

LESSON PLAN: CONDUCT RAIL LOAD OPERATIONS

Action: Conduct Unit Rail Load Operations Training in a Dynamic and Complex Environment

Conditions: The unit is deploying and must transport its equipment by rail. The rail site has been designated, and the company commander has been advised to coordinate rail loading operations with the Installation Transportation Office (ITO) and the battalion staff. The unit movement officer (UMO) is certified and is familiar with the unit's equipment and organization. The UMO has established liaison with the ITO, and a unit movement coordinator (UMC) has been assigned. A railroad representative is available, and the cars have arrived on site. Rail load teams are fully trained. Military regulations and related publications are available, including the Surface Deployment and Distribution Command/Transportation Engineering Agency (SDDC /TEA) Tie-down Handbook for Rail Movement. Higher HQ and unit RSOPs are available, as well as the operations order (OPORD) for deployment. This task should not be trained in MOPP 4.

Standards:

- On order, the unit conducts rail load operations, loading all assigned and attached vehicles and equipment at the established location and within the time allotted.
- The UMO maintains liaison with the UMC, who assists in appropriating support from outside civil and military organizations, including the railroad.
- The battalion staff provides assistance as required in the acquisition of local logistics support.
- The unit coordinates all support at the railhead with the UMC, battalion staff, and other agencies as required.
- During loading operations, the unit properly loads and secures its equipment aboard the rail cars in accordance with SDDC/TEA MI Pamphlet 55-19, American Association of Railroads (AAR) loading rules, local, or host nation regulations if appropriate.

Lesson Step / Activity (LSA) and Assessment:

- There are three LSAs (Plan, Prepare and Execute) to support the instructional methodology of this lesson plan and are the sequential actions that the applicable unit rail load operation members must demonstrate to perform a supported objective to an established standard. These specifications are the foundation for the lesson.
- To obtain a T or T- in the assessment, it must be conducted in a dynamic and complex environment with 4 plus Operational Environment (OE) variables and a hybrid threat at night with 75% or more leaders present, greater than 80% of Soldiers present, receive a "GO" on 80% or more of the performance measures, all the critical performance measures and at least 80% "GO" on the leader performance measures. Must be conducted during an external evaluation.

Notes:

- For this Lesson Plan, an Army leader is defined as a Soldier who is in an officer, warrant officer, or noncommissioned officer (NCO) position designated by grade, paragraph, and title on the units Table of Organization and Equipment (TOE). Leaders also include subject matter experts (SME) who possess the knowledge and skills required to perform a specified task that supports or constitutes an element of this collective task. Leaders may also be personnel otherwise assigned to the unit and designated as leaders by the unit commander.
- Training begins upon notification of the task. Training ends when designated training objectives for the particular training events or exercises are performed to Army standard. Unit leadership should conduct an after-action review (AAR) to determine future training requirements for the unit.
- Appointment orders and training certificates for the UMO and unit rail load teams are maintained in the unit's deployment binder.

Downloads:

- [Download TC 4-13.17 Cargo Specialists Handbook](#)

- [Download MI 19 Tiedown Instructions for Rail Movements \(CAC required & have to request permission at site\)](#)
- [Other Various Transportation Engineering Publication Links - All Items \(CAC required & have to request permission at site\)](#)
- [Sample Rail Training Support Plan](#) (contained in the Reference tab)
- [American Association of Railroad \(AAR\) Open Top Loading Rule \(OTLR\) Library. Select Section 6 Rules for Loading Military Equipment and Materiel](#)
- [551-88A-9067: Coordinate Home Station Activities TE&O \(review applicable Rail Individual Supporting Tasks\) • TM 4-14.21 Rail Safety](#)
- [Rail Safety and Rail Virtual Training Course Tabs located at the CASCOM ASRP](#)
- [Hand and Arm Signals Check on Learning Tab located at the CASCOM ASRP](#)
- [Rail Head Safety Tab located at the CASCOM ASRP](#)

Safety Risk: Low

Task

Cue: The deploying unit's vehicles and equipment are en route via rail to a given destination. The unit commander has designated an OIC, NCIOC, Safety Officer, and selected unit members to execute the Rail Load Operation, which is directed to off-load the unit's equipment upon arrival, and stage it for onward movement.

DANGER

Notice should alert users to the possibility of immediate death or permanent injury. Although damage to equipment may occur, the major concern is the probability of death or permanent injury if the warning is ignored.

CAUTION

Notice should alert users to the possibility of personal injury or damage to equipment that may result from long-term failure to follow correct procedures.

