STP 55-88H14-SM-TG
February 2015

Soldier's Manual and Trainer's Guide

MOS 88H

Cargo Specialist

SKILL LEVELS 1, 2, 3, and 4

HEADQUARTERS, DEPARTMENT OF THE ARMY

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TABLE OF CONTENTS

PAGE

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PREFACE

This publication is for soldiers holding military occupational specialty (MOS) 88H skill levels (SL) 1, 2, 3, and 4, trainers and first-line supervisors. It contains standardized training objectives, in the form of task summaries, to train and evaluate soldiers on critical tasks that support unit missions during wartime. Trainers and first-line supervisors should ensure soldiers holding MOS 88H SL1, SL2, SL3, and SL4 have access to this publication. This STP is available for download from the Central Army Registry (CAR) at https://rdl.train.army.mil/catalog/#/dashboard.

This manual applies to both Active and Reserve Component soldiers.

The proponent of this publication is the United States Army Training and Doctrine Command (TRADOC). Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, CASCOM SCOE (ATCL-TDM), G-3/5/7 Training Development Directorate, TDD, 2221 Adams Avenue, Fort Lee, VA 23801-2102.

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CHAPTER 1

Introduction

1.1 General

The soldier training publication (STP) identifies the individual military occupational specialty (MOS) training requirements for soldiers in various specialties. Another source of STP task data is the Central Army Registry (CAR) at https://rdl.train.army.mil/catalog/#/dashboard. Commanders, trainers, and soldiers should use the STP to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference to support the self-development and training of every soldier in the unit. It is used with the Soldier's Manual of Common Tasks, Army Training and Evaluation Program (ARTEP) products, and ADRP 7-0, Training Units and Developing Leaders, to establish effective training plans and programs that integrate soldier, leader, and collective tasks. This chapter explains how to use the STP in establishing an effective individual training program. It includes doctrinal principles and implications outlined in ADRP 7-0. Based on these guidelines, commanders and unit trainers must tailor the information to meet the requirements for their specific unit.

1.2 Training Requirement

Every soldier, noncommissioned officer (NCO), warrant officer, and officer has one primary mission — to be trained and ready to fight and win our nation's wars. Success in battle does not happen by accident; it is a direct result of tough, realistic, and challenging training.

a. Operational Environment.

(1) Commanders and leaders at all levels must conduct training with respect to a wide variety of operational missions across the full spectrum of operations. These operations may include combined arms, joint, multinational, and interagency considerations, and span the entire breadth of terrain and environmental possibilities. Commanders must strive to set the daily training conditions as closely as possible to those expected for actual operations.

(2) The operational missions of the Army include not only war, but also military operations other than war (MOOTW). Operations may be conducted as major combat operations, a small-scale contingency, or a peacetime military engagement. Offensive and defensive operations normally dominate military operations in war along with some small-scale contingencies. Stability operations and support operations dominate in MOOTW. Commanders at all echelons may combine different types of operations simultaneously and sequentially to accomplish missions in war and MOOTW. These missions require training since future conflict will likely involve a mix of combat and MOOTW, often concurrently. The range of possible missions complicates training. Army forces cannot train for every possible mission; they train for war and prepare for specific missions as time and circumstances permit.

(3) One type of MOOTW is the Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) event. To assist commanders and leaders in training their units, CBRNE-

related information is being included in the Army Medical Department (AMEDD) mission training plans (MTPs). Even though most collective tasks within an MTP may support a CBRNE event, the ones that will most directly be impacted are clearly indicated with a statement in the condition that reads: "This task may be used to support a CBRNE event." These collective tasks and any supporting individual tasks in this soldier's manual should be considered for training emphasis.

(4) Our forces today use a train-alert-deploy sequence. We cannot count on the time or opportunity to correct or make up training deficiencies after deployment. Maintaining forces that are ready now, places increased emphasis on training and the priority of training. This concept is a key link between operational and training doctrine.

