

Deployment Guide

for
Brigade Combat Team Safety Professionals



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Foreword

This booklet is a quick reference guide intended to assist Brigade Combat Team Safety Professionals (BCTSPs) in advising their commands and in preparing and maintaining accident prevention programs during deployment. It is a compilation of resources, tools, lessons learned, tactics, techniques, and procedures (TTPs) and additional useful information.

This information does not supersede existing regulations or policies, nor does it negate the need for personnel to be properly trained and knowledgeable of regulatory and safety standards. Keep in mind, what works for one unit may not be the right fit for another.

While intended for use by BCTSPs, safety personnel at all levels, leaders and Soldiers alike can use the information and resources included herein to enhance their mission readiness and success.

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Overview

During conflict, individuals frequently abandoned safety in an effort to establish “combat posture.” Unfortunately, when we do this we end up sacrificing our combat power. We become our own worst enemy needlessly injuring our personnel and damaging our equipment. Leaders must understand that doing things safely is a combat multiplier.

Since policies, TTPs, and standard operating procedures (SOPs) don’t capture every operating condition or hazard that we may be confronted with, Composite Risk Management (CRM) is one of the most powerful tools a command can use to achieve mission success. This tool must be an integral part of the decision-making process and applied during all phases of the mission/operation. Implementing CRM will result in safer operations without compromising the mission. Use the CRM principles as a guide.

- ❖ **Integrate CRM into all phases of missions and operations.** This encompasses planning, preparation, execution and recovery.
- ❖ **Make risk decisions at the appropriate level.** Commanders are required to establish and publish approval authority for decision-making. Check higher headquarters policy.
- ❖ **Accept no unnecessary risk.** Does the potential gain or benefit outweigh the potential loss?
- ❖ **Apply the process cyclically and continuously.** Applied across the full spectrum of Army training and operations, to continuously identify and assess hazards, develop and implement controls and evaluate outcomes.
- ❖ **Do not be risk averse.** Identify and control the hazards; complete the mission.

A successful command is one that promotes safety, enforces the standards and applies the principles of CRM to all they do.

References and links

USACRC’s Composite Risk Management (CRM) Web page contains guidance, tools, available training and links to CRM resources. <https://safety.army.mil/crm>

Ground Risk Assessment Tool (GRAT) assists users in the identification, assessment and control of hazards associated with specified missions or tasks. This interactive tool can produce an automated CRM worksheet based on user input. Users can edit, save, print, digitally sign and email the worksheet. <https://safety.army.mil/grat>

Accident Risk Assessment for Leaders is a tool that helps Leaders identify individuals within their formations who are at the most at-risk for an accident. Additionally, they can do a quick self-assessment that lets them know if they are an engaged leader. Identifying and monitoring at-risk Soldiers is essential in preventing accidents. <https://safety.army.mil/soldier-risk-assessments>

Accident Risk Assessment for Individuals assists individuals in assessing their own risk level. It can help them identify risk factors and targets areas that they can improve through smart decision-making. <https://safety.army.mil/soldier-risk-assessments>

AR 11-35 Deployment Occupational and Environmental Health Risk Management
http://armypubs.army.mil/epubs/pdf/r11_35.pdf

DA PAM 385-30 Mishap Risk Management
http://armypubs.army.mil/epubs/pdf/p385_30.pdf

FM 5-19 Composite Risk Management
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm5_19.pdf

TC 3-34.489 The Soldier and the Environment
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc3_34x489.pdf

Pre-deployment

Before you deploy, take some refresher courses, and put together [checklists](#), [SOPs/guidance](#), [posters](#) and contact lists. Prior planning will set the stage for a successful and safe deployment. You'll have a solid foundation from the start and will be able to make adjustments once you are on the ground.

Although not limited to, consider taking refresher training in key areas such as fire prevention, electrical safety, weapons handling/range safety (to include prevention of negligent discharges), ammunition and explosives handling and storage, construction safety, field sanitation, and traffic safety. You should also find out as much as you can about environmental and cultural hazards for the deployment area. A good way to accomplish this is to contact the BCTSP currently in the position you will be taking over. He/she will also be a great source of other information.

After gathering information regarding deployment area hazards, you can assist your units in conducting [pre-deployment training](#). This training should include topics such as driver/crew training (to include deployment area driving hazards), deployment area critters, hot and cold weather injury prevention, food and water consumption, fatigue, radiation safety and laser injury prevention. Information and resources contained in the Soldiers and the Environment section of this booklet may assist you in this area.

In addition to the guidance provided in [DA PAM 690-47](#), check with higher headquarters for specifics concerning your personal deployment requirements such as uniforms, weapons, equipment, processing, etc.

References and links

USACRC's Tactical Safety Web page provides deployment hazard and injury prevention information and tools for Soldiers and Civilians.

<https://safety.army.mil/tacticalsafety>

Center for Army Lessons Learned - Lesson of the Day (LOD) provides useful insights and tactics, techniques, and procedures (TTPs) employed in theater that will assist units in preserving combat power.

https://call2.army.mil/doc_index.aspx?ID=339

USACRC's Poster Library Web page provides many useful posters developed to assist you in staying in the fight. Use these products to train, inform, and communicate loss reduction through CRM. <https://safety.army.mil/posters>

USACRC'S Ground Safety Video Library Web page provides useful videos that are designed to train, inform and communicate ground safety through CRM.

<https://safety.army.mil/groundvideos>

Army Public Health Command Deployment Web page provides services and information pertinent to maintaining and improving environmental health.

<http://phc.amedd.army.mil/topics/envirohealth/Pages/default.aspx>

USACRC's Driver's Training Toolbox is a resource of materials necessary to set up and maintain an effective drivers training program.

<https://safety.army.mil/drivertrainingtoolbox>

PHC Region-Specific Information

<http://phc.amedd.army.mil/topics/phcrspecific/Pages/default.aspx>

Civilian's Corner is a "one-stop" resource for Leaders, supervisors and safety professionals to obtain current, timely information and safety resources that can be used to educate, enforce safe work practices, and influence behavior for the civilian workforce. <https://safety.army.mil/civilianscorner>

AR 385-10 The Army Safety Program (Chapters 12 and 13)

http://armypubs.army.mil/epubs/pdf/R385_10.pdf

AR 690-11 Use and Management of Civilian Personnel in Support of Military Contingency Operations

http://armypubs.army.mil/epubs/pdf/R690_11.pdf

DA PAM 690-47 DA Civilian Employee Deployment Guide

http://armypubs.army.mil/epubs/pdf/P690_47.pdf

FORSCOM Civilian Deployment Guide provides references and a short summary of the provisions available concerning areas such as medical, awards, passports, R & R, living conditions, duty hours, pay, clothing and equipment, uniforms, etc,

<https://fcportal.forscom.army.mil/sites/G1/SharedDocuments/Private/HRD/FORSCOMCivilianDeploymentGuide20Jul09.pdf>

Rail, Port and Cargo Ops

Key components of a successful operation are prior planning and training. Ensure all operators are properly licensed. Both the operators and ground guides must know standard ground guiding procedures. Review arm and hand signals for ground forces in FM 21-60, Chapter 2 and in Appendix A of TC 21-305-20.

Inform personnel about the hazards associated with overhead power lines. Remind them to maintain situational awareness and avoid any contact. Also, have them remove or tie down antennas and ensure all equipment is secure.

Personnel should avoid placing themselves between objects where they can possibly be pinned or pinched. Instruct them to never drive or walk under suspended loads and under or between railcars.

Equip Soldiers with Personal Protective Equipment (PPE) appropriate for the mission. At minimum, this includes reflective vest, helmet/hard hat, hearing protection and gloves.

Designate at least one trained individual (on orders) to certify hazardous cargo at unit level. Hazardous cargo certifiers must be trained at a Department of Defense (DOD) approved school within the last 24 months. Certifiers require refresher training every two years.

The hazardous cargo certifying official is responsible for ensuring the shipment is properly prepared, packaged, marked, inspected and documented. They can certify documentation for commercial and military trucks, rail, sea and air. A common mistake occurs when units send the HAZMAT certifier with the advance party leaving no one to accomplish the HAZMAT inspections during departure operations.

The unit Safety Officer must coordinate with the port Safety Officer prior to arrival at port. Once on site, all unit personnel are required to receive Port Safety/Rules of the Port brief.

See SDDC's [Safety Guidelines for Port Operations](#) booklet for more detailed information.

