserve the unit's warfighting capability.

*a.* Five areas account for more than half of all Army accidents during combat and tactical operations.

(1) *Vehicle operations.* Some accidents in this area are caused by excessive speed, weather, or traffic conditions. Other causes for these accidents are recklessness, fatigue, unfamiliarity with roads, and untrained and inexperienced drivers. Lack of knowledge of equipment/vehicle handling characteristics also contributes to mishaps. Strict control is needed for all vehicle operations. Senior occupants must be responsible for vehicle operation. Only trained, licensed personnel should operate vehicles or equipment. Ground guides are mandatory during movement in bivouac and assembly areas, when backing, and during periods of reduced visibility. Ensure all soldiers are familiar with proper operation and maintenance of commercial equipment.

(2) *Sports and recreation.* Accidents occur during all sports activities, but basketball and touch football are the largest contributors to injury. Typical injuries are sprains and bruises. While these accidents aren't usually severe, even a sprained ankle reduces the effectiveness of a soldier. Most injuries result from failure to warm up and playing by "combat rules," which indicates a lack of supervision. Drowning is the leading cause of fatalities for the sports and recreation category.

(3) *Material handling.* These accidents occur when an object is too large or too heavy to handle for those attempting to move it. As a result, someone suffers a muscle injury, back injury, or is crushed. Overconfidence in one's ability, a lack of planning, and fatigue are common factors in such accidents.

(4) *Maintenance.* Many accidents occur during maintenance operations. Some common causes are failure to follow procedures, using the wrong tools, and personal fatigue.

(5) *Tactical parachuting.* Poor parachute landing falls (PLFs) usually cause these injuries. Pre-jump training can eliminate most of the problems.

*b.* The following activities produce fewer accidents than those just listed. Unfortunately they result in more fatalities and/or visibility.

(1) *Ammunition and explosives.* Mishandling, disassembly, unauthorized use, and improper storage of ammunition and explosives account for many personal injury accidents. Make recommendations to ensure enforcement of accountability and security procedures for unexpended ammunition and explosives. Explosives storage must comply with explosive safety standards in AR 385-64.

(2) *Explosive souvenirs.* Educate soldiers to the dangers involved and the serious consequences of collecting unexploded ordnance on the battlefield or the ranges. Post combat/training shakedown inspections for this type of material are a must. Amnesty boxes can also help prevent accidents during retrograde. Platoon sergeants and squad leaders should be actively involved in policing their soldiers and preventing these type of accidents.

(3) *Field expedients.* Tactical operations frequently involve employment of field expedients. Risk and benefits must be carefully weighed. In many cases, field expedients are the result of weak supply system or inadequate planning. Be suspicious of shortcuts.

(4) *Field heaters and stoves.* Only authorized fuels should be provided and used. Operators must be trained and licensed in advance.

(5) *Grenades.* The killing radius of a grenade makes it dangerous to both enemy and friendly forces. Provide guidance based on the tactical or training situation and ensure leaders enforce it.

(6) *POL storage and handling.* POL handlers must know and practice safety rules and procedures. Inspect often to ensure safe storage and transfer of POL products. Proper grounding procedures must be followed.

(7) *Soldier fatigue.* This occurs when a soldier's sleep time depends on the tactical situation. Soldiers suffering from sleep loss experience various symptoms of fatigue, including decreased coordination, narrowed attention span, and reduced standards of performance. Anticipate fatigue-related errors and take action to prevent them.

(8) *Tactical sleeping plan.* Where soldiers sleep is very important. Control sleeping areas to reduce risk of soldiers being crushed by moving vehicles.



*Drown proofing is a vital part of preparing for water crossing training*

(9) *Water operations.* The risks of drowning and equipment loss are high during water operations. Strong swimmers should be paired with weak ones to protect personnel. Secure equipment and float it across rather than requiring individuals to carry their own. Use safety lines and personal float devices. Plan water operations carefully.

(10) *Weapons.* Most of these accidents occur when cleaning or clearing individual weapons, entering or exiting vehicles, or running with loaded rifles. Guidance for weapons handling and loading must be provided and strictly enforced. Weapons not essential for the current mission should not be loaded.

(11) *Weather-related casualties.* Unit effectiveness is lost quickly through weather-related casualties such as frostbite, heat-stroke, and falls. Soldiers need to be instructed in awareness, prevention, and first aid for weather-related injuries, and when these conditions can be expected.