(5) Units train to be ready for war based on the requirements of a precise and specific mission. In the process they develop a foundation of combat skills that can be refined based on the requirements of the assigned mission. Upon alert, commanders assess and refine from this foundation of skills. In the train-alert-deploy process, commanders use whatever time the alert cycle provides to continue refinement of mission-focused training. Training continues during time available between alert notification and deployment, between deployment and employment, and even during employment as units adapt to the specific battlefield environment and assimilate combat replacements.

b. How the Army Trains the Army.

(1) Training is a team effort and the entire Army — Department of the Army, major commands (MACOMs), the institutional training base, units, the combat training centers (CTCs), each individual soldier, and the civilian workforce — has a role that contributes to force readiness. Department of the Army and MACOMs are responsible for resourcing the Army to train. The Institutional Army, including schools, training centers, and NCO academies, for example, train soldiers and leaders to take their place in units in the Army by teaching the doctrine and tactics, techniques, and procedures (TTP). Units, leaders, and individuals train to standard on their assigned critical individual tasks. The unit trains first as an organic unit and then as an integrated component of a team. Before the unit can be trained to function as a team, each soldier must be trained to perform his/her individual supporting tasks to standard. Operational deployments and major training opportunities, such as major training exercises, CTCs, and ARTEP evaluations provide rigorous, realistic, and stressful training and operational experience under actual or simulated combat and operational conditions to enhance unit readiness and produce bold, innovative leaders. The result of this Army-wide team effort is a training and leader development system that is unrivaled in the world. Effective training produces the force — soldiers, leaders, and units — that can successfully execute any assigned mission.

(2) The Army Training and Leader Development Model (see Figure 1-1) centers on developing trained and ready units led by competent and confident leaders. The model depicts an important dynamic that creates a lifelong learning process. The three core domains that shape the critical learning experiences throughout a soldier's and leader's time span are the operational, institutional, and self-development domains. Together, these domains interact using feedback and assessment from various sources and methods to maximize warfighting readiness. Each domain has specific, measurable actions that must occur to develop our leaders.

- ☐ The operational domain includes home station training, CTC rotations, and joint training exercises and deployments that satisfy national objectives. Each of these actions provides foundational experiences for soldier, leader, and unit development.

- ☐ The institutional domain focuses on educating and training soldiers and leaders on the key knowledge, skills, and attributes required to operate in any environment. It includes individual, unit and joint schools, and advanced education.

- ☐ The self-development domain, both structured and informal, focuses on taking those actions necessary to reduce or eliminate the gap between operational and institutional experiences.

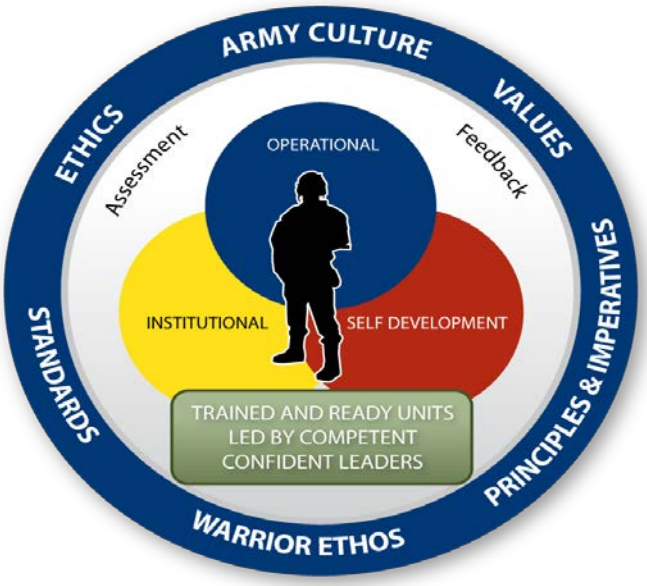


Figure 1-1

Army Training and Leader Development Model

(3) Throughout this lifelong learning and experience process, there is formal and informal assessment and feedback of performance to prepare leaders and soldiers for their next level of responsibility. Assessment is the method used to determine the proficiency and potential of leaders against a known standard. Feedback must be clear, formative guidance directly related to the outcome of training events measured against standards.

c. Leader Training and Leader Development.