References and links

USACRC's Cargo Operations Web page <https://safety.army.mil/portops>

Ground Risk Assessment Tool (GRAT) <https://safety.army.mil/grat>

SDDC Transportation Engineering Agency Web page

<http://www.tea.army.mil/>

SDDC's Safety Guidelines for Port Operations

<https://safety.army.mil/LinkClick.aspx?fileticket=d-9tH-0jg0%3d&tabid=656>

IMCOM Rail Safety Rules

<https://safety.army.mil/LinkClick.aspx?fileticket=-7OirYnRCIs%3d&tabid=656>

AR 385-10 The Army Safety Program (Chapter 14)

http://armypubs.army.mil/epubs/pdf/R385_10.pdf

FM 3-35 Army Deployment and Redeployment

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm3_35.pdf

FM 21-60 Visual Signals (see Chapter 2)

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm21_60.pdf

TC 21-305-20 Manual for the Wheeled Vehicle Operator

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/tc21_305_20.pdf

Soldiers and the Environment

Expect mostly dry, hot and windy conditions (dust/airborne sand) with extreme temperatures (both hot and cold). Approximately, two-thirds of Afghanistan is comprised of mountainous terrain with peak elevations reaching 25,000 feet.

Environmental conditions found in Afghanistan such as contaminated food and water, extreme temperatures, and high altitudes can put personnel at risk.

- Only consume U.S. military-approved food, water and ice; wash hands often. Use sunscreen, lip balm and protective eyewear.
- Shield your face with cloth materials to protect from blowing dust and sand.
- Ensure personnel are acclimated and have the proper clothing and nutrition. Hydration and rest will assist them in overcoming extreme conditions.

Critters such as snakes, spiders, scorpions, insects and other animals, as well as some plants, can also pose a threat to personnel.

- Use insect repellents containing DEET on exposed skin; sleep under permethrin-treated bed nets. Treat older Army Combat Uniforms (ACUs) with permethrin, but do not use permethrin on the newer Flame-Resistant Army Combat Uniforms (FRACUs). If unsure of the uniform type, check the Use and Care Label on the inside of the garment. Take malaria prevention pills if prescribed.
- Shake out boots/bedding/clothing prior to use, never walk barefoot, avoid sleeping on the ground, use caution when entering caves, abandoned buildings or bunkers, avoid all animals and if scratched, bitten or stung, seek medical attention immediately.
- Do not adopt stray animals as pets or mascots. Keep living areas free of trash and food. Avoid living in areas where livestock were or are currently kept.
- Do not touch, chew, eat, or burn unfamiliar plants; wash contaminated skin/clothing after contact.

References and links

USACRC's Tactical Safety Web page provides deployment hazard and injury prevention information and tools for Soldiers and Civilians.

<https://safety.army.mil/tacticalsafety>

Army Public Health Command Deployment Web page

<http://phc.amedd.army.mil/topics/envirohealth/Pages/default.aspx>

Deployment Preventive Medicine Measures Presentation is a comprehensive presentation with notes covering topics such as injury prevention from environmental elements such as temperatures, altitude, critters, etc. It also includes topics such as sports injury prevention, field sanitation, nutrition and other personal health and hygiene areas. https://safety.army.mil/Portals/groundsafety/docs/Non_Country-Specific_Deployment_Preventive_Measures.pdf

Army Guide to Staying Healthy

<http://usaphcapps.amedd.army.mil/HIOShoppingCart/viewItem.aspx?id=413>

Deployment Health Card - Afghanistan

<http://usaphcapps.amedd.army.mil/HIOShoppingCart/viewItem.aspx?id=318>

Deployment Health Guide - Afghanistan

<http://usaphcapps.amedd.army.mil/HIOShoppingCart/viewItem.aspx?id=329>

Deployment Health Guide: A Soldier's Guide to Staying Healthy at High Elevations

<http://usaphcapps.amedd.army.mil/HIOShoppingCart/viewItem.aspx?id=310>

The following hot weather injury prevention material and more is available at

<http://phc.amedd.army.mil/topics/discond/hipss/Pages/HeatInjuryPrevention.aspx>

- Heat Acclimatization Guidance
- Heat: Are You Hydrated? Take the Urine Color Test (Poster)
- Heat: Heat Can Kill Poster (deployed)
- Heat: Sun Smart Card
- Heat Injury Prevention Pocket Guide

The following cold weather injury prevention material and more is available at

<http://phc.amedd.army.mil/topics/discond/cip/Pages/ResourceMaterials.aspx>.

- Cold Weather Injuries Poster
- Cold Weather Casualties & Injuries Card
- Heaters Just the Facts

Approved Eye Protection

<http://phc.amedd.army.mil/topics/workplacehealth/vcr/Pages/EyeProtection.aspx>

<https://peosoldier.army.mil/pmseq/eyewear.asp>

FM 6-22.5 Combat and Operational Stress Control Manual for Leaders and Soldiers

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm6_22x5.pdf

TC 21-3 Soldier's Handbook for Individual Operations and Survival in Cold-Weather

Areas https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc21_3.pdf

TG 248 Guide for Deployed Preventive Medicine Personnel on Health Risk
Management <http://phc.amedd.army.mil/PHC%20Resource%20Library/TG248.pdf>

[TRADOC CRM-Heat Injury Prevention, Identification and Response Card](#)

Operating Bases

Upon arrival, one of the first things a BCTSP should do is introduce him/herself to the Forward Operation Base (FOB) mayor as well as the project manager for the contract that provides support throughout the FOB. Knowing these key individuals will pay huge dividends should any problems surface that need quick resolution. BCTSPs should attend FOB mayor cell meetings, which occur at least monthly. These meetings are very informative providing updates on contract work performance as well as ongoing projects. Additionally, FOB tenants are able to voice their thoughts or safety concerns and it is a way to share safety tips.

It is important for BCTSP to perform safety inspections around the FOB and combat outposts (COPs) within the brigade's area of responsibility. The BCTSP should coordinate with unit Additional Duty Safety Officers (ADSOs/NCOs) when conducting inspections. This will provide safety assistance and training for ADSO/NCOs and can be beneficial since the BCTSP may be limited on his/her ability to circulate around the battlefield. While not limited to, these are some key areas to consider.

Security areas: While this area typically falls under the control of the Base Defense Operation Center (BDOC), the BCTSP can assist with hazard mitigation in various areas where security is involved.

- **Entry control point (ECP)** – Ensure ECP personnel keep a safe distance from vehicles and never assume operators can see them. Communicate hazards associated with concertina wire and swing and drop gates.
- **Guard towers** – Ensure stairs leading up to towers are sturdy, free of obstacles and have handrails. Check to ensure there are no tripping or electrical hazards inside and around the tower.

Living areas:

- **Tents** – Most tents are on a hard stand and will have some form of heater, ventilation and air-conditioning (HVAC) unit for environmental comfort. Ensure these HVAC units are in working order along with any overhead lighting and outlet fixtures. If these are not functioning properly, the unit can submit a work order through the mayor cell to repair any issues. Look for unsafe use of power strips (i.e., daisy chaining), check fire extinguisher placement and charge and finally, check for any evidence of rodent issues. You can recharge fire extinguishers at the FOB fire department and submit a work order through the mayor cell to address rodent issues.

- **Container housing unit (CHU)** – In most cases, the contractor is responsible for the upkeep of the HVAC units associated with each CHU and will periodically inspect them and change the filters. This requires access to the CHU interior and provides leaders an opportunity to inspect the CHUs interior for cleanliness, proper use of outlets and evidence of rodent issues. Additionally, FOB contractors are responsible for inspecting and charging all CHU exterior mounted fire extinguishers. (This also may be the case with FOB tents where the contractor has responsibility over tent maintenance.) Lastly, make sure to inspect CHU roofs before, during and after the rainy season. The weather tends to reduce weatherproofing support causing leaks, which may be hazardous to the occupants.
- **Latrine and shower facilities** – On a major FOB, grounding units to prevent fire, electrical shock and electrocutions is typically a contractor responsibility. However, there is no harm in checking their work to ensure the safety of your Soldiers. You will want to inspect for hazards that may lead to slips, trip and falls inside and outside the facility. Ensure there is proper signage in place informing facility users of potential hazards. In locations such as combat outposts (COP) or patrol bases (PB) where latrine and shower facilities are constructed, refer to Appendix A (A-32-47) FM 21-10, Field Hygiene and Sanitation for methods of waste disposal.

Burn pits: BCTSPs should periodically check for improperly discarded items such as ammunition, class III P (packaged POL) products, tires or any items that may bring about health hazards once burned. For austere locations, refer to Appendix A (A-36) FM 21-10, for field expedient methods.