### **7-3. Vehicle Convoy Operations.**

Control of convoy speed and proper separation between vehicles is critical to reducing the risk of an accident. The following guidance is provided:



*Convoys must be well planned and drivers trained*

*a. Use of safety equipment.* When the tactical situation allows, flashers should be turned on immediately if a vehicle is disabled or impedes traffic. Every effort should be made to move a disabled vehicle off the roadway. Highway-warning kits must be provided for all vehicles in a convoy. When a vehicle is disabled, the warning triangle should be placed a minimum of 100 meters to the rear of the vehicle. All personnel must remain clear of the road and the rear of the vehicle.

*b. Slow-moving vehicles.* Front-end loaders, road graders, etc. operating on public highways shall display the "slow-moving vehicle" warning triangle on the rear of the vehicle when threat conditions permit. When conditions and mission permit, slow-moving vehicles should periodically move off the road to permit traffic to pass. Slow movers should not operate on freeways.

*c. Driver skills.* Training for operators of tactical vehicles should teach specific skills needed for vehicle operations. In addition to requirements outlined in AR 600-55, the training should include:

- (1) Pulling and backing trailers.
- (2) Vehicle-recovery operations.

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- (3) Loading and lashing of cargo.
- (4) Methods of negotiating difficult terrain such as sand dunes, rice paddies, mountainous terrain, icy roads, etc.
- (5) Ground-guide procedures, and signals.
- (6) Methods and procedures for retrieving stuck vehicles in snow, mud, sand, or other restrictive terrain.
- (7) Proper parking and use of chock blocks.

### *d. Night Operations.*

(1) Personnel required to operate motor vehicles while wearing night vision goggles must be trained and tested on the use and operation of such devices. Training must be recorded on individual's driver training records.

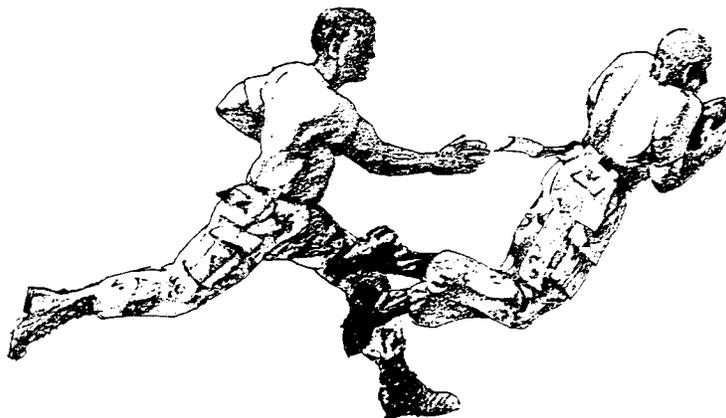
(2) Ground guides must be used when moving vehicles at night in areas where troops are present.

(3) Blackout driving or use of camouflage lights should be prohibited on public roads, except when performing a combat mission where the risk of enemy detection is greater than the risk of a collision.

## **7-4. Safe Movement of Personnel.**

The senior occupant is responsible for ensuring the driver operates the vehicle safely to include—

- a.* Complying with Army regulations and local laws.
- b.* Not exceeding the designated seating capacity of the vehicle.
- c.* Ensuring occupants are seated and wear restraint devices when available.
- d.* Prohibiting passengers from riding on the top of vehicles or loads, or in a cargo compartment with unsecured cargo.
- e.* Guiding the driver when vehicle is backing.
- f.* Ensuring personnel are not transported in dump trucks unless an approved positive locking device is installed.



*Off duty activity must be organized to prevent injury*

### **7-5. Sports and Recreation.**

Sports and recreation activities in a combat environment help soldiers relax and improve physical conditioning. They are also a major contributor to injuries. Require soldiers to follow the rules of the game. Keep players under control. Encourage warmup exercises. Ensure sports equipment and playing areas are serviceable before use.

### **7-6. Fire Prevention.**

The risk of fire is high in areas where a large number of soldiers are in tents. The following guidance will reduce the risk of fires:

- a.* Establish a fire-prevention and protection plan that includes procedures for refilling fire extinguishers during tactical operations.
- b.* Appoint a fire marshal for each bivouac area.
- c.* Establish safe distances between tents to reduce the risk of multiple losses from one fire.
- d.* Provide available fire-fighting equipment (portable extinguishers, sand, water buckets, shovels) to contain small fires. Ensure personnel are trained on their use.
- e.* Establish procedures for sounding fire alarms.
- f.* Ensure no-smoking areas are established and enforced.
- g.* Establish an inspection system to ensure compliance with fire-prevention standards.
- h.* Ensure flammable materials are stored in accordance with appropriate directives and checklists.
- i.* Ensure vehicle fire extinguishing/suppression systems are operational and that crews are proficient in using the systems.
- j.* Provide a designated fire plan, equipment, and trained personnel for POL storage, ammunition dumps, motor pools, hospitals, hangars, etc.