(1) Competent and confident leaders are a prerequisite to the successful training of units. It is important to understand that leader training and leader development are integral parts of unit readiness. Leaders are inherently soldiers first and should be technically and tactically proficient in basic soldier skills. They are also adaptive, capable of sensing their environment, adjusting the plan when appropriate, and properly applying the proficiency acquired through training.

(2) Leader training is an expansion of these skills that qualifies them to lead other soldiers. As such, doctrine and principles of training require the same level of attention of senior commanders. Leader training occurs in the Institutional Army, the unit, the CTCs, and through self-development. Leader training is just one portion of leader development.

(3) Leader development is the deliberate, continuous, sequential, and progressive process, grounded in Army values, that grows soldiers and civilians into competent and confident leaders capable of decisive action. Leader development is achieved through the life-long synthesis of the knowledge, skills, and experiences gained through institutional training and education, organizational training, operational experience, and self-development. Commanders play the key role in leader development that ideally produces tactically and technically competent, confident, and adaptive leaders who act with

boldness and initiative in dynamic, complex situations to execute mission-type orders achieving the commander's intent.

d. Training Responsibility. Soldier and leader training and development continue in the unit. Using the institutional foundation, training in organizations and units focuses and hones individual and team skills and knowledge.

(1) Commander Responsibility.

(a) The unit commander is responsible for the wartime readiness of all elements in the formation. The commander is, therefore, the primary trainer of the organization and is responsible for ensuring that all training is conducted in accordance with the STP to the Army standard.

(b) Commanders ensure STP standards are met during all training. If a soldier fails to meet established standards for identified MOS tasks, the soldier must retrain until the tasks are performed to standard. Training to standard on MOS tasks is more important than completion of a unit training event such as an ARTEP evaluation. The objective is to focus on sustaining MOS proficiency — this is the critical factor commanders must adhere to when training individual soldiers in units.

(2) NCO Responsibility.

(a) A great strength of the US Army is its professional NCO Corps who takes pride in being responsible for the individual training of soldiers, crews, and small teams. The NCO support channel parallels and complements the chain of command. It is a channel of communication and supervision from the Command Sergeant Major (CSM) to the First Sergeants (1SGs) and then to other NCOs and enlisted personnel. NCOs train soldiers to the non-negotiable standards published in STPs. Commanders delegate authority to NCOs in the support channel as the primary trainers of individual, crew, and small team training. Commanders hold NCOs responsible for conducting standards-based, performance-oriented, battle-focused training and providing feedback on individual, crew, and team proficiency. Commanders define responsibilities and authority of their NCOs to their staffs and subordinates.

(b) NCOs continue the soldierization process of newly assigned enlisted soldiers, and begin their professional development. NCOs are responsible for conducting standards-based, performance-oriented, battle-focused training. They identify specific individual, crew, and small team tasks that support the unit's collective mission essential tasks; plan, prepare, rehearse, and execute training; and evaluate training and conduct after action reviews (AARs) to provide feedback to the commander on individual, crew, and small team proficiency. Senior NCOs coach junior NCOs to master a wide range of individual tasks.

(3) Soldier Responsibility. Each soldier is responsible for performing individual tasks identified by the first-line supervisor based on the unit's mission essential task list (METL). Soldiers must perform tasks to the standards included in the task summary. If soldiers have questions about tasks or which tasks in this manual they must perform, they are responsible for asking their first-line supervisor for clarification, assistance, and guidance. First-line supervisors know how to perform each task or can direct soldiers to appropriate training materials, including current field manuals, technical manuals, and Army regulations. Soldiers are responsible for using these materials to maintain performance. They are also responsible for maintaining standard performance levels at their current skill level and below listed in the Soldier's Manual of Common Tasks. Periodically, soldiers should ask their supervisor or another soldier to check their performance to ensure that they can perform the tasks.