Note: If the brigade desires to have an internal amnesty box, ensure it is properly secured and check it often for hazardous items or for items have been disposed of improperly.

Construction: When it comes to new construction on the FOB, it is typically the contractor's responsibility to ensure the construction complies with any/all Occupational Safety and Health Administration (OSHA) standards. However, units typically take on new, yet minor, construction projects because they do not have contractor support or the project does not warrant going through the contract phase. Nevertheless, the BCTSP and/or ADSO is responsible for assisting the commander in ensuring personnel comply with all OSHA standards.

Pedestrian safety: Depending on the FOB's size, population and maturity, it is important to keep pedestrian safety in mind. Ensure the vehicle traffic plan incorporates pedestrian foot traffic and that signage is adequate and applicable. You can further control speed by emplacing speed bumps. Make Soldiers aware of high-volume traffic

areas. Establish, communicate and enforce directives pertaining to running/walking with headphones, talking/texting on cell phones, and wearing reflective gear during hours of darkness. Ensure Soldiers are aware of pedestrians on the FOB as they operate military equipment and that they obey all posted signs.

Bicyclist: Ensure bicycle safety rules are consistent with stateside rules. Cyclists must wear a helmet, eye protection, use reflective gear (belt/vest) and have operational lights on their bicycle for use during limited visibility. Additionally, ensure cyclists follow posted signs throughout the FOB. Technically, they are considered a vehicle and must obey the same rules.

PT/Sports: As the BCTSP, it is important to inspect all indoor and outdoor areas where Soldiers conduct PT or play sports for hazards are and to emplace controls to mitigate these hazards. Ensure run routes are away from high-volume traffic areas and that Soldiers comply with regulatory guidance such as wearing reflective gear, running against the flow of traffic and use of headphones and cell phones when running. With regard to sports, BCTSPs should remind Soldiers to use the proper PPE, such as mouth guards, goggles and braces as appropriate.

Also, encourage Leaders to tailor their programs in accordance with TC 3-22.20 to prevent injuries and to take the **Injury Prevention through Leadership Course** offered via ALMS through the U.S. Army Combat Readiness/Safety Center website.

Fire Prevention Tips

- ✓ Each inhabited building must have two exits. These exits must be at opposite ends - preferably, one at each end of the building.
- ✓ Both doors must be unlocked when the building is occupied.
- ✓ Do not block the exits and ensure they are clearly marked as an exit.
- ✓ Check electrical outlets for cracked or missing covers, loose wiring and evidence of smoke or heat damage, i.e., melting covers, crisp wallpaper.
- ✓ Ensure extension cords are free of cracks, cut insulation, and heat damage. Remove damaged electrical cords from service immediately.
- ✓ Ensure Soldiers understand that only acceptable power strips are UL or CE approved (molded to the bottom of the strip, not a sticker).
- ✓ Appliance wiring should be free of cracked, cut or melted insulation. Also, check appliances for damaged or missing covers, plastic protective devices and heat damage. Remove from service immediately if a defect is noted.
- ✓ Ensure any unused appliance is unplugged when not in use.
- ✓ Only allow trained personnel to install electrical wiring and equipment.
- ✓ Never bypass circuit breakers and fuses or replace them with those of higher amperage.
- ✓ Do not suspend lamp fixtures directly by the electrical connection; they must be supported.

References and links

USACRC's Fire Protection Web page contains fire prevention and protection resources and links. <https://safety.army.mil/fireprotection>

USACRC's Electrical Safety Web page contains regulatory standards and guidance, links, available training and other materials regarding electrical safety. <https://safety.army.mil/electricalsafety>

USACRC's Walking/Working Surfaces Web page contains guidance, fact sheets, tools, training, and other information pertaining to prevention of slips, trips and falls. <https://safety.army.mil/slipstripsfalls>

National Institute for Occupational Safety and Health (NIOSH) Electrical Safety <http://www.cdc.gov/niosh/topics/electrical/>

AR 385-10 The Army Safety Program
http://armypubs.army.mil/epubs/pdf/r385_10.pdf

DA PAM 385-10 Army Safety Program
http://armypubs.army.mil/epubs/pdf/p385_10.pdf

FM 4-25.12 Unit Field Sanitation Team
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm4_25x12.pdf

FM 5-424 Theater of Operations Electrical Systems (Chapter 8)
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm5_424.pdf

FM 21-10 Field Hygiene and Sanitation
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm21_10.pdf

GTA 90-01-011 Joint FOB Survivability & Protective Construction Handbook (FOUO)
https://atiam.train.army.mil/soldierPortal/atia/adlsc/view/restricted/25001-1/GTA/90-01-011/9001011_TOP.HTM

TB 577 Sanitary Control and Surveillance of Field Water Supplies
http://armypubs.army.mil/med/dr_pubs/dr_a/pdf/tbmed577.pdf

TB 593 Guidelines for Field Waste Management
http://armypubs.army.mil/med/dr_pubs/dr_a/pdf/tbmed593.pdf

TC 3-22.20 Army Physical Readiness Training

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc3_22x20.pdf

TC 3-34.489 The Soldier and the Environment

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc3_34x489.pdf

UFC 3-560-01 Electrical Safety O & M (w/change 3)

http://www.wbdg.org/ccb/DOD/UFC/ARCHIVES/ufc_3_560_01_c2.pdf

[Forward Operating Base/Base Camp Safety Handbook](#) (FOUO)

[Call Handbook 04-11 Field Sanitation in Contingency Operations](#) (FOUO)

[Arc Flash Labels and Signage](#)

[Sample Base Ops Safety Checklist](#) (FOUO)

[Checklists](#)

[Electrical Safety & Overloaded Circuits](#) presentation gives examples of different types of electrical plugs, overloaded circuits, poor wiring and other electrical hazards.

Electric Current Abroad lists the characteristics of electric current available and the type of plug attachments used in over 150 countries. The booklet includes a table with the types of current (alternating or direct current), number of phases, frequency (hertz), and voltage, as well as the stability of the frequency and the number of wires to a commercial or residential installation.

<http://www.trade.gov/publications/pdfs/current2002FINAL.pdf>

External Insulated Temporary Structures (Foam-Insulated Tents)

<https://safety.army.mil/Portals/groundsafety/SAFETYPROGRAMS/EXTERNALINSULATEDTEMPORARYSTRUCTURESEITS/tabid/780/Default.aspx>

[Risk Management Worksheet Examples](#)

[The Train Smart Brochure](#) Provides sports and physical training-related injury information and prevention tips.

[Train Smart Poster](#)

[Waste Management Information](#)

Ground Guiding

Using ground guides is a good way to ensure vehicles are not traveling too fast for high-risk or heavily populated areas. Ground guides assist operators in identifying potential ground hazards, obstacles and personnel that they may not otherwise see. However, when personnel do not follow proper procedures, the consequences can be fatal.

To mitigate risks, follow the tips below.

- Train ALL unit personnel when to use a ground guide and how to execute ground-guiding procedures.
- Always use ground guides when:
 - ❖ backing and in congested areas
 - ❖ traveling cross-country during periods of limited visibility
 - ❖ in bivouac and assembly areas
- Always use two ground guides when vision is restricted (for example, when backing).
- Drivers must keep ground guides in view at all times. They must stop the vehicle if they lose sight of the ground guide.

Ground guides will:

- Use hand signals. Voice signals can be misunderstood or go unheard.
- Determine who is giving signals to the driver. Only one person gives commands to the driver.
- Use two flashlights or “chem-lights” (if bright enough) during limited visibility.
- Keep proper distance from the vehicle (10 yards).
- Stay out of the path of travel.
- Keep to the side and front (or rear) of the vehicle (preferably, the driver’s side).
- Stay in the driver’s line of sight.
- Never walk backwards or get between two vehicles.
- Clear themselves, then the vehicle, and then give the command to move the vehicle.

References and links

AR 385-10 - The Army Safety Program (Chapter 11)

https://armypubs.us.army.mil/epubs/pdf/r385_10.pdf

FM 21-60 Visual Signals (see Chapter 2)

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm21_60.pdf

TC 21-305-20 Manual for the Wheeled Vehicle Driver (Appendix A)

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/tc21_305_20.pdf

TC 21-306 Tracked Combat Vehicle Driver Training

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_c/pdf/tc21_306.pdf

Vehicle and Convoy Operations

Operating or riding in a vehicle continues to be the No. 1 injury-producing activity while deployed. The tactical vehicles Soldiers typically operate in theater are more reminiscent of a “tank” on wheels than a truck. Their increased height, weight, high center of gravity, and wide turning radius make them difficult to maneuver and susceptible to rollovers.