## CHAPTER 8

### GARRISON AND OFF-DUTY SAFETY

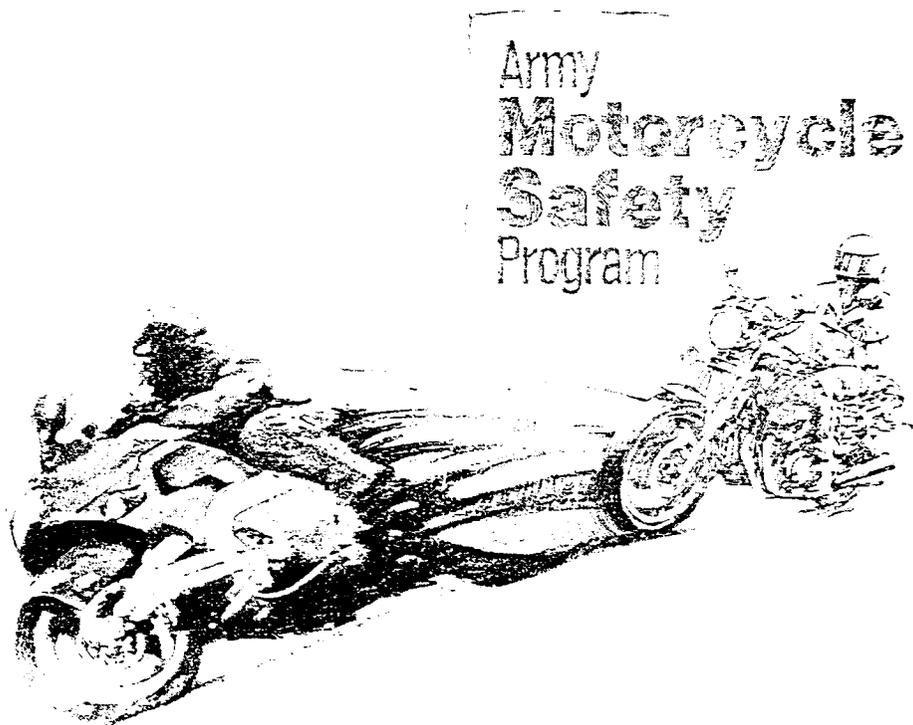
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#### 8-1. The Big Problems.

The garrison environment exposes soldiers to two significant hazards, privately owned vehicle operations and recreational activities.

#### 8-2. Non-Military Owned Vehicle Operations.

*a. General.* Part of the Army's combat readiness is dependent upon the availability of its personnel. Readiness is degraded when Army personnel die or are injured in non-military motor vehicle accidents. This section provides information on transportation safety programs and addresses automobiles, trucks, buses, recreational vehicles, motorcycles, motorized bicycles (MOPEDS), bicycles, and pedestrians.



*Motorcycle Training is required to operate on Base*

*b. Commanding officer's policy statement.* All commanding officers, officers in charge, or equivalent level civilian supervisors should publish a policy statement on motor vehicle safety. The statement should

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encourage personal responsibility and emphasize the command atmosphere regarding motor vehicle operation.

*c. Local orientation program.* The unit safety officer/NCO should establish a local-area orientation program with at least the following common elements:

(1) A large, well-defined map of the local area, marked to show high-accident locations. These locations should be identified and supported with photographs. Alternate routes should be recommended for use during peak traffic periods. Hazards that pose a threat to certain types of traffic should be pointed out.

(2) A map of base roads and traffic patterns, locations of gates, principal traffic routes, one-way streets, restricted areas, and locations of major buildings and services. The identification process should use proper street names. Photographs or overhead transparencies could be used to illustrate street markings. A presentation could be developed showing various intersections, dangerous-cargo routes, special fire lanes, rush-hour routes, or streets that may be changed from one-way to two-way (or vice-versa) during certain peak traffic hours.

(3) An explanation of local, state, or foreign-country traffic regulations and enforcement policies. Some specific topics and laws that should be covered include: safety-belt regulations, child-restraint laws, motorcycle-helmet laws, rules for stopped school buses, speed limits, roadway markings, pedestrian crossings, traffic signals, right turn on red or left turn on red, expressway regulations, parking on hills, vehicle lighting, implied-consent laws, legal intoxication limit, blood alcohol content (BAC). A local driver's manual should be provided to all personnel reporting to a new duty station.

(4) A briefing covering weather conditions in the local area as well as routes to outlying areas that may be heavily traveled during weekends and holidays. Explain dangerous road conditions that may develop because of snow, rain, wind or other severe weather conditions.

