

*USAREUR Pamphlet 385-15-2

Safety

Commander's Rail-Loading Checklist and Risk Assessment

18 July 2002

***This pamphlet supersedes USAREUR Pamphlet 385-15-2, 21 May 2002.**

For the Commander:

ANTHONY R. JONES
Major General, GS
Chief of Staff

Official:



MARILYN A. QUAGLIOTTI
Brigadier General, GS
Deputy Chief of Staff,
Information Management

Summary. This pamphlet provides checklists for conducting rail-loading operations and a generic rail-risk assessment. This pamphlet should be used with UP 385-15.

Summary of Change. This revision clarifies the responsibilities of the wagonmaster in table 2.

Applicability. This pamphlet applies to leaders who are planning or conducting rail-loading operations in USAREUR.

Forms. USAREUR and higher-level forms (printed and electronic) are available through the USAREUR Publications System (UPUBS).

Records Management. Records created as a result of processes prescribed by this pamphlet will be identified, maintained, and disposed of according to AR 25-400-2. File numbers and descriptions are available on the United States Army Records Management and Declassification Agency website at <http://www.rmda.belvoir.army.mil>.

Suggested Improvements. The proponent of this pamphlet is the Office of the Deputy Chief of Staff, Personnel and Installation Management (ODCSPIM) (AEAGA-S, 370-8084). Users may suggest improvements to this pamphlet by sending a DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the ODCSPIM, HQ USAREUR/7A (AEAGA-S), Unit 29351, APO AE 09014.

Distribution. A (UPUBS). This pamphlet is available only in electronic format.

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1. PURPOSE

The purpose of this pamphlet is to ensure that leaders who are planning or conducting rail operations in USAREUR incorporate safety into their plans and operations. This pamphlet should be used with UP 385-15.

2. REFERENCES

- a. UR 385-55, Prevention of Motor Vehicle Accidents.
- b. UP 385-15, Leaders Operational Accident-Prevention Guide.

3. EXPLANATION OF ABBREVIATIONS

b&b	blocking and bracing
EOD	explosive ordnance disposal
HN	host nation
MCT	movement control team
MILVAN	military-owned demountable container
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
ODCSPIM	Office of the Deputy Chief of Staff, Personnel and Installation Management, HQ USAREUR/7A
OIC	officer in charge
OSHA	Occupational Safety and Health Act
POL	petroleum, oils, and lubricants
UP	USAREUR pamphlet
UR	USAREUR regulation
USAREUR	United States Army, Europe
UXO	unexploded ordnance

4. CHECKLISTS AND TABLES

Commanders and other leaders who are planning or conducting rail operations will use the appropriate table (a through c below) to help them assess hazards and risks. The tables may be printed and filed with unit records to show that appropriate risk assessments have been completed. Paragraph 3 defines abbreviations used in the tables.

- a. Table 1, Preoperation Requirements.
- b. Table 2, Loading and Unloading Procedures.
- c. Table 3, Generic Rail-Risk Assessment.