Tactical vehicles are often too tall to operate safely under overpasses, footbridges and overhead power lines, which are particularly hazardous to an exposed gunner. Driving too close to the shoulder or edge of the road can cause the road’s surface to collapse, putting the vehicle into a roll. This risk is even greater on unimproved roads or near canals or other bodies of water.

Ballistic windows, along with the vehicle’s size, can restrict the crew’s field of view making it difficult to judge vehicle clearance or to see people or obstacles on the ground.

The most common mistakes operators make are: driving too fast for conditions, abrupt/improper steering, misjudging clearance and driving too close to the edge of the road.

Not surprisingly, the gunner is the most at-risk crewmember since they are the most exposed. If they are not using an Army-approved Gunner Restraint System (GRS), the risk of them being ejected and injured or crushed during a blast, accident or abrupt maneuver increases greatly. Yet, many Soldiers continue to get injured, some of them fatally, because they failed to use Army-approved GRS or their seat belt.

Recovery and towing disabled vehicles is another area of concern. The most serious injuries occur when Soldiers are pinned between vehicles, struck by snapped cables or chains while standing too close, or during rollover accidents while towing a vehicle. Soldiers also have injured their backs, hands and feet while attempting to install or remove tow bars.

Doors, hatches, ramps, and the turret gear are also a source of pinching or crushing injuries for many Soldiers, particularly in mine-resistant, ambush-protected vehicles (MRAPs). Additionally, a number of Soldiers experience injuries when they jump, misstep or fall off of a vehicle. In some cases, they get a ring caught on something and are degloved or lose a finger.

Extreme operating temperatures, exposed wiring and electrical shorts, leaking fuel or oil

sources, malfunctioning/locked brakes and riding on flat/improperly inflated tires are factors that have resulted in vehicle fires. Vehicle fires can quickly get out of control and cause damage to equipment and injury to personnel.

Risk mitigation strategies:

- Leaders, operators and crewmembers must be familiar with the capabilities and limitations of their vehicles and understand their roles and responsibilities. Therefore, proper training is essential and will be specific for the model.
- Provide instruction on local driving customs and practices. Ensure crews are aware of flash flood dangers and actions to take.
- Establish and enforce safe speed limits for the road and environmental conditions such as blackout, sand/dust storms or other restricted visibility.
- Ensure operators have adequate rest before conducting a mission.
- Reinforce braking and downhill driving procedures with all personnel.
- Deliberate planning prior to every mission is key. Route reconnaissance is especially important for missions involving heavy vehicles, poorly maintained or unimproved roads, or uncertain terrain. Other things to consider are the size and weight of each vehicle, the capacity of bridges along the route, the type and width of road surfaces, the presence of low-hanging electrical wires and canals or other bodies of water. Leaders must brief this information to all personnel prior to the mission along with safe following distances and convoy and catch-up speeds for expected road and environmental conditions. When planning, allocate sufficient time for preventative maintenance checks and services (PMCS), pre-combat checks and inspections (PCIs), and rehearsals before every mission.
- Include recovery assets in the convoy or verify that they will be available upon request.
- Due to severe environmental conditions, ensure operators perform special requirements covered in the “Operating Under Unusual Conditions” section of their respective operators manual. Operators must perform a thorough after operations inspection once they complete the mission to check for any possible maintenance hazard, fire ignition sources and damage from the terrain or hostile engagements. Ensure fire suppressions systems are functional and the proper hand held extinguishers are present and serviceable.
- Ensure all prime movers and trailer brake systems are properly connected and operational.
- Rehearse rollover, emergency egress and rescue drills prior to each mission.

- Emergency exits should be clearly marked with luminous tape or “chem-lights.” Clearly marking exits will help Soldiers quickly find the nearest point of egress during an emergency in restricted visibility.
- Secure personnel and cargo - seat belts and gunner restraints save lives and prevent injury. Ensuring equipment is secured prevents items from becoming projectiles that can inflict injury while traveling on rough terrain or during an accident or explosive blast. Approved cargo netting is available through the Army supply system.
- Never place vehicles transporting troops, ammo or POL last in a convoy serial or march unit.
- Establish and mark designated sleeping/rest areas away from vehicle travel routes. Ensure vehicles are not parked where they can roll toward sleeping personnel or on an incline without chocks.
- Crew coordination and communication are critical. Each member of the crew plays a vital role in the safe operation of tactical vehicles and must be on the lookout for hazards – not only from the enemy, but also from the terrain around the vehicle. Continuous, relevant, clear communication among all occupants is a must.
- Ensure personnel wear the proper PPE, to include hearing and eye protection.

References and links

USACRC’s Motor Vehicle Accident Prevention Web page contains resources, guidance, tools and links pertaining to Army motor vehicle accident prevention.

<https://safety.army.mil/militaryvehiclesops>

USACRC’s Driver’s Training Toolbox assists commanders, examiners, and instructors in the management of driver’s training.

<https://safety.army.mil/drivertrainingtoolbox>

MRAP Safety Awareness Site contains videos, slide presentations, lesson plans and other materials that units can use to execute an effective hazard awareness program for MRAP operators and crewmembers. Materials highlight hazards unique to MRAPs and offer ways to mitigate the associated risks. <https://safety.army.mil/mrap>

CALL Handbook #04-27 Convoy Leader Training - Volume II is for Leaders conducting transport operations in support of Operation Iraqi Freedom (OIF). It focuses on planning and preparing for combat to counter Level I and II threats based on doctrine, TTPs, and experience gained from units participating in OIF.

<https://call2.army.mil/toc.aspx?document=106>

CALL Handbook #10-62 Convoy Operations in Afghanistan provides theater specific information and tips to assist Leaders in mission planning based on lessons learned. <https://call2.army.mil/toc.aspx?document=6257&tag=141>

CALL Handbook#06-31 UAH Rollover Prevention & Egress Training (FOUO)
<https://atiam.train.army.mil/soldierPortal/atia/adlsc/view/restricted/25229-1/ST/CALL06-31/06-31.PDF>

AR 385-10 The Army Safety Program (Chapter 11)
https://armypubs.us.army.mil/epubs/pdf/r385_10.pdf

AR 600-55 The Army Driver and Operator Standardization Program
https://armypubs.us.army.mil/epubs/pdf/r600_55.pdf

TC 21-305 Training Program for Wheeled Vehicle Accident Avoidance (INCL C-1)
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc21_305c1.pdf

TC 21-305-20 Manual for the Wheeled Vehicle Driver
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/tc21_305_20.pdf

TC 21-306 Tracked Combat Vehicle Driver Training
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_c/pdf/tc21_306.pdf

Warrior Task 551-001-1043 - React to a Vehicle Rollover
https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/stp21_1.pdf

GTA 07-09-001 MRAP FoV Emergency Rollover/Egress Procedures
<https://atiatest.train.army.mil/catalog/go/100.ATSC/0FC573C5-57EA-4442-8D74-F13DA01A0AAA-1277959635967>

GTA 17-08-002 Conduct Rollover Drill (M-1 Series) (FOUO)
<https://atiatest.train.army.mil/catalog/go/100.ATSC/64BB0A4A-0180-4A7D-8B56-B69B43067AFC-1300769902702>

GTA 17-08-003 Conduct Rollover Drill on a Mobile Gun System (FOUO)
<https://atiatest.train.army.mil/catalog/go/100.ATSC/DEA05C86-DE35-42E5-82C4-ECA3D90C7840-1300609404870>

[Winter Driving Presentation](#) this unit created presentation provides winter maintenance tips that will help operators keep their vehicles up and running. It also includes winter driving techniques and tactics.

[Supplemental emergency breathing device](#) information.

[Vehicle operation CRM worksheet examples](#) from units in the field.

Maintenance

When it comes to maintenance-related activities, the most serious (fatal) injuries occur when Soldiers are pinned/crushed between or under vehicles or equipment, burned during fuel handling operations or electrocuted while conducting maintenance operations. However, the majority of maintenance-related injuries occur when Soldiers:

- slip or fall from a vehicle or other elevation.
- are caught between or struck by a vehicle hood, hatch, door, or ramp.
- hands or fingers are struck by moving parts in the engine compartment (i.e., fan blades, belts, etc.).
- are struck in the face or eyes by debris, fluid, metal chips or other objects.
- lose their grip on objects or use improper lifting techniques.