(5) Mileage distances to various points of interest that are regularly visited by personnel during their off time. Recommended maximum travel distances and times under good and adverse weather conditions should be covered.

(6) Information necessary to establish a local orientation program can be obtained from several sources. Some of these sources may include local law enforcement agencies, travel clubs, installation public affairs office, and military police.

(7) Soldiers should be treated as mature adults and motivated by their superiors to take responsibility for protecting themselves, their families and friends, and their peers from harm and undue risk. This is particularly true during off-duty activities involving vehicle operation and recreation.

*d. Child passenger safety.* Motor vehicle accidents are the leading cause of preventable deaths and injuries among children in the United States. The tragedy is that these deaths and injuries are not being prevented. All 50 states and the District of Columbia now require approved child restraints for children. In most of these states, child restraint systems must be used up to the age of 5. All personnel should be made aware of the benefits of child restraint systems.

*e. Pedestrian safety.* Each year thousands of pedestrians are killed in the United States. Pedestrians account for approximately 15 percent of all traffic deaths. Additional thousands are injured; many of them permanently disabled. A pedestrian may be someone who walks, runs, stands, rides a bicycle, or one who crosses at a crosswalk on roller skates or in a toy vehicle. While each pedestrian accident has its own particular causes, all such accidents have certain factors in common. These center on behavioral errors of drivers and pedestrians that relate directly to vehicle features and the environment.

(1) Pedestrian safety tips.

(a) Be alert, courteous, and realistic.

(b) Walk facing traffic.

(c) Wear light-colored clothing or use reflective fluorescent material on your clothing when walking during hours of darkness or low visibility.

(d) Cross all roads at intersections. When attempting to cross where there is no intersection, exercise extreme caution.

(e) Always obey pedestrian signals.

(2) Profile of Army pedestrian fatalities.

(a) PV2 through SGT.

(b) On pass or leave while off the installation.

(c) Wearing civilian clothing.

(d) Alcohol is a factor.

(e) Approximately 70 percent occur during darkness.

(f) Victims are usually attempting to cross a road.

(g) Many are walking with traffic (on a roadway with no sidewalks).

### **8-3. Sports and Recreation.**

*a.* Unit-level sports develop leadership and team spirit. The soldier encounters many conditions in sports activities similar to conditions in combat. As in combat, however, some of these same qualities lead to injuries and deaths.

*b.* Effective effort won't be applied to curb sports and recreational accidents until leaders realize the true impact of these losses. The unit safety officer/NCO assists the commander in executing the measures that counter sports injuries. These elements include effective supervi-

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sion, proper instruction, appropriate training, and thorough planning. Sports and recreational accidents rank second in number only to privately owned motor vehicle accidents.

c. The team sports that produce the greatest number of accidents and disabling injuries are: football, basketball, and softball. Important contributors to the high number of injuries are lack of protective clothing, poor conditioning, and lack of adequate coaching to properly execute play.

d. Although there are fewer injuries in individual sports, some of these activities are potentially very dangerous; they can result in severe injuries or death. Among the individual sports with a high potential for fatal injuries are: swimming, fishing, canoeing/rafting, sport parachuting, alpine sports, and hunting.

e. Research studies indicate that 20 percent of sports accidents could be eliminated by the use of adequate equipment controls. Another 31 percent could be eliminated through effective leadership. Equipment control is easy to bring about. Effective personnel controls are much more difficult; they involve the human element—securing the cooperation and support of participants.

f. Promoting concerned attitudes. Most people obey rules they understand. They are much less likely to obey rules they do not understand or see any reason for. If the safety officer/NCO, sports supervisor, or coach simply presents a list of safety “do’s” and “don’ts” without explaining the logic behind the rules, people frequently will ignore them. By implanting the proper attitude, the unit safety officer/NCO can help individuals and teams run their own programs.

g. The unit safety officer/NCO attacks sports-related losses by ensuring that guidelines are followed and facilities and equipment are adequate. He must also work with coaches to see that players are properly chosen, trained, and motivated.

### **8-4. Other Considerations.**

a. The unit safety officer/NCO is the interface between the unit commander and the supporting installation or community safety office. Most routine tasks that make the unit safety program work are executed by the safety officer/NCO in the commander’s name.

b. The flow of services and information between the unit and the supporting safety office is two-way. The safety office provides, or offers, prevention program materials, standards interpretations, data, and training classes. The unit submits reports, responds to taskers, provides operational hazard information, and makes safety awards nominations.