1.3 Battle-focused Training

Battle focus is a concept used to derive peacetime training requirements from assigned and anticipated missions. The priority of training in units is to train to standard on the wartime mission. Battle focus guides the planning, preparation, execution, and assessment of each organization's training program to ensure its members train as they are going to fight. Battle focus is critical throughout the entire training process and is used by commanders to allocate resources for training based on wartime and operational mission requirements. Battle focus enables commanders and staffs at all echelons to structure a training program that copes with non-mission-related requirements while focusing on mission essential training activities. It is recognized that a unit cannot attain proficiency to standard on every task whether due to time or other resource constraints. However, unit commanders can achieve a successful training program by consciously focusing on a reduced number of METL tasks that are essential to mission accomplishment.

a. Linkage between METL and STP. A critical aspect of the battle focus concept is to understand the responsibility for and the linkage between the collective mission essential tasks and the individual tasks that support them. For example, the commander and the CSM/1SG must jointly coordinate the collective mission essential tasks and supporting individual tasks on which the unit will concentrate its efforts during a given period. This task hierarchy is provided in the task database at the Reimer Digital Library. The CSM/1SG must select the specific individual tasks that support each collective task to be trained. Although NCOs have the primary role in training and sustaining individual soldier skills, officers at every echelon remain responsible for training to established standards during both individual and collective training. Battle focus is applied to all missions across the full spectrum of operations.

b. Relationship of STPs to Battle-focused Training. The two key components of any STP are the soldier's manual (SM) and trainer’s guide (TG). Each gives leaders important information to help implement the battle-focused training process. The trainer’s guide relates soldier and leader tasks in the MOS and skill level to duty positions and equipment. It states where the task is trained, how often training should occur to sustain proficiency, and who in the unit should be trained. As leaders assess and plan training, they should rely on the trainer’s guide to help identify training needs.

(1) Leaders conduct and evaluate training based on Army-wide training objectives and on the task standards published in the soldier's manual task summaries or in the Reimer Digital Library. The task summaries ensure that --

- ☐ Trainers in every unit and location define task standards the same way.
- ☐ Trainers evaluate all soldiers to the same standards.

(2) Figure 1-2 shows how battle-focused training relates to the trainer’s guide and soldier's manual:

- ☐ The left column shows the steps involved in training soldiers.
- ☐ The right column shows how the STP supports each of these steps.

Battle-focused Process	STP Supported Process
Select supporting soldier tasks	Use TG to relate tasks to METL
Conduct training assessment	Use TG to define what soldier tasks to assess
Determine training objectives	Use TG to set objectives
Determine strategy; plan for training	Use TG to relate soldier tasks to strategy
Conduct pre-execution checks	Use SM task summary as source for task performance
Execute training; conduct after action review	Use SM task summary as source for task performance
Evaluate training against established standards	Use SM task summary as standard for evaluation

Figure 1-2

Relationship of Battle-focused Training and STP

1.4 Task Summary Format

Task summaries outline the wartime performance requirements of each critical task in the SM. They provide the soldier and the trainer with the information necessary to prepare, conduct, and evaluate critical task training. As a minimum, task summaries include information the soldier must know and the skills that he must perform to standards for each task. The format of the task summaries included in this SM is as follows:

a. Task Title. The task title identifies the action to be performed.

b. Task Number. A 10-digit number identifies each task or skill. This task number, along with the task title, must be included in any correspondence pertaining to the task.

c. Conditions. The task conditions identify all the equipment, tools, references, job aids, and supporting personnel that the soldier needs to use to perform the task in wartime. This section identifies any environmental conditions that can alter task performance, such as visibility, temperature, or wind. This section also identifies any specific cues or events that trigger task performance, such as a chemical attack or identification of a threat vehicle.

d. Standards. The task standards describe how well and to what level the task must be performed under wartime conditions. Standards are typically described in terms of accuracy, completeness, and speed.