To minimize these types of injuries follow these tips:

- Ensure areas are clear of obstructions and hazards.
- Make work platforms available when possible.
- When feasible, have personnel use fall protection when working at heights above six feet.
- Remind personnel to use safety pins and devices that secure hoods, hatches, doors and ramps. Stress the importance of situational awareness and communication between crewmembers.
- Institute procedures similar to lockout/tagout for operations involving hazardous machinery. Emphasize the need for clear and concise communication between work crewmembers.
- Conduct spot checks to ensure appropriate guards and barriers are in place.
- Make available and enforce the use of appropriate PPE to include safety goggles, face shields and gloves. Require Soldiers wear safety goggles anytime they are conducting maintenance or are in the maintenance shop or motor pool.
- Promote a positive safety climate. Develop metrics that measure positive, proactive safety behavior and institute a challenging but attainable awards program.

Here are a few other areas to consider:

Recovery Ops

- Never allow personnel to stand directly behind a moving vehicle or position themselves where they could be pinned or crushed.
- Do not allow personnel to ride in a disabled vehicle that is being towed.

- Ensure anyone handling recovery cables wears heavy leather gloves and eye protection.
- Remind personnel to stand clear of all cables under tension.
- Remind personnel to use the buddy system when removing and installing a tow bar.
- Reiterate and enforce safe towing speeds.
- Remind recovery personnel to use a braking vehicle when required by the TM.

Tire Repair

- Insist mechanics always use a tire cage when repairing split-rim wheels and that they keep their hands out of the cage when inflating tires.
- Remind personnel to use the proper tools and a 10ft.inflation hose on all tires.
- Reiterate the use of the buddy system when lifting, removing and installing tires.

Radiator

- Do not allow personnel to open the radiator cap when **hot!**
- Remind them not to place hands on the radiator or radiator hoses when **hot!**

Brakes

- Don appropriate PPE when using brake fluid.
- Make sure airlines are hooked-up correctly to the towed vehicle.

Fuel handling:

Grounding and bonding

- Check to ensure proper grounding and bonding procedures are in place and inspect equipment regularly.
- Remind personnel that hot, dry, dusty conditions contribute to generation of static electricity.
- Ensure personnel ground themselves by touching a large metal object before handling fuel hoses and nozzles.

Remind fuel operators to:

- Not wear nylon clothing – nylon builds up electrostatic charges.
- Wear fuel resistant or rubber gloves, protective clothing (flame retardant is preferred), rubber apron, and protective goggles. Hearing protection must always be available and used when necessary.

- Use explosion-proof flashlights when checking fuel levels. Never use lighters, open flames or unapproved flashlights. All of these have resulted in serious burn injuries and death.
- Ensure vehicles and radios are off during refuel operations.
- Bond the nozzle to the vehicle being refueled using a bonding cable or by touching the end of the nozzle to the filler neck.
- Not fill vehicles to full capacity (allow for expansion).
- Keep tank truck hatches open during refueling to allow vapors to escape and to close them immediately after refueling.
- Stay on the windward side to prevent being overcome by fuel vapors.

Keeping up with equipment safety issues is important. You can access important safety messages and alerts through the Army electronic product support site. In addition, know who your local logistics assistance representative (LAR) is, so you can contact them regarding equipment concerns or questions.

References and links

USACRC's Maintenance Safety Web page contains guidance, TTPs and other resources. <https://safety.army.mil/maintenance>

TACOM's Safety Messages and Alerts Web page (Safety First) has many resources such as Safety of Use Messages (SOUms), Ground Precautionary Messages (GPMs), Maintenance Advisory Messages (MAMs), and Field Alert messages. <https://tulsa.tacom.army.mil/Safety/serviced.cfm>

PS Magazine contains important maintenance safety information and directs articles toward the conditions that deployed Soldiers serve in. <https://www.logsa.army.mil/psmag/pshome.cfm>

AR 600-8-22 Military Awards (See paragraph 8-31)
http://armypubs.army.mil/epubs/pdf/R600_8_22.pdf

AR 750-6 Equipment Safety & Maintenance Notification System
http://armypubs.army.mil/epubs/pdf/R750_6.pdf

DA PAM 385-10 Army Safety Program
http://armypubs.army.mil/epubs/pdf/p385_10.pdf

DA PAM 750-1 Commanders' Maintenance Handbook
http://armypubs.army.mil/epubs/pdf/P750_1.pdf

DA PAM 750-3 Soldier's Guide for Field Maintenance Operations

http://armypubs.army.mil/epubs/pdf/p750_3.pdf

ATTP 4-33 Maintenance Operations

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/attp4_33.pdf

FM 5-424: Theater of Operations Electrical Systems (Chapter 8)

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm5_424.pdf

TC 9-237 Welding Theory and Application

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc9_237.pdf

Weapons Handling

Occurring all too often and topping the list of weapons safety issues are negligent discharges. The constant exposure to weapons in a deployed environment versus garrison increases the potential for Soldiers to become complacent and provides greater opportunities for negligent discharges to occur.

Negligent discharges most commonly occur when:

- cleaning, clearing or performing a functions check on their weapons.
- entering or exiting vehicles.
- retrieving, uploading, or emplacing weapons.
- following a change of mission, duty, or weapon's status.
- joking or playing around pointing a weapon at themselves or someone else.
- handling a foreign weapon they are unfamiliar with.
- Soldiers become distracted and fiddle with a weapon and unmindfully pull the trigger.

While not as prevalent, improper headspace and timing and accidental ricochet/shrapnel incidents are also a concern. As with negligent discharges, these mishaps are often a result of inadequate training, overconfidence, complacency and indiscipline.

Steps to reduce weapons handling risk:

- Create an awareness and incentives campaign.
- Partner with unit leaders to aggressively change the way Soldiers THINK about weapons safety!
 - T**reat every weapon as if it is loaded.
 - H**andle every weapon with care.
 - I**dentify the target before you fire.
 - N**ever point the muzzle at anything you don't intend to shoot.
 - K**eeep the weapon on safe and your finger off the trigger until you intend to fire.
- Assist Leaders in ensuring personnel have adequate training for their assigned weapons. Do not allow personnel to use weapons they are not trained on or that have not been inspected for serviceability.
- Ensure the source of ammunition is removed (magazine, belt, etc.) as one of the

first steps in clearing a weapon. Do not allow personnel to clean weapons with a magazine in the weapon.

- Ensure there is adequate command policy in place regarding authorized holsters. Avoid holsters that orient muzzles towards personnel.
- Ensure there is adequate policy regarding handling and use of foreign weapons and ammunition.
- Ensure Soldiers use the proper gauge. The M2 and M3 are not interchangeable.
- Remind Soldiers when firing an individual weapon from the gunner's station to ensure the muzzle has cleared the turret. A good way to do this is to have them put the barrel over the turret.

References and links

USACRC's Range and Weapons Safety Toolbox is a collection of resources units can use to establish and maintain an effective range and weapons safety-training program. Resources include materials such as regulations, training support packages, videos, posters, messages/alerts and links to other related sites.

<https://safety.army.mil/rangeweaponssafety>

USACRC's Weapons Posters Library includes a variety of on and off duty weapons and range safety posters that are designed to train, inform and communicates loss reduction through CRM.

<https://safety.army.mil/multimedia/POSTERLIBRARY/tabid/390/Default.aspx>

(select Ground Safety >> Weapons from dropdown)

USACRC's Weapons Videos Library includes both on and off duty weapons and range safety videos that are designed to train, inform and communicate loss reduction through CRM. <https://safety.army.mil/weaponsvideos>

AR 385-63 Range Safety

https://armypubs.us.army.mil/epubs/pdf/r385_63.pdf

DA PAM 385-63 Range Safety

https://armypubs.us.army.mil/epubs/pdf/p385_63.pdf

Safe Weapons Handling Procedures Pamphlet

<https://safety.army.mil/rwstoolbox/safeweaponshandling>

Ammunition and Explosives Storage and Handling

Some Leaders and Soldiers tend to think ammunition and explosives safety is for peacetime and is a low priority during theater operations. Actually, just the opposite is true. Ammunition assets and Soldiers are even more critical to mission accomplishment during combat.

Ammunition and explosives accidents most commonly occur when:

- dropping or inadvertently firing pyrotechnic flares while riding in vehicles.
- using .50 cal rounds as a hammer to seat the mounting pin on a M2.
- handling UXO.
- playing around and/or trying to modify or disassemble ammo or explosives.
- failure to release grenades or simulators prior to detonation.
- ammunition is stored in inappropriate/unauthorized areas.
- improper techniques are used such as the taping of grenades.

Most ammunition and explosives accidents are preventable. Failure to follow proper handling procedures and Soldiers not wearing the proper PPE are common mistakes. Inadequate training, lack of Leader involvement, and overconfidence are often cited as contributing factors in mishaps.