*c.* Unit safety personnel usually act as the commander's representative in formal safety actions such as surveys, investigations, and Safety Awareness Day activities. The unit additional duty safety officer (ADSO) is the normal POC for periodic Standard Army Safety and Health Inspections (SASOHI) and other mandatory surveys such as ammunition surveys and surety assistance visits. Unit preparation for an inspection and responses to subsequent findings are executed or coordinated by the additional duty safety personnel.

*d.* Close coordination between unit safety personnel and the full-time safety office pays dividends. The installation or command safety office is the conduit for valuable resources such as no-cost training, promotional materials, up-to-date doctrine, and awards for individuals and the unit. Effort the ADSO devotes to installation safety personnel is repaid several times over. A memorandum of understanding should be drawn up between the installation safety office and unit to delineate specific support requirements and services. One area that should be covered is fire-prevention surveys and fire-fighting support.



## APPENDIX A

### SAFETY REFERENCES

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AR 385-10  
Army Safety Program

AR 385-15  
Water Safety

AR 385-40  
Accident Reporting and Records

AR 385-55  
Prevention of Motor Vehicle Accidents

AR 385-63  
Policies and Procedures for Firing Ammunition for Training,  
Target Practice, and Combat

AR 385-64  
Ammunition and Explosives Safety Standards

AR 385-95  
Army Aviation Accident Prevention

AR 420-90  
Fire Prevention and Protection

AR 672-74  
Army Accident Prevention Awards Program

#### Additional References

AR 40-5  
Preventive Medicine

AR 55-29  
Military Convoy Operations in CONUS

AR 385-26  
Use of Explosives and Pyrotechnics in Public Demonstrations,  
Exhibitions and Celebrations

AR 600-55  
Motor Vehicle Driver—Selection, Testing and Licensing

DA Pam 40-501  
Hearing Conservation

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DA Pam 385-3  
Protective Clothing and Equipment

DA Form 285  
The Army Accident Report

TB MED 81  
Cold Injury

TB MED 507  
Occupational and Environmental Health: Prevention, Treatment,  
and Control of Heat Injury

TB SIG 291  
Safety Measures to Be Observed When Installing and Using Whip  
Antennas, Field Type Masts, Towers, Antennas, and Metal Poles  
that are used with Communication, Radar, and Direction-Finder  
Equipment

TC 11-6  
Grounding Techniques

TC 21-21  
Water Survival Training

## APPENDIX B

### Sources of Assistance

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<i>Source</i>	<i>Information or Assistance</i>
<b>B-1. Supporting safety office</b>	Safety posters and materials. Safety codes, standards, and regulations. Hazard communication. Advice on safety demonstrations, exhibits, or exercises. Occupational Safety and Health Administration. Guidance on accident investigating and reporting. Radiation protection officer. Guidance on operating overall unit safety program.
<b>B-2. Transportation Office</b>	Selection, testing, and licensing of drivers. Training of drivers. Maintenance of vehicles. Administration of vehicle safety check programs. Safe-driver award program. Transportation of hazardous materials.
<b>B-3. Medical Officer and/or Sanitation, Preventive Medical Staff</b>	Treatment of injuries. Hygiene and first aid. Prevention of heat and cold-weather injury. Hearing conservation. Respiratory protection. Admissions records. Vision safety. Suicide prevention. Emergency room. Preventive medicine and environmental health. Physical qualification of personnel.
<b>B-4. Personnel Office</b>	Assignments and transfers (selecting suitable jobs). Knowledge of physical disabilities involved in job selection.
<b>B-5. Provost Marshal</b>	Enforcement and discipline. Seatbelt enforcement. Statistical information. Supervision of military police. Registration of privately owned motor vehicles. Posting of traffic signs, signals, and markings.

<i>Source</i>	<i>Information or Assistance</i>
<b>B-6. Engineer &amp; Housing</b>	Repair and maintenance of buildings. Supervision of fire prevention and protection activities. Provision of traffic signs, signals, and roadway markings. Environmental protection and waste disposal.
<b>B-7. Chaplain</b>	Moral persuasion (attitude development).
<b>B-8. Training Office</b>	Incorporation of safety in training methods and activities.
<b>B-9. Chemical Office</b>	Compatibility of chemicals. Storage and disposal.
<b>B-10. Drug and Alcohol Office</b>	Statistics on drug and alcohol use. Training classes. Education.
<b>B-11. Defense reutilization and marketing office</b>	Equipment disposal.
<b>B-12. EOD</b>	Disposal of ordnance. Explosives training.
<b>B-13. AMC Logistic Assistance Representative</b>	Advice on equipment operation and maintenance.
<b>B-14. Range Officer</b>	Range safety and procedures.
<b>B-15. Quality Assurance Specialist, Ammunition Surveillance (QASAS)</b>	Ammunition safety, storage, and quality standards.
<b>B-16. Staff Judge Advocate</b>	Legal advice. Release of accident data.
<b>B-17. Public Affairs Office</b>	Media control. Release of accident data.