Table 1 Preoperation Requirements	
ITEM TO CHECK	COMPLETED?
Commanders. Before beginning rail-loading operations, commanders will ensure--	
● Personnel conduct a risk analysis of the railroad site considering common risk factors.	
● Soldiers are briefed and instructed on safety standards and procedures.	
● The following safety equipment is available:	
a. Reflective vests.	
b. Flashlights or chemical lights for ground guides.	
c. Kevlar or OSHA-approved hardhats.	
d. Leather or work gloves (<i>not wool inserts</i>).	
e. Eye protection.	
f. Hearing protection.	
● The following supervisory personnel are available and qualified:	
a. OIC.	
b. NCOIC.	
c. Safety officer or NCO.	
● Trained ground guides are available.	
● Medical support is available at loading and unloading sites and medical support personnel know the most direct route to medical facilities.	
● Safety standards are monitored and enforced.	
● Soldiers are shown the location of high voltage lines.	
● Protection from cold or inclement weather (for example, warming tents) is provided.	
Train Commanders. Train commanders will ensure the following requirements have been met before rail loading or unloading:	
● Military units and organization personnel have been--	
a. Briefed on regulatory requirements before each rail movement.	
b. Made aware of unsafe conditions in the railhead area.	
c. Told to keep a safe distance from electric powerlines and systems in the workarea.	
● Supervisors are aware that--	
a. When powerlines are switched on temporarily for technical reasons--	
(1) Operations must cease.	
(2) The area must be cleared of personnel.	
(3) Operations will not resume until the appropriate railway authority (for example, <i>Deutsche Bundesbahn</i> in Germany) confirms that electricity has been shut off and grounded in the railhead area. (<i>Note: Electrified rail systems with overhead powerlines and feeder lines installed beside rail tracks carry 15,000 volts or more.</i>)	
b. While supplies are moved, escorts may not ride in freight cars or vehicles loaded on railcars.	
Transportation Officer or Representative. The transportation officer or designated representative will--	
● Coordinate with the responsible railway official and confirm that electric overhead powerlines have been shut off and grounded in the railhead workarea. Under no circumstances will operations start until confirmation is received.	
● Keep units informed of changing conditions.	
● Enforce the rules of conduct for ensuring safe operations.	
● Make soldiers aware of warning signs posted in the local workarea and affixed to railway equipment. Equipment with steps or stepladders extending higher than 2 meters above the rail surface will be avoided.	
Personnel. Personnel will--	
● Wear Kevlar helmets or OSHA-approved hardhats.	
● Wear leather or work gloves when handling chains, wire ropes, blocking, tools, or any other form of bracing material.	
● Be equipped with reflective vests and flashlights during darkness.	
● Not work or walk on top of unloaded vehicles without specific permission from the OIC or NCOIC. <i>This will apply even when no overhead line is installed above the tracks. Only the OIC or NCOIC may declare an area safe from electrical hazards.</i>	
● Be informed that the local transportation representative in charge of rail uploading or downloading is the only person authorized to inform HN supervisors when railcars may be moved. <i>The transportation representative will be the only person wearing a white armband.</i>	
Vehicle Operators. Vehicle operators will remove whip antennas from vehicles before entering a rail-loading site. <i>Antennas will not be remounted until vehicles are in the staging area away from electrical hazards.</i>	

Table 2	
Loading and Unloading Procedures	
ITEM TO CHECK	COMPLETED?
OIC or NCOIC. The OIC or NCOIC will ensure--	
• Support legs are lowered and tailgates and side braces are removed (if necessary) before loading or unloading operations.	
• Trash is cleared from the area before the train leaves.	
• Railcars are inspected before loading to ensure ice, snow, and dunnage are removed.	
Ground Guides. Ground guides will--	
• Use hand-and-arm signals (with flashlights after dark).	
• Not run or walk backwards or place themselves in a dangerous position between two vehicles. <i>UR 385-55 prescribes ground-guide requirements for various types of vehicles.</i>	
Train Commanders. Train commanders will lock the tracks and control the keys.	
HN Railroad Wagonmasters. HN wagonmasters must check equipment with traveling tubes or booms and ensure it is properly tied down.	
Commanders. Commanders will ensure personnel working at the railhead are briefed not to--	
• Be on the same railcar as a moving vehicle. <i>The only exception is when a second or third vehicle is being placed on a railcar capable of carrying two or three vehicles. The second and third vehicle will move forward only after the first vehicle has stopped completely.</i>	
• Ride in or climb on tanks, vehicles, and other equipment being transported by rail after the vehicles and equipment have been locked.	
• Enter equipment during stops.	
Compressed Gas Cylinders. Compressed gas cylinders will be secured in an upright position with safety caps on and separated from flammables (for example, POL, fuel blends).	
Vehicles. Vehicles will be secured by chock blocks and bracing that locks the sides. Commanders must ensure--	
• Vehicles are properly secured.	
• Gun barrels are locked and secured (confirmed by the OIC in the consignment note).	
• Railcars are returned well swept (after unloading) and nails and wire remnants are removed completely.	

