



A railroad crew member observes a vehicle that fell between railcars during loading because the spanners were not secure.

Staying on Track With Military Rail

Movement by rail can be hazardous, so railroad crews must follow safety procedures to prevent accidents.

■ By Howard J. Mayhew

The military's use of the railroad system began during the Civil War, and it is still a vital part of sustaining the warfighter today.

Rail is the primary way that the military moves large quantities of equipment and ammunition. Rail transport has proven itself capable of supporting war efforts over many decades. However, movement by rail can be hazardous, which is why safety is paramount during railroad operations.

To mitigate risk, the Army has a number of rail publications that gov-

ern the management of rail equipment, operations, air brakes and train handling, rail safety, railroad maintenance, track safety, and tie-down procedures for rail movements. All of these publications are driven by Army Techniques Publication 5-19, Risk Management.

Military rail comprises four major areas that contribute to its success: track maintenance, railcar and locomotive repair, rail loading operations, and train and engine operations. The rail operations program could fail if all four of these areas did not work as a team.

Track Maintenance

In accordance with the Code of Federal Regulation, Title 49, Part 214, maintenance of way personnel must protect themselves while working on railroad tracks to prevent accidents, injuries, or fatalities. They must follow on-track safety procedures to ensure worker protection and to prevent a train or runaway railcar from entering their work zone.

In recent accidents resulting in injuries and fatalities, roadway worker protection was not enforced. One such accident closed an installation's railway for more than 30 days and

proved detrimental to the mission.

Mission failure can lead to catastrophic consequences that include derailments, washouts, and grade crossing incidents that could cause injury and damage to equipment or close the tracks to traffic.

Railcar and Locomotive Repairs

When personnel are conducting maintenance on a locomotive or railcar, special care must be exercised.

General Code of Operating Rules, rule 5.13, outlines the requirements for protecting personnel who are inspecting, testing, repairing, and servicing rolling equipment. In particular, because these tasks require work on, under, or between rolling equipment, workers are exposed to potential injury from moving equipment.

Locomotives use sand for traction, so part of the duties of a locomotive mechanic is to replenish the sand receptacles on board. These sand receptacles, such as ones on the GP10 locomotive, are located in the rear, approximately 15 feet above the ground.

It has been a common practice for locomotive mechanics to lift 80-pound bags of sand to the top of the locomotives to fill the receptacles. The personnel performing this task should use fall arrest or fall protection while working to help prevent accidents. The preferred method for lifting sandbags is to use a sand hopper that operates off the locomotive's air system.

Rail Loading Operations

Rail loading operations require coordinated teamwork and attention to detail. Both Soldiers and civilians load and secure equipment on railcars. All personnel must be properly trained prior to the loading operation.

Proper spanners (platforms for bridging gaps between railcars) must be used. Personnel must ensure the spanners are secure and in the correct position. There have been occurrences in which a spanner slipped off

and the vehicle being loaded fell between or off the railcar. This resulted in property damage and drastically slowed down the operation.

In other accidents, railcars were en route to a port of embarkation or debarkation when the vehicles became unsecured, up-armored doors came open, and secondary loads became unsecured, causing damage to railway signals and passing trains.

The keys to a successful loading operation are making safety the first priority and being familiar with all of the publications that reference loading operations.

Train and Engine Operations

One of the most vital parts of train operations is the train operating crew. This crew usually consists of a locomotive engineer, a conductor, and a brakeman. Their jobs have many hazards associated with them, so they must be alert and follow all proper procedures to prevent accidents.

Trends show most accidents are from runaway railcars. In fact, in the past few years, numerous incidents have involved runaways. In one case, a runaway DODX railcar loaded with two M1 Abrams tanks proceeded six miles at approximately 86 miles per hour before it derailed at a split-point derail, which prevented the railcar from entering the mainline. Although no injuries occurred, the cost of the accident was estimated at \$5 million. Properly applying hand brakes and chocking railcars could have prevented these accidents.

There have also been several accidents at railroad crossings involving motor vehicles and trains that have resulted in injuries and property damage. Most of these accidents could have been prevented if the train crew and vehicle operators were following proper procedures.

Preventive Measures

To reduce rail accidents, the Transportation Regimental Safety Office of the Combined Arms Support Command, the Joint Munitions Command, the Army Sustain-

ment Command, the Military Surface Deployment and Distribution Command, and the Army Combat Readiness Center have partnered to conduct rail safety assistance visits.

These visits identify safety concerns and enable installations to address them before they contribute to an accident. During these visits, an Army rail safety specialist can present the Rail Safety for Safety Professionals Course. This course teaches attendees to identify safety concerns that could affect rail operations.

The course can be requested by organizations that oversee military rail operations. Organizations can schedule this training by contacting the Transportation Regimental Safety Office.

According to Technical Manual 4-14.21, Rail Safety, the Transportation Regimental Safety Office investigates accidents. Notifications and investigations are used to identify problem trends in order to develop accident prevention methods for the entire Army rail community. Accidents can be reported by contacting usarmy.lee.tradoc.mbx.rail-safety@mail.mil.

Rail is a vital part of the military's deployment process. All rail operations must be conducted in a safe manner to avoid injuries to Soldiers, equipment damage, and mission disruption.

Personnel avoid accidents by planning properly, paying attention to detail, following proper procedures, and incorporating the risk management process into all aspects of rail operations. Conducting safe operations ensures the sustainment of our warfighters and keeps military rail on track.

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