## APPENDIX C

**SUGGESTED UNIT SAFETY AWARENESS ACTIVITIES**

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- C-1.** *First-line leaders* discuss accident prevention measures with their soldiers.
- C-2.** *First-line leaders* discuss hazard identification, risk assessment, and risk management.
- C-3.** *First-line leaders* conduct crew training with emphasis on safety and on heat stress.
- C-4.** *Senior NCOs* teach hazard identification, risk assessment, and risk management techniques to junior NCOs.
- C-5.** *Senior NCOs* monitor and supervise first-line leaders during safety instruction and training.
- C-6.** *Senior NCOs* conduct safety surveys of subordinate leaders to ensure unit safety programs are implemented.
- C-7.** *Junior officers* conduct safety classes for subordinates.
- C-8.** *Junior officers* develop unit safety programs and SOPs.
- C-9.** *Junior officers* monitor and supervise safety training activities.
- C-10.** *Unit safety officers and NCOs* review and update unit safety programs and publications.
- C-11.** *Unit safety personnel*—
- a. Conduct safety classes on contingency mission area operations and survival.
  - b. Conduct surveys of bivouac areas to identify and eliminate unsafe conditions.
  - c. Review ground guide requirements and hand signals.
  - d. Review emergency first-aid techniques.
  - e. Review convoy procedures.
  - f. Review safety requirements for live-fire exercises and other hazardous training activities.
  - g. Conduct aviation safety orientation (if applicable).
  - h. Review ammunition and explosives safety, transportation, and storage requirements.
  - i. Review driver selection procedures and the driver training program.
  - j. Review unit medevac procedures.
  - k. Conduct sports and recreational safety briefings.
  - l. Review grounding requirements for generators and electrical equipment.
  - m. Review fire prevention programs.
  - n. Conduct motor-vehicle accident prevention classes.

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- o.* Review preventive maintenance checks and services (PMCS) on vehicles and ground support equipment.
- p.* Review safety requirements for vehicle movement under tactical conditions.
- q.* Review safety requirements for field mess operations.
- r.* Review field sanitation conditions.
- s.* Review fuel point operations.
- t.* Present on-the-spot safety promotional gifts to persons observed working safely, eliminating hazards, etc.
- u.* Provide recognition awards: letters, safety promotional gifts, atta-boys, etc.
- v.* Provide specialized safety training for hazardous activities.
- w.* Emphasize seatbelt use.
- x.* Arrange safety awareness contests/events.
- y.* Provide discussions for unit personnel on effects of dehydration.
- z.* Provide special training for unit motorcyclists.
- aa.* Arrange for nonpunitive POV inspections in unit parking lot by maintenance personnel.
- ab.* Review procedures to locate unauthorized duds and weapons, including an ammunition amnesty program.
- ac.* Conduct classes on pedestrian and runner safety, bicycle safety, and troop formation safety.
- ad.* Coordinate with medical personnel for them to present safety related classes on relevant subjects (e.g., hearing conservation, laser safety, respiratory protection).
- ae.* Coordinate with drug and alcohol personnel for classes on available programs.
- af.* Coordinate with fire department personnel to conduct fire prevention and fire extinguisher use classes.
- ag.* Conduct a seatbelt promotion class. Discuss requirements, benefits, show video, and display posters. Conduct spot checks in unit parking lot.
- ah.* Conduct environmental hazards class, focusing on severe weather, poisonous plants, and insects.
- ai.* Coordinate with local law enforcement agencies (state highway patrol, city police, sheriff's department, military police) to conduct highway-safety seminar.

## APPENDIX D

### GUIDE TO PREACCIDENT PLAN

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This appendix is intended to assist commanders and safety officers/NCOs by providing assistance in establishing a preaccident plan. The sample preaccident plan is for guidance only. It is not all-inclusive or restrictive. Each unit must decide what needs to be included in their plan.

#### Unit Preaccident Plan

#### D-1. General.

The operations officer is responsible for the establishment, implementation, and accomplishment of the accident plan. That plan will ensure—

- a. Coordination between all personnel.
- b. All unit personnel are familiar with the crash-alarm system and the provisions of AR 420-90, AR 385-40, and AR 385-95.
- c. Regular (at least monthly) tests of the plan.
- d. Air crash search and rescue (ACSR) or local crash grid maps and/or crash grid overlays are distributed and maintained by each activity listed on the primary and secondary crash-alarm systems and in all medical ambulances.
- e. DA Pam 385-95, AR 420-90, and FM 1-300 are used as guidance.
- f. Units operating as a tenant activity on a non-Army or joint-use airfield develop plans and coordinate them to fulfill all Army requirements, to include those not provided by the host activity.