Table 3 Generic Rail-Risk Assessment			
TASK	HAZARD	CAUSE	CONTROL MEASURE
Work at or around the railhead.	Electrical shock	Contact with high-tension overhead wires	<ul style="list-style-type: none"> ◆ Railhead commander will verify with MCT that overhead power is off and grounded before allowing any worker to approach the train. ◆ Workers will be briefed on how and when to stand on loaded vehicles. ◆ Do not install antennas on vehicles while on railhead. ◆ Establish a staging area for reinstalling antennas on vehicles.
	Being hit by a train	Falling under or in front of a moving train	<ul style="list-style-type: none"> ◆ All workers will be briefed to stay clear of railroad tracks and railcars until the train has been completely stopped and secured, and train blocking chocks are in place. ◆ Passengers will not disembark until cleared by the railhead commander.
	Fire or explosion	Ignition of POL products or explosives	<ul style="list-style-type: none"> ◆ Railhead commanders will brief all workers that smoking will be allowed only in designated smoking areas. ◆ Workers will not carry any flame or spark-producing devices into the railhead area. ◆ Railhead commanders will establish a spark- or flame-producing device turn-in point.
Remove b&b material and lower railcar siding from railcars.	Pinching or cutting of hands or fingers	<ul style="list-style-type: none"> ◆ Lack of working room between vehicle, railcar, tools, and b&b material ◆ Poor lighting 	<ul style="list-style-type: none"> ◆ Brief workers on the dangers of the operation. ◆ Ensure workers wear leather gloves while handling b&b material and removing the blocking material. ◆ Ensure ample lighting is available during periods of limited visibility.
	Eye damage or eye loss	Flying chips of blocking material, railcar, or nails	<ul style="list-style-type: none"> ◆ Ensure workers removing b&b material wear protective headgear and eye goggles. ◆ Ensure observers either wear goggles or stand back far enough to prevent injury.
	Head or body injury	<ul style="list-style-type: none"> ◆ Sudden release of tension of bracing cables or chain ◆ Striking body with railcar siding 	<ul style="list-style-type: none"> ◆ Ensure leather gloves are worn by workers. ◆ Ensure workers wear eye protection. ◆ Ensure warning is given when releasing cables or chains. ◆ Ensure protective headgear is worn. ◆ Use at least two workers to handle each side or end piece. ◆ Warn others when siding is being lowered.
	Nail in foot, leg, or hand	Nails or screws protruding from railcar or b&b material	<ul style="list-style-type: none"> ◆ All b&b handlers will wear leather gloves. ◆ Inspect railcars and b&b material before operations begin. ◆ Remove nails, screws, and other hazardous pieces immediately. ◆ Carefully hand b&b material with nails, screws, or other protruding metal to another worker, then place b&b material in a designated pile. ◆ Surround designated area for b&b material with engineer tape or another suitable device.

Table 3 Generic Rail-Risk Assessment--Continued				
TASK	HAZARD	CAUSE	CONTROL MEASURE	
Move vehicle onto or off railcars.	Pinched worker's hand or leg under moving vehicle	<ul style="list-style-type: none"> ◆ Worker still removing b&b material ◆ Loss of sight of ground guard ◆ Failure of driver to follow ground guide instructions 	<ul style="list-style-type: none"> ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Ground guide will ensure that all b&b material is removed and b&b workers are completely away from railcars before vehicles are moved. 	
	<ul style="list-style-type: none"> ◆ Being hit by moving vehicle ◆ Being pinched between two or more vehicles 	<ul style="list-style-type: none"> ◆ Loss of sight of ground guide ◆ Failure of driver to follow ground-guide instructions ◆ Worker not observing operation and surroundings 	<ul style="list-style-type: none"> ◆ Use reflective vests to ensure drivers recognize ground guides. ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Ground guide and driver will always maintain eye-to-eye contact. ◆ Only one ground guide will be in charge of each vehicle. ◆ Driver will automatically stop vehicle if eye-to-eye contact is lost. ◆ Ground guide will give halt signal if positioning is in question. 	
	◆ Vehicles dropping off railcar side	<ul style="list-style-type: none"> ◆ Ground guide losing sight of railcar edge ◆ Failure of driver to follow ground-guide instructions ◆ Spanners not being used 	<ul style="list-style-type: none"> ◆ Same as above. ◆ Ensure spanners are available and used between railcars for all wheeled and small vehicles. 	
	Workers or ground guides slipping or falling on walking surfaces	◆ Worker not observing operation and surroundings	◆ Rain-, ice-, or snow-covered walking surface	<ul style="list-style-type: none"> ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Remove ice or snow. ◆ Apply melting agent to surface. ◆ Brief workers on conditions and most slippery areas.
		Rain-, ice-, or snow-covered walking surface		◆ Ground guide and workers will not walk backwards or run.
	People falling from vehicles	Rain-, ice-, or snow-covered vehicle		<ul style="list-style-type: none"> ◆ Ensure ample lighting is available. ◆ Remove ice or snow. ◆ Brief workers on conditions and most slippery areas. ◆ Drivers maintain three-point contact. ◆ Workers will carry flashlights or chemical lights during periods of limited visibility.
Move vehicle up or down railhead ramp.	Vehicle falling from railhead ramp	<ul style="list-style-type: none"> ◆ Loss of sight between ground guide and driver ◆ Failure of driver to follow ground-guide instructions 	<ul style="list-style-type: none"> ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Driver will halt vehicle if there is loss of sight between driver and ground guide. ◆ Reflective vest will be worn by ground guide. 	
	Ground guide falling off ramp side	Ground guide walking backwards or running	<ul style="list-style-type: none"> ◆ Same as above. ◆ Ground guide will not walk backwards or run. ◆ Leaders will constantly monitor operation. 	