Steps to reduce the risk:

- Get to know the QASAS (Quality Assurance Specialist, Ammunition Surveillance), they can assist with ammunition and explosive issues.
- Create an awareness and incentives campaign.
- Collaborate with unit leaders to aggressively enforce discipline and proper handling of ammunition and explosives.
- Assist Leaders in ensuring personnel have adequate training for the ammunition and explosive devices they are using. Do not allow personnel to use devices they are not trained to handle or that have not been inspected for serviceability.
- When possible, all AMMO should be stored in its original packaging in a designated AMMO storage area (ammo holding area (AHA), ammo supply point (ASP), basic load storage area (BLSA), etc.).
- Ensure there is adequate command policy in place regarding storage procedures. Remember the cardinal principle of explosives safety: expose the MINIMUM amount of personnel, to the MINIMUM amount of explosives, for the MINIMUM amount of time.
- Make every effort should to comply with explosives safety requirements. If the

minimum explosives safety quantity distances, internally or externally, cannot be obtained then the situation calls for a Certificate of Risk Acceptance (CoRA). A CoRA replaces a waiver or exemption. You can also use a CoRA for other explosives safety deficiencies such as lack of lightning protection for ammunition storage or risk to mission capability (i.e. less than asset preservation distance).

- Engage Leaders in frequent risk assessments and inspections.
- Ensure Soldiers understand the 3 Rs of unexploded ordnance (UXO) – Recognize, Retreat and Report.

References and links

USACRC's Explosives Safety Web page contains publications, posters, videos, bulletins, related links and other information pertaining to ammunition and explosives safety.

<https://safety.army.mil/explosivessafety>

USACRC's Range and Weapons Safety Toolbox is a collection of resources used to establish and maintain an effective range and weapons safety-training program. The toolbox includes materials such as regulations, videos, posters, messages/alerts and links to other related sites. <https://safety.army.mil/rangeweaponssafety>

Defense Ammunition Center's Explosives Safety Toolbox contains tools, adaptable templates and documents, explosive safety site criteria and techniques, and other helpful information to improve the Army's overall explosives safety posture and unit readiness. <https://acc.dau.mil/CommunityBrowser.aspx?id=282919&eid=259077&lang=en-US>

Ammo HELP (Defense Ammunition Center) is a Web based system that allows users enter technical ammunition questions and in return, ammunition professionals answers the queries. <https://dac.jmc.army.mil/AmmoHelp/OpenAccess/AskQuestion.aspx>

DA PAM 385-64 Ammunition and Explosives Safety Standards

http://armypubs.army.mil/epubs/pdf/P385_64.PDF

DA PAM 385-65 Explosive and Chemical Site Plan Development and Submission

http://armypubs.army.mil/epubs/pdf/p385_65.pdf

FM 4-30.13 Ammunition Handbook: Tactics, Techniques and Procedures for Munitions Handlers https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/fm4_30x13.pdf

FM 4-30.51 Unexploded Ordnance Procedures

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/fm4_30x51.pdf

[TB 43-0250 Ammunition Handling, Storage and Safety](#)

EM 385-1-97 Explosives - Safety and Health Requirements Manual

<http://140.194.76.129/publications/eng-manuals/em385-1-97/toc.htm>

Laser Safety

Green lasers are high tech devices that are a very desirable element of a Soldier's kit. However, green lasers pose a serious hazard to the eye. They can cause instant, severe and irreversible damage to vision.

Green laser accidents most commonly occur when:

- traveling in vehicle convoys/patrols.
- approaching ECPs or traffic control points.
- Soldiers are playing around with lasers.

Steps to reduce the risk:

- Ensure laser operators are trained on how to use their assigned system and are familiar with laser hazards and the control measures to mitigate them, as listed in the operator's manual.
- Keep the laser on safe (batteries removed/safe cable disconnected) when not in use.
- Never intentionally point the laser in anyone's face unless it is an aggressor.
- Include proper laser use and safety precautions when briefing the rules of engagement (ROE) and escalation of force (EOF) procedures during patrol and convoy briefs.
- Ensure personnel exposed to laser beams wear laser eye protection.

Note: *In the event someone is injured, ensure the unit submits an accident report.*

References and links

U.S. Army Public Health Command Laser and Optical Radiation Web page

<http://phc.amedd.army.mil/topics/workplacehealth/lor/Pages/default.aspx>

Green Laser Safety Training (Presentation) (FOUO)

<https://safety.army.mil/rwstoolbox/greenlasersafetytraining>

MIL-HDBK-828A HB - Laser Safety on Ranges and in Other Outdoor Areas

<https://safety.army.mil/rwstoolbox/lasersafetyhandbook>

[Dazzler Laser Poster](#)

Accident Reporting

Timely and accurate accident reporting is critical any time a mishap occurs. What may seem like something minor or rare in your unit could actually be insight into a greater Army-wide trend or issue. Therefore, it is imperative that all accidents are investigated and reported.

Review hospital admissions and sick call logs, blotter reports, theater significant activities logs, TACOM maintenance accident/incident reports, etc., to assist you in identifying potential accidents. Ensure all recordable Army accidents are reported through the chain of command to the U.S. Army Combat Readiness/Safety Center (USACRC) – somebody's life could depend on it!

In the event of a ground or aviation class A or B accident, or a class C aviation accident (flight, flight related and aircraft ground), the first commander aware of the accident will immediately notify - through their chain of command - the immediate commander or supervisor of all personnel involved and the USACRC.

At a minimum, immediate notification to the USACRC will be accomplished via telephone - DSN: 558–2660/3410, commercial: (334) 255–2660/3410 using a DA Form 7306 for Ground accidents and a DA Form 7305 for Aviation accidents and incidents. See AR 385-10 and DA PAM 385-40 for follow-on and additional investigation and reporting requirements.

If the accident board or command responsible identifies the need for a safety-of-use, safety-of-flight or ground precautionary message issue, they will contact the USACRC immediately by telephone using the numbers listed above.

For questions concerning how to conduct an accident investigation or report the results, contact the USACRC Accident Advisors at the following:

Aviation:
Comm: (334) 255-3493
DSN: 558-3493
Email:
Safe.AviationAIA@conus.army.mil

Ground & Civilian:
Comm: (334) 255-2256
DSN: 558-2256
Email:
Safe.GroundAIA@conus.army.mil

Class A accident. An Army accident in which the resulting total cost of property damage is **\$2 million or more**; an **Army aircraft is destroyed, missing, or abandoned**; or an injury and/or occupational illness results in **a fatality or permanent total disability**. Note that unmanned aircraft system (UAS) accidents are classified based on the cost to repair or replace the UAS. A **destroyed, missing, or abandoned UAS will not constitute a class A accident unless replacement or repair cost is \$2 million or more.**

Class B accident. An Army accident in which the resulting total cost of property damage is **\$500,000 or more, but less than \$2 million**; an injury and/or occupational illness results in **permanent partial disability, or when 3 or more personnel are hospitalized as inpatients** as the result of a single occurrence.

Class C accident. An Army accident in which the resulting total cost of property damage is **\$50,000 or more, but less than \$500,000**; a nonfatal injury or occupational illness that **causes 1 or more days away from work or training beyond the day or shift on which it occurred or disability at any time** (that does not meet the definition of class A or B and is a day(s) away from work case).

Class D accident. An Army accident in which the resulting in total cost of property damage is **\$2,000 or more, but less than \$50,000**; a nonfatal injury or illness **resulting in restricted work, transfer to another job, medical treatment greater than first aid, needle stick injuries, and cuts from sharps that are contaminated from another person's blood or other potentially infectious material, medical removal under medical surveillance requirements of an OSHA standard, occupational hearing loss, or a work-related tuberculosis case.**

Class E aviation accident. An Army accident in which the resulting total cost of property damage is **less than \$2,000.**

Class F aviation incident. Recordable incidents are confined to **aircraft turbine engine damage because of unavoidable internal or external foreign object damage**, where that is the only damage (does not include installed aircraft auxiliary power units). These incidents will be reported using DA Form 2397-AB (Abbreviated Aviation Accident Report); check "F" in the "Accident Classification" block.

References and links

USACRC's Accident Reporting Web page provides guidance, forms, and tools to assist users in conducting accident investigations and reporting the results.