#### D-2. Primary Crash Alarm System

##### a. *Flight operations will—*

- (1) Activate the primary crash-alarm system when notified of a crash and notify all parties in the primary system.
- (2) Activate the secondary alarm system by informing all parties in the system and specifying an assembly point.
- (3) Control, direct, coordinate, and dispatch personnel, aircraft, equipment, and convoys to locate or to service crash scene.
- (4) Establish and control an adequate crash Pass System.
- (5) Monitor requests from the crash area for special or additional assistance or equipment.
- (6) Serve as the control center for general direction of post-accident activities.

##### b. *Air traffic control tower will—*

- (1) Keep a current ACSR or grid map/overlap conspicuously posted and ensure that all tower personnel are familiar with the map.

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(2) Activate the primary alarm system, and report when a crash or flight emergency is observed from the tower or reported to tower personnel by radio.

(3) Radio crash location data to firefighting and rescue crews.

(4) Alert all traffic to the emergency and grant traffic priority to rescue and search aircraft.

(5) Close field to air and ground traffic if necessary.

### *c. Fire station will—*

(1) Respond immediately to the alarm.

(2) Conduct rescue and fire suppression as necessary.

(3) Supervise crash area until fire, if any, is under control or until area is safe for entry by authorized personnel.

(4) Request additional firefighting equipment when necessary because of location or nature of fire.

(5) Maintain trained and equipped crash-rescue crew on alert during all flying operations.

(6) Provide appropriate training for all personnel.

### *d. Ambulance station will—*

(1) Dispatch medical personnel to the crash scene via ambulance or helicopter, whichever permits earliest arrival and evacuation of injured.

(2) Periodically train all medical personnel who may be assigned crash or rescue duties.

(3) Inform ambulance crews of best routes to reach each general area shown on ACSR or grid map/overlay sections.

(4) Request additional ambulance and medical assistance when necessary because of crash location or nature.

(5) Supervise removal and transportation of injured and provide emergency treatment.

### *e. Helicopter ambulance crew will—*

(1) Maintain helicopter ambulance for immediate departure to locate crash.

(2) Rescue personnel from crash and evacuate casualties to the designated medical facility.

(3) Radio preliminary report of crash scene to tower or controlling agency to aid ground-rescue operation.

(4) Provide transportation for medical personnel, crash crews, and medical supplies as directed by the flight surgeon.

### *f. Special crash rescue will—*

(1) Dispatch rescue team when required.

(2) Radio preliminary report of crash circumstances to the tower.

(3) Rescue and transport injured persons to specific transfer point where faster transportation to hospital is available.

Note

A specially equipped and trained rescue team may be required to meet search and rescue needs under unusual geographic conditions.

**D-3. Secondary Crash-Alarm System**

*a. Airfield or post fire department will—*

- (1) Dispatch equipment necessary to support crash fire station.
- (2) Where crash location or nature indicates need for outside fire extinguishment services, make request directly to appropriate fire departments.
- (3) Determine the off-post fire stations closest to each grid map area, and post telephone numbers on the crash grip map.
- (4) Supervise the crash site until fire is under control.
- (5) Direct crash crew training.
- (6) Advise flight operations when dangerous or hazardous cargo warrants presence of specialist (such as ordnance officer and chemical officer).

*b. Flight surgeon or his assistant will—*

- (1) Dispatch medical personnel to accident with crash crews, as directed by flight operations.
- (2) Alert hospital emergency room of crash and prepare medical personnel, facilities, and equipment for accident victims.
- (3) Supervise and plan periodic training of all medical personnel who may be assigned crash rescue duty.
- (4) Determine off-airfield medical and ambulance facilities closest to each grid map area, and post telephone numbers on the grid map.
- (5) Serve on the investigation board, assist in determining causes of accident and injuries, and assist in the selection of accident prevention measures.

*c. Provost marshal will—*

- (1) Dispatch security guards to assembly points as needed to provide adequate security and order at the crash scene and to prevent pilferage of wreckage. Security personnel will remain on duty until relieved by military guards. Inform military police (MPs) that cooperation with civil authorities should be in accord with the Posse Comitatus Act (18 USC 1385) or the Status of Forces Agreement (SOFA) and the treatment of the crash scene should be in accordance with AR 360-5.
- (2) Train security personnel on specific duties at aircraft accident scenes. This includes restraint of spectators, crash pass requirements, handling of wreckage, security of classified materials, and safeguarding government property.
- (3) Escort crash convoys to accident scene.
- (4) Ensure that all security control patrols know best routes to all general areas within ACSR or grid map/overlay sections.