WARNING

Notice should alert users to the possibility of immediate personal injury or damage to equipment.

Performance Steps and Measures

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps **NOTE:**

Assess task proficiency using the task evaluation criteria matrix.

+ 1. The Unit Movement Officer (UMO) prepares the unit rail load requirement using the Unit Deployment List (UDL) in TC-AIMS II.

Note: The rail movement requirement includes all vehicles and equipment to be moved, the number and type of containers required, and the type and amount of blocking, bracing, packing, crating, and tie-down materials needed.

- a. The battalion movements section or brigade Movement Warrant Officer (MWO) assists the UMO in validating the requirement.
- b. The UMO forwards the requirement to the Installation Transportation Office (ITO) for QA/QC and validation.
- c. Once the requirement is validated, the ITO sends the validated rail requirement to SDDC for booking.
- d. The unit Commander designates the Rail Operation OIC, NCIOC, Safety Officer and ICCW the Unit 1SG, will identify unit members that will conduct the Rail Load/Offload Operation.
- e. The Unit Rail Opns OIC with the Unit UMO will conduct a recon of the site with the ITO/MCT representative to confirm the usable on hand facilities and resources and identify any operational shortfalls that exist.
- f. The OIC with the Unit UMO will coordinate with the respective organizations (HHQ/ITO/LRC/etc) to resource the earlier identified shortfalls at the rail operations site.
- g. The OIC will with the Unit UMO will coordinate 'refresher training' at the rail operations site for the unit members that have been identified as the rail load/offload team(s) to ensure they have a current understanding of the operation and the required local TTP's required for mission success.
- h. The Unit members identified to execute the Rail Load/Offload Operation will conduct a Rehearsal of Concept (ROC) drill as a back brief to the unit commander confirming to the commander that the Mission has been planned and any shortfalls mitigated with external support requests.

Note: If the unit is outside the Continental United States (OCONUS), a movement control team (MCT) performs the functions of the ITO in all movements.

Safety: In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine. See ATP 5-19.

Downloads:

- [Download ATP 5-19 Risk Management](#)
- [Other Various Transportation Engineering Publication Links - All Items \(CAC required have to request permission at site\)](#)
- [551-88A-1317 Manage Rail Head Operations](#)
- [Fort to Port Rail Briefing contained in the References Tab](#)
- [Unit Movement Officers \(UMO\) Handbook in the References Tab](#)

- [Rail DRRF Safety Briefings contained the References Tab](#)
- [UMODPC Rail Load Training located the CASCOM ASRP](#)

LSA-2: Prepare Rail Load Operations

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps

+ 1. Selected unit personnel conduct the site inspection and preparation with the ITO/MCT staff.

- Inspects the site to determine what additional support will be required.
- Ensures the site is clean and free of debris.
- Inspects the loading ramps for serviceability or coordinate ramp maintenance and/or construction if required.
- Inspects on hand equipment (spanners, wrenches, etc) for serviceability and number required for the scale of the operation.
- Coordinates site support and set-up.

(1) Mission command facilities, warming tents, rations and beverages, communications, and a medical aid station.

(2) Equipment staging area.

(3) Maintenance support area.

(4) Generators and light sets.

(5) Disconnection of power to overhead electric wires, if applicable.

(6) Site security.

+ 2. The unit coordinates material support with the battalion S4.

Note: If the movement is part of a battalion movement, logistic support may be provided by either a sister unit or the Logistics Readiness Center (LRC).

- Material and container handling equipment (MHE/CHE).
- A crane capable of lifting the heaviest vehicle or equipment item, either on site or on call. c. A wrecker on site or on call.
- Fuel/defuel assets on site or on call.
- Medical evac vehicle(s)

+ 3. Selected unit personnel and the ITO/MCT conduct an inspection of rail cars with the railroad representative.

Note: The UMO may be present for this inspection.

- Ensure rail cars are free of foreign matter or residue from previous use.
- Ensure chains are present and serviceable on flatcars that are so equipped.
- Ensure that all wood decking is intact and serviceable.

Note: The installation transportation officer (ITO) is the point of contact in CONUS and MCT is the point of contact in the theater and OCONUS.

- UMC provides the rail representative with the plan for spotting the cars.

e. UMC requests car brakes to be applied and trucks chocked as the cars are spotted.

+ 4. The unit commander, designated unit leaders, UMO, and the OIC/NCOIC conduct railhead pre-operations checks. a.

Ensure proper preparation of equipment for transport.