Table 3 Generic Rail-Risk Assessment--Continued			
TASK	HAZARD	CAUSE	CONTROL MEASURE
Move vehicle up or down railhead ramp (continued).	Ground guide being hit by vehicle	<ul style="list-style-type: none"> ◆ Ground guide too close to vehicle ◆ Driver not paying attention to ground guide 	<ul style="list-style-type: none"> ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Ground guide will maintain distance between vehicle and him- or herself at all times. ◆ Ground guides will wear reflective vests. ◆ Leaders will constantly monitor all operations.
Load or unload MILVANS and trailers onto or off railcars.	Pinching people between MILVANS, trailers, or other objects or railcar ends	<ul style="list-style-type: none"> ◆ Closeness of MILVANS and trailers ◆ Large number of MILVANS and trailers ◆ Difficulty controlling MILVANS or trailer movement while attached to crane 	<ul style="list-style-type: none"> ◆ Ensure ample lighting is available during periods of limited visibility. ◆ Maintain clear zone around MILVANS and trailers while being lifted. ◆ Ensure safety monitor is observing entire lifting procedure to warn workers if danger is detected. ◆ Establish warning sign, sound, or order and brief all workers on correct usage. ◆ Ensure that all work halts if <i>anyone</i> sounds danger warning alarm. ◆ Use guide ropes to assist in controlling MILVAN and trailer movement.
	Guide-rope handlers injured	Guide rope wrapped around hand, arm, or leg	<ul style="list-style-type: none"> ◆ Ensure guide-rope handlers are briefed on how to properly use guide ropes. ◆ Ensure workers do not wrap guide ropes around hands or arms. ◆ Ensure excess guide rope does not tangle around operator's foot or leg. ◆ Guide-rope handlers hold rope tightly. ◆ Ensure guide rope-handler lets go of rope if MILVAN or trailer starts spinning. ◆ Ensure guide-rope handlers wear leather gloves.
Conduct side loading or off-loading of vehicles.	Vehicles falling between railcars and platform	Gaps between train and platform, especially at ends of railcars	<ul style="list-style-type: none"> ◆ Avoid side loading if possible. ◆ Ensure spanners are available and used at gaps.
	People falling between railcars and platform	Gaps between train and platform, especially at ends of railcars	<ul style="list-style-type: none"> ◆ Same as above. ◆ Ensure workers are briefed on hazards. ◆ Ensure safety personnel closely monitor worker movement. ◆ Use the buddy system while moving through the workarea.

Table 3 Generic Rail-Risk Assessment--Continued			
TASK	HAZARD	CAUSE	CONTROL MEASURE
Use warm-up tent.	<ul style="list-style-type: none"> ◆ Tent catching fire ◆ People getting hurt or killed ◆ Loss of equipment 	<ul style="list-style-type: none"> ◆ Hot smokestack touching tent flaps or tent ◆ Hot pieces of soot landing on tent roof ◆ Improper procedures ◆ Improper fuel ◆ Fuel control turned up too high ◆ Fuel leak ◆ No working fire (AB) extinguisher ◆ Fire guard not in place of duty 	<ul style="list-style-type: none"> ◆ Smoke stacks must have two complete sections above tent opening. ◆ Three guy wires will be used. ◆ Tent flaps must be tied back. ◆ Checks for fuel leaks must be made hourly by a licensed fire guard. ◆ Fuel source must be positioned at least 5 feet from tent. ◆ Secondary containment must be available for fuel source and reserve fuel. ◆ A drip loop must be made in the fuel-source hose with a drip can placed below the loop. ◆ Reserve fuel will be at least 50 feet from tent. ◆ Reserve fuel storage area must have secondary containment. ◆ Reserve fuel area must be placarded. ◆ Reserve fuel area must have a designated fire point with a class B fire extinguisher.
	Carbon-monoxide poisoning	<ul style="list-style-type: none"> ◆ Exposure to carbon monoxide ◆ Incomplete combustion of fossil-burning fuels ◆ Defective heating devices ◆ Improper use of equipment ◆ Inadequate ventilation 	<ul style="list-style-type: none"> ◆ Brief workers on use of equipment. ◆ Maintain heating equipment properly. ◆ Use the proper fuel with the proper heater. ◆ Remove defective heaters from use. ◆ Ensure operators are properly licensed. ◆ Ensure there is adequate ventilation.
Conduct operations during hot weather.	Heat cramps	Heavy salt loss	<ul style="list-style-type: none"> ◆ Supervisor will monitor subordinates. ◆ Brief workers on symptoms. ◆ During emergency actions, replace lost salt through saline injection or solution administered by a competent medical authority.
	Heat exhaustion	<ul style="list-style-type: none"> ◆ Vascular collapse due to excessive salt loss ◆ Dehydration ◆ Excessive physical work 	<ul style="list-style-type: none"> ◆ Ensure sufficient water intake. ◆ Brief workers on symptoms. ◆ Ensure acclimatization. ◆ Elevate victim's legs. ◆ Move victim to cooler place. ◆ Assign light duty for 24 to 48 hours.