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(5) Determine off-post police departments closest to each grid map area, and post telephone numbers (and radio control data) on the grid map.

(6) Obtain and supervise nonmilitary guards when there are insufficient security personnel or other military personnel available to guard the accident area.

(7) Provide radio communications with MP vehicles when necessary.

### *d. Aviation maintenance officer will—*

(1) Ensure qualified personnel are available to assist accident investigation board at accident site.

(2) Provide the board with an estimated cost of damage (ECOD) (TB 43-0002-3) to assist in determining accident classification.

(3) Help the board recover and identify wreckage and determine the operating conditions of various parts.

(4) Provide maintenance history of wrecked aircraft.

(5) Help board reconstruct aircraft from wrecked parts.

### *e. Aviation safety officer (ASO) will—*

(1) Be thoroughly familiar with AR 385-40 and DA Pam 385-95.

(2) Identify an alternate ASO.

(3) Review this plan and ensure that participating agencies test it at least once a month.

(4) Go to the scene of an aircraft accident.

(5) Classify the accident based on ECOD from the AMO and injury cost and classification estimates from the medical activity.

(6) Take charge of the accident site until the accident investigation board arrives. Additional details related to this responsibility are contained in DA Pam 385-95, and AR 385-40.

(7) Keep the ASO in next higher chain of command informed.

(8) Make certain that a preliminary report of aircraft mishap (PRAM) has been sent and that the message is correct.

(9) Act as an advisor to the investigation board and assist its members as necessary.

(10) Review aircraft accident reports for the commander before they are forwarded to the reviewing authority, giving particular attention to cause determination and preventive measures.

*f. Motor officer will—*Provide ground transportation necessary to transport authorized personnel and equipment to and from the accident scene.

### *g. Army Communications Command element will—*

(1) Dispatch photographers to assembly point to report directly to the board president. Additional guidance is in DA Pam 385-95.

(2) Provide and maintain communication facilities to implement this plan.

(3) Provide multiple-telephone hookup system for secondary alarm circuit so that all numbers are called at the same time.

(4) Test multiple-telephone hookup at least quarterly.

*h. Public affairs officer will—*

(1) Dispatch personnel to accident scene to handle news releases.

(2) Maintain liaison with local news services.

(3) Help investigators identify witnesses and solicit return of wreckage pieces that may have been removed without authorization.

*i. Staff adjutant general will—*

(1) Alert commander to accident details.

(2) Contact chaplain when necessary.

(3) Contact claims officer when necessary.

(4) Prepare and transmit casualty report.

(5) Designate the staff duty officer (SDO) responsible for these duties during non-duty hours and ensure SDO is contacted.

(6) Dispatch specialists (chemical or ordnance) when crashed aircraft was transporting dangerous or hazardous cargo requiring special handling.

*j. Facility engineer will—*

(1) Dispatch a qualified draftsman, equipped to diagram wreckage pattern and accident scene, to assembly point.

(2) Provide, upon request from aircraft accident investigation board, personnel and equipment needed to clear land, move earth, or perform other engineering functions related to accident investigation.

*k. Aircraft accident investigation board members will—*

(1) Be notified of crashes by board president or ASO.

(2) Report to specified assembly point upon notification of crash.

(3) Take charge of accident site and initiate investigation upon arrival at crash scene after rescue and fire suppression tasks have been completed.

(4) Conduct the investigation and send the report of the investigation as prescribed by AR 385-40.

*l. Airfield weather officer will—*

(1) Issue local weather observations.

(2) Determine if additional weather information will be required for investigation purposes. Analysis of weather conditions occurring at the time and place of accident is essential to the accident investigation. The weather unit must be promptly advised of an aircraft accident or emergency to ensure the most accurate information can be determined concerning existing weather conditions at the time of the accident.

*m. Aviation officer will—*

(1) Not be on the secondary alarm system but will be informed promptly after the secondary alarm system is implemented.

(2) Go to the accident scene when appropriate.

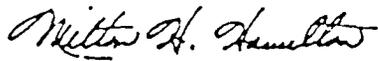
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(3) Arrange for appointment of an investigating board if the organization that has the accident does not have appointing authority.

By Order of the Secretary of the Army:

Official:

GORDON R. SULLIVAN  
*General, United States Army*  
*Chief of Staff*



MILTON H. HAMILTON  
*Administrative Assistant to the*  
*Secretary of the Army*

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