<https://safety.army.mil/accidentreporting>

AR 385-10 The Army Safety Program (Chapter 3)

http://armypubs.army.mil/epubs/pdf/R385_10.pdf

AR 600-34 Fatal Training/Operational Accident Presentations

http://armypubs.army.mil/epubs/pdf/r600_34.pdf

DA PAM 385-40 Army Accident Investigation and Reporting
http://armypubs.army.mil/epubs/pdf/p385_40.pdf

[Aerostat Accident Reporting Memo](#)

Telephonic Notification of Ground Accident DA Form 7306
<http://armypubs.army.mil/eforms/pdf/a7306.pdf>
<http://armypubs.army.mil/eforms/pureedge/a7306.xfdl>

Telephonic Notification of Aviation Accident/Incident DA Form 7305
<http://armypubs.army.mil/eforms/pdf/a7305.pdf>
<http://armypubs.army.mil/eforms/pureedge/a7305.xfdl>

Preparation Guide for Army Abbreviated Ground Accident Report
<https://safety.army.mil/AGARpreparationguide>

DA Form 285-AB Feb 09 U.S. Army Abbreviated Ground Accident Report (AGAR)
http://armypubs.army.mil/eforms/pdf/a285_ab.pdf
http://armypubs.army.mil/eforms/pureedge/a285_ab.xfdl

Preparation Guide for Army Abbreviated Aviation Accident Report
<https://safety.army.mil/AAARpreparationguide>

DA Form 2397 Abbreviated Aviation Accident Report (AAAR)
http://www.apd.army.mil/pub/eforms/pdf/a2397_ab.pdf
http://www.apd.army.mil/pub/eforms/pureedge/a2397_ab.xfdl

Use for ALL UAS ACCIDENTS

DA Form 2397-U Unmanned Aircraft System Accident Report (UASAR)
http://armypubs.army.mil/eforms/pdf/a2397_u.pdf
http://armypubs.army.mil/eforms/pureedge/a2397_u.xfdl

Redeployment

In the past, we experienced accident spikes 60-90 days before and after redeployment, but this is no longer the case. Integration programs and other countermeasures put in place based on lessons learned are paying off. However, that doesn't mean we should let our guard down. We must continue to use CRM during all phases of operations/activities and always execute tasks to standard - no short cuts!

There are still areas we can focus on in order to reduce injuries on and off duty. Soldier fitness and tasks units have not participated in since deployment, such as parachuting can put Soldiers at greater risk for an on-duty injury. Off duty, Soldiers are most at-risk for a serious injury in a vehicle/motorcycle, privately owned weapon or water-related accident. Alcohol is often a factor in these types off-duty accidents.

You don't need to wait until you get back. You can coordinate with the rear-detachment to set up a redeployment workshop with Family Readiness Groups (FRGs) prior to the command's return. The unit Safety representative can use the [Family Engagement Kit](#). Include Army Community Service (ACS); Family and Morale, Welfare, and Recreation (FMWR); Chaplains and Behavioral Health in the workshop.

- ACS has information and classes on issues such as finance, mental health and relationship issues.
- The FMWR system should provide free daycare for events like this. Involve FMWR in organizing Family weapons safety day. Educating spouses about guns will help cut down on negligent discharges.
- Bring in an expert to discuss the types of behaviors to watch out for and who to contact if spouse or Family members see any of them.
- Set up an AKO chat group so the Family members can contact each other and ask each other for advice or help.
- Get with FMWR and arrange Warrior Adventure Quest outings.

You can also ensure Leaders and Soldiers in your command are familiar with available [tools and programs](#). Leaders must remain engaged with their Soldiers, "battle buddies" need to continue to look out for each other back at home station, and Soldiers need to take personal responsibility for their actions – and be held accountable before an accident occurs.

On duty, ensure units recondition Soldiers before jumping back into a routine PT program. In addition, look at the missions/task units may be rusty at and ensure they conduct some type of refresher training no matter how mundane the task may seem.

References and links

TC 3-22.20 Army Physical Readiness Training

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/tc3_22x20.pdf

Prevention: Don't Get Sidelined...Train Smart poster

<https://usaphcapps.amedd.army.mil/HIOShoppingCart/viewItem.aspx?id=435>

Injury Prevention for Leaders Course

http://usaphcapps.amedd.army.mil/ptipt/ip_leadership/ip_leadership/launchpage.htm

USACRC's Off-Duty Safety Awareness Presentation is a 50-minute presentation designed to assist battalion level Leaders in educating Soldiers about off-duty hazards. The presentation comes complete with embedded videos and speaker notes, which can be modified to fit any presentation style or to reflect what's happening in any organization. <https://safety.army.mil/odsap2011>

Family Engagement Kit is a tool aimed at increasing Family awareness of factors that may lead to post-deployment accidents. This presentation provides an overview of some of the challenges that military families may face. It provides safety tips and information resources that you can use in an effort to keep you, your family and your Soldier safe. <https://safety.army.mil/family-engagement-kit>

Travel Risk Planning System (TRiPS) is an automated trip planning tool that incorporates the principles of CRM and facilitates a dialogue between supervisor and subordinate prior to privately owned vehicle (POV) travel. <https://safety.army.mil/trips>

USACRC's POV/POM Toolbox is a web-based program includes the CSA's 6-point program, a number of POV inspection checklists, tools for trip planning, accident trend analysis, Leaders' guides and options available to commanders in dealing with unsafe drivers. <https://safety.army.mil/pov-motorcycle-toolbox>

The Motorcycle Mentorship Program (MMP) provides Leaders with a plan that will assist them in establishing voluntary installation-level motorcycle clubs where less

experienced riders and seasoned riders can create an environment supportive of responsible motorcycle riding and enjoyment. This environment can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program. <https://safety.army.mil/MMP>

USACRC's Range & Weapons Safety Toolbox is a collection of resources used to establish and maintain an effective range and weapons safety-training program. It includes materials such as regulations, videos, posters, messages/alerts and links to other related sites. Also, contains information on privately owned weapons.

<https://safety.army.mil/rangeweaponssafety>

The BOSS Safety Factor is a presentation designed to build hazard awareness and encourage Soldiers to think safety during their off-duty hours, but not without a little fun. During the safety presentation, some of today's top comedians take a humorous look at the hazards of Army life. A great way to get safety messages through to even the toughest audiences. <https://safety.army.mil/boss>

The Peer-to-Peer Video Competition is hosted annually by the Army BOSS program and the USACRC to promote off-duty safety awareness. The competition begins on January 1st and ends June 30th each year. You can download competition videos from the USACRC Website and use them in safety presentations to add a bit of humor to your message. <https://safety.army.mil/peertopeer>

The Leader's Engagement Kit includes 12 tools that a Leader can use to engage Soldiers. The tools don't take much time, cost little or nothing and are easy to use. Each tool provides simple "how to" instructions along with any necessary checklist, aid or video example. <https://safety.army.mil/leader-engagement-kit>

The Accident Risk Assessment for Leaders is a tool that assists Leaders in identifying Soldiers who are the most at-risk for an accident. Leaders can also do a quick self-assessment to ensure they are engaged. Identifying and knowing who the at-risk Soldiers are is essential in preventing accidents.

<https://safety.army.mil/soldier-risk-assessments>

The Accident Risk Assessment for Individuals is a tool designed to help individuals assess their own risk level. This assessment can help Soldiers identify these risk factors and target areas where they can improve by making smart decisions.

<https://safety.army.mil/soldier-risk-assessments>

The Battle Buddy Risk Assessment is a tool to help individuals identify behavior patterns in their Battle Buddies that may increase the likelihood that they will end up having an accident. <https://safety.army.mil/soldier-risk-assessments>

The Water Safety Tool is an interactive community that links to useful water safety information to challenging and fun online activities. Challenge your friends, beat the high score and show off your skills by competing in the water safety challenges. <https://safety.army.mil/watersafety>

The Firearms Safety Techniques Tool is an interactive tool that provides useful information and challenging, fun online activities. Challenge your friends, beat the high score and show off your skills by competing in the safety challenges. <https://safety.army.mil/Firearm-Safety>

Reference Index

Army Regulations

[AR 11-35 Deployment Occupational and Environmental Health Risk Management](#)

[AR 385-10 Army Safety Program](#)

[AR 385-63 Range Safety](#)

[AR 600-8-22 Military Awards \(See paragraph 8-31\)](#)

[AR 600-34 Fatal Training/Operational Accident Presentations](#)

[AR 600-55 Army Driver and Operator Standardization Program](#)

[AR 690-11 Use and Management of Civilian Employees in Support of Military Contingency Operations](#)

[AR 750-6 Equipment Safety and Maintenance Notification System](#)

DA Pamphlets

[DA PAM 385-10 Army Safety Program](#)

[DA PAM 385-24 Army Radiation Safety Program](#)