Table 3 Generic Rail-Risk Assessment--Continued			
TASK	HAZARD	CAUSE	CONTROL MEASURE
Conduct operations during hot weather (continued).	Heat stroke	<ul style="list-style-type: none"> ◆ High body temperature ◆ Loss of water or salt ◆ Excessive exposure to heat ◆ High temperature, exposure to the sun 	<ul style="list-style-type: none"> ◆ Ensure acclimatization. ◆ Ensure sufficient water intake. ◆ Ensure protection or shielding from excessive sun or heat. ◆ Provide cool meals instead of hot ones with the heaviest meal served later in the day. ◆ Revise work schedules and workload. ◆ Ensure close supervision. ◆ Identify personnel who are most likely to incur a heat injury. ◆ Lower body temperature by removing clothing and immersing victim in cold water, or sprinkle victim with water and fan the victim to hasten evaporation. ◆ Evacuate victim to a hospital immediately.
	Sunburn	Overexposure to the ultraviolet radiation of the sun	<ul style="list-style-type: none"> ◆ Ensure protection or shielding from excessive sun. ◆ Ensure the use of sunblock. ◆ Limit the time spent in direct sunlight.
Conduct operations during cold weather.	Hypothermia	<ul style="list-style-type: none"> ◆ Exposure to cold wind ◆ Temperatures between 30 and 50 °F 	<ul style="list-style-type: none"> ◆ Stay dry. ◆ Cover head, neck, body, and legs. ◆ End exposure to or get out of wind and rain.
	Frostbite	<ul style="list-style-type: none"> ◆ Skin exposed to extreme cold ◆ Exposure to cold for long periods ◆ Lack of leadership ◆ Lack of experience 	<ul style="list-style-type: none"> ◆ Brief workers on the situation. ◆ Brief workers on cold-weather-injury symptoms. ◆ Wear dry clothing in layers. ◆ Protect hands and feet with proper equipment. ◆ Do not stand in wet areas.
	Chill blains	<ul style="list-style-type: none"> ◆ Exposure to cold over long periods ◆ High humidity 	<ul style="list-style-type: none"> ◆ Reschedule work to allow rotation of workers in and out of the cold. ◆ Provide workers adequate warming areas.
	Immersion/trench foot	Exposure to water for more than 12 hours	<ul style="list-style-type: none"> ◆ Ensure schedule allows workers to rotate to a warming tent frequently.

Table 3 Generic Rail-Risk Assessment--Continued			
TASK	HAZARD	CAUSE	CONTROL MEASURE
Conduct operations during cold weather (continued).	Carbon-monoxide poisoning	<ul style="list-style-type: none"> ◆ Exposure to carbon monoxide ◆ Incomplete combustion of fossil-burning fuels ◆ Defective heating devices ◆ Improper use of equipment ◆ Inadequate ventilation 	<ul style="list-style-type: none"> ◆ Brief workers on use of equipment. ◆ Maintain heating equipment properly. ◆ Use the proper fuel with the proper heater. ◆ Remove defective heaters from use. ◆ Ensure operators are properly licensed. ◆ Ensure adequate ventilation exists.
Conduct all operations.	Explosion from UXO	Soldier carrying UXO in gear or vehicle	<ul style="list-style-type: none"> ◆ Provide amnesty boxes at all railheads. ◆ Brief soldiers on UXO and provide EOD telephone numbers to soldiers.