(1) BBPCT is on hand with the required tools to facilitate securing unit equipment for rail transport..

(2) Hazardous material (HAZMAT) compatibility.

(3) Documentation.

(4) Securing secondary loads.

(5) Reducing oversized loads.

(6) Weight distribution.

(7) Placement of labels, placards, and RF-ID tags.

b. Check vehicles to ensure all shackles and pins are attached and serviceable.

c. Check fuel levels on all vehicles (maximum three quarters full).

d. Check fuel levels on trailer mounted equipment (maximum half full).

e. Inspect all wheeled vehicle tires to ensure inflation to required standards.

f. Ensure that no vehicles and trailers exceed height and weight restrictions as determined by Army or local government regulations or policy.

g. Inspect blocking and bracing materials.

h. Sequence vehicles in the staging area for loading.

i. Ensure that vehicles parked in the staging area are properly secured with chock blocks and equipped with drip pans.

j. Ensure that all personnel are properly licensed or certified for their assigned duties.

k. Ensure security is established at all operational sites.

l. Confirm that electric overhead power lines are disconnected in the rail head work area, if applicable.

m. Ensure that the railhead is properly marked to prevent collisions with moving trains.

n. Verify the presence of a safety officer or safety NCO on site.

o. Confirm on-site communications and medical support.

p. Maintain copies of TEA Pamphlet 55-19 on site for supervisor use.

q. Verify maintenance crew has oil on hand to free frozen locking devices.

r. Ensure hard hats are available in the visitors' area.

s. The unit commander conducts a risk assessment before beginning operations.

+ 5. Unit leaders conduct inspection of personnel prior to loading.

a. Inspect personnel protective equipment (leather gloves, hard hat or helmets, eye protection, high vis belt or vest, and safety boots).

b. Ensure that all personnel are appropriately dressed for current weather conditions.

+ 6. OIC/NCOIC briefs unit personnel prior to starting operations.

a. Briefs personnel on hand and arm signals.

b. Directs personnel:

(1) Use the steps provided or access the rail car using an adjacent rail car or the loading ramp.

(2) Do not jump off the rail cars.

(3) Do not crawl under the rail cars.

(4) Do not step between the rail cars or step on the rails.

(5) Do not to move vehicles on the cars without a ground guide.

(6) Do not walk backward on the cars.

(7) Do not stand or walk between a moving vehicle and a parked vehicle on the cars or in the loading area.

(8) Ensure vehicle engines are turned off and hand brakes are applied before securing the vehicle to the rail car.

(9) Use authorized tools and use them only for the purpose for which they are designed.

(10) Be alert for any unsafe actions or situations, and immediately call a halt to operations if an unsafe situation or action is observed.

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Execute

- + 1. The rail opns OIC/NCOIC supervises rail loading operations.
 - a. Calls vehicles forward to ramp.
 - b. Enforces rules of conduct for safe operations.
 - c. Stations the unit rail load teams.
 - d. Ensures drivers obey the guides' hand and arm signals.
 - e. Verifies that guides set the spanners to the wheel width of the vehicle being loaded.
 - f. Ensures spanners are secured to each car to prevent movement as equipment is loaded.
 - g. Maintains proper brake wheel clearance.
 - h. Confirms accountability of all vehicles and containers as they are loaded.
 - h. Submits operational and situation reports as required.

- + 2. The rail team loads and secures vehicles to the cars.
 - a. Positions and secures spanners between cars.
 - b. Ensures the spanners are secured to each car.
 - c. Guides vehicles onto the rail cars in accordance with applicable standards.
 - d. Maintains proper brake wheel clearance.
 - e. Chocks or blocks and ties down all vehicles and containers in accordance with applicable standards.
 - f. Verifies all nested cargo is properly secured.
 - g. Secures tarpaulins over vehicles and equipment, if required.
 - h. Conducts a final walk through with the rail ops OIC/NCOIC to inspect the load.

Downloads:

- [551-88H-4000 Review Rail Plan for Loading/Unloading Cargo](#)
- [551-88H-2016 Validate Dangerous Cargo for Rail Transport](#)
- [551-88H-2000 Inspect Blocking/Bracing Materials Required for Rail Movement](#)
- [551-88H-2001 Conduct Rail Loading Operations](#)
- [551-88H-4301 Review Rail Plan for Loading/Unloading Cargo](#)
- [551-88N-2018 Conduct Reception, Staging, Onward Movement, and Integration \(RSO&I\) Operations](#) • [551-88H-1302 Load Vehicles on Flatcar](#)