[DA PAM 385-30 Mishap Risk Management](#)

[DA PAM 385-40 Army Accident Investigation and Reporting](#)

[DA PAM 385-61 Toxic Chemical Agent Safety Standards](#)

[DA PAM 385-63 Range Safety](#)

[DA PAM 385-64 Ammunition and Explosives Safety Standards](#)

[DA PAM 385-65 Explosive and Chemical Site Plan Development and Submission](#)

[DA PAM 690-47 DA Civilian Employee Deployment Guide](#)

[DA PAM 750-1 Commanders' Maintenance Handbook](#)

[DA PAM 750-3 Soldier's Guide to Field Maintenance Operations](#)

Field Manuals

[FM 3-04.15 Multi-service Tactics, Techniques, and Procedures for Tactical Employment of Unmanned Aircraft Systems](#)

[FM 3-04.155 Army Unmanned Aircraft System Operations](#)

[FM 3-04.300 Airfield and Flight Operation Procedures](#)

[FM 3-35 Army Deployment and Redeployment](#)

[FM 4-25.12 Unit Field Sanitation Team](#)

[FM 4-30.13 Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers](#)

[FM 4-30.51 Unexploded Ordnance Procedures](#)

[FM 5-19 Composite Risk Management](#)

[FM 5-424 Theater of Operations Electrical Systems \(Chapter 8\)](#)

[FM 6-22.5 Combat and Operational Stress Control Manual for Leaders and Soldiers](#)

[FM 21-10 Field Hygiene and Sanitation](#)

[FM 21-60 Visual Signals \(Chapter 2\)](#)

ATTPs

[ATTP 4-33 Maintenance Operations](#)

CALL Handbooks

[CALL Handbook #04-11 Field Sanitation in Contingency Operations](#) (FOUO)

[CALL Handbook #04-27 Convoy Leader Training Handbook - Volume II](#)

[CALL Handbook #06-31: UAH Rollover Prevention & Egress Training](#) (FOUO)

[CALL Handbook #10-62 Convoy Operations in Afghanistan Handbook](#)

GTAs

[GTA 07-09-001 MRAP FoV Emergency Rollover/Egress Procedures](#)

[GTA 90-01-011 Joint Forward Observation Base \(JFOB\) Survivability & Protective Construction Handbook](#)

[GTA 17-08-002 Conduct Rollover Drill \(M-1 Series\)](#) (FOUO)

[GTA 17-08-003 Conduct Rollover Drill on a Mobile Gun System](#) (FOUO)

TBs

[TB 43-0250 Ammunition Handling, Storage and Safety](#)

[TB 577 Sanitary Control and Surveillance of Field Water Supplies](#)

[TB 593 Guidelines for Field Waste Management](#)

TCs

[TC 3-22.20 Army Physical Readiness Training](#)

[TC 3-34.489 The Soldiers and the Environment](#)

[TC 9-237 Welding Theory and Application](#)

[TC 21-3 Soldier's Handbook for Individual Operations and Survival in Cold-Weather Areas](#)

[TC 21-305 Training Program for Wheeled Vehicle Accident Avoidance](#)

[TC 21-305-20 Manual for the Wheeled Vehicle Operator](#)

[TC 21-306 Tracked Combat Vehicle Driver Training](#)

Other references

[Aerostat Accident Reporting Memo](#)

[Approved Eye Protection](#)

[Army Guide to Staying Healthy](#)

[Checklists](#)

[Cold Weather Injuries Poster](#)

[Cold Weather Injuries Card](#)

[Dazzler Laser Poster](#)

[Deployment Health Card - Afghanistan](#)

[Deployment Health Guide - Afghanistan](#)

[Deployment Health Guide: A Soldier's Guide to Staying Healthy at High Elevations](#)

[Deployment Preventive Medicine Measures Presentation](#)

[Electric Current Abroad](#)

[Electrical Safety & Overloaded Circuits Presentation](#)

[EM 385-1-97 Explosives - Safety and Health Requirements](#)

[External Insulated Temporary Structures \(Foam-Insulated Tents\)](#)

[FORSCOM's Civilian Deployment Guide](#)

[Forward Operating Base/Base Camp Safety Handbook](#)

[Green Laser Safety Training](#)

[Heat Acclimatization Guidance](#)

[Heat: Are You Hydrated? Take the Urine Color Test \(Poster\)](#)

[Heat: Heat Can Kill Poster \(deployed\)](#)

[Heat Injury Prevention Pocket Guide](#)

[Heat: Sun Smart Card](#)

[Heaters Just the Facts](#)

[IMCOM Rail Safety Rules](#)

[MIL-HDBK-828A HB - Laser Safety on Ranges and in Other Outdoor Areas](#)

[Preparation Guide for Army Abbreviated Aviation Accident Report](#)

[Preparation Guide for Army Abbreviated Ground Accident Report](#)
[Risk Management Worksheet Examples](#)
[Safe Weapons Handling Procedures Pamphlet](#)
[SDDC's Safety Guidelines for Port Operations](#)
[TG 248 Guide for Deployed Preventive Medicine Personnel on Health Risk Management](#)
[TRADOC CRM-Heat Injury Prevention, Identification and Response Card](#)
[Train Smart Brochure](#)
[Train Smart Poster](#)
[UFC 3-560-01 Electrical Safety O & M \(w/change 3\)](#)
[Warrior Task 551-001-1043 - React to a Vehicle Rollover](#)
[Waste Management Information](#)
[Winter Driving Presentation](#)

Websites and pages

AMC's PS Magazine <https://www.logsa.army.mil>
Army Public Health Command Deployment Web page
<http://phc.amedd.army.mil/topics/envirohealth/Pages/default.aspx>
NIOSH Electrical Safety <http://www.cdc.gov/niosh/topics/electrical/>
SDDC Transportation Engineering Agency Web page <http://www.tea.army.mil/>
TACOM's Safety Messages and Alerts Web page
<https://tulsa.tacom.army.mil/Safety/serviced.cfm>
USACRC's Accident Reporting Web page <https://safety.army.mil/accidentreporting>
USACRC's Cargo Operations Web page <https://safety.army.mil/portops>
USACRC's Composite Risk Management Web page <https://safety.army.mil/crm>
USACRC's Electrical Safety Web page <https://safety.army.mil/electricalsafety>
USACRC's Explosives Safety Web page <https://safety.army.mil/explosivessafety>
USACRC's Fire Protection Web page <https://safety.army.mil/fireprotection>
USACRC's Ground Video Library Web page <https://safety.army.mil/groundvideos>
USACRC's Maintenance Safety Web page <https://safety.army.mil/maintenance>
USACRC's Motor Vehicle Accident Prevention Web page
<https://safety.army.mil/militaryvehiclesops>
USACRC's Poster Library Web page <https://safety.army.mil/posters>
USACRC's Tactical Safety Web page <https://safety.army.mil/tacticalsafety>

USACRC's Walking/Working Surfaces Web page

<https://safety.army.mil/slipstripsfalls>

Tools

Risk Assessment/Management

Ground Risk Assessment Tool (GRAT) <https://safety.army.mil/grat>

Travel Risk Planning System (TRiPS) <https://safety.army.mil/trips>

Leader, Battle Buddy and Individual Risk Assessments

<https://safety.army.mil/soldier-risk-assessments>

Vehicle Accident Prevention

POV/POM Toolbox <https://safety.army.mil/pov-motorcycle-toolbox>

Motorcycle Mentorship Program (MMP) <https://safety.army.mil/MMP>

Driver's Training Toolbox <https://safety.army.mil/drivertrainingtoolbox>

MRAP Safety Awareness Site <https://safety.army.mil/mrap>

Weapons, Ammo, and Explosives

Range & Weapons Safety Toolbox <https://safety.army.mil/rangeweaponssafety>

Firearms Safety Techniques Tool <https://safety.army.mil/Firearm-Safety>

DAC's Explosives Safety Toolbox

<https://acc.dau.mil/CommunityBrowser.aspx?id=282919&eid=259077&lang=en-US>

DAC's Ammo HELP

<https://dac.jmc.army.mil/AmmoHelp/OpenAccess/AskQuestion.aspx>

Engagement

BOSS Safety Factor <https://safety.army.mil/boss>

Family Engagement Kit <https://safety.army.mil/family-engagement-kit>

Leader's Engagement Kit <https://safety.army.mil/leader-engagement-kit>

Off-Duty Safety Awareness Presentation <https://safety.army.mil/odsap2011>

Peer-to-Peer Video Competition <https://safety.army.mil/peertopeer>

Water Safety Tool <https://safety.army.mil/watersafety>