e. Performance Steps. This section includes a detailed outline of information on how to perform the task. Additionally, some task summaries include safety statements and notes. Safety statements (danger, warning, and caution) alert users to the possibility of immediate death, personal injury, or damage to equipment. Notes provide a small, extra supportive explanation or hint relative to the performance steps.

f. Evaluation Preparation. This subsection indicates necessary modifications to task performance in order to train and evaluate a task that cannot be trained to the wartime standard under wartime conditions. It may also include special training and evaluation preparation instructions to accommodate these modifications and any instructions that should be given to the soldier before evaluation.

g. Performance Measures. This evaluation guide identifies the specific actions that the soldier must do to successfully complete the task. These actions are listed in a GO/NO GO format for easy evaluation. Each evaluation guide contains an evaluation guidance statement that indicates the requirements for receiving a GO on the evaluation.

h. References. This section identifies references that provide more detailed and thorough explanations of task performance requirements than those given in the task summary description.

1.5 Training Execution

All good training, regardless of the specific collective, leader, and individual tasks being executed, must comply with certain common requirements. These include adequate preparation, effective presentation and practice, and thorough evaluation. The execution of training includes preparation for training, conduct of training, and recovery from training.

a. Preparation for Training. Formal near-term planning for training culminates with the publication of the unit training schedule. Informal planning, detailed coordination, and preparation for executing the training continue until the training is performed. Commanders and other trainers use training meetings to assign responsibility for preparation of all scheduled training. Preparation for training includes selecting tasks to be trained, planning the conduct of the training, training the trainers, reconnaissance of the site, issuing the training execution plan, and conducting rehearsals and pre-execution checks. Pre-execution checks are preliminary actions commanders and trainers use to identify responsibility for these and other training support tasks. They are used to monitor preparation activities and to follow up to ensure planned training is conducted to standard. Pre-execution checks are a critical portion of any training meeting. During preparation for training, battalion and company commanders identify and eliminate potential training distracters that develop within their own organizations. They also stress personnel accountability to ensure maximum attendance at training.

(1) Subordinate leaders, as a result of the bottom-up feed from internal training meetings, identify and select the individual tasks necessary to support the identified training objectives. Commanders develop the tentative plan to include requirements for preparatory training, concurrent training, and training resources. At a minimum, the training plan should include confirmation of training areas and locations, training ammunition allocations, training simulations and simulators availability, transportation requirements, soldier support items, a risk management analysis, assignment of responsibility for the training, designation of trainers responsible for approved training, and final coordination. The time and other necessary resources for retraining must also be an integral part of the original training plan.

(2) Leaders, trainers, and evaluators are identified, trained to standard, and rehearsed prior to the conduct of the training. Leaders and trainers are coached on how to train, given time to prepare, and rehearsed so that training will be challenging and doctrinally correct. Commanders ensure that trainers and evaluators are not only tactically and technically competent on their training tasks, but also understand how the training relates to the organization's METL. Properly prepared trainers, evaluators, and leaders project confidence and enthusiasm to those being trained. Trainer and leader training is a critical event in the preparation phase of training. These individuals must demonstrate proficiency on the selected tasks prior to the conduct of training.

(3) Commanders, with their subordinate leaders and trainers, conduct site reconnaissance, identify additional training support requirements, and refine and issue the training execution plan. The training plan should identify all those elements necessary to ensure the conduct of training to standard.

Rehearsals are essential to the execution of good training. Realistic, standards-based, performance-oriented training requires rehearsals for trainers, support personnel, and evaluators. Preparing for training in Reserve Component (RC) organizations can require complex pre-execution checks. RC trainers must often conduct detailed coordination to obtain equipment, training support system products, and ammunition from distant locations. In addition, RC pre-execution checks may be required to coordinate Active Component (AC) assistance from the numbered CONUSA, training support divisions, and directed training affiliations.

b. Conduct of Training. Ideally, training is executed using the crawl-walk-run approach. This allows and promotes an objective, standards-based approach to training. Training starts at the basic level. Crawl events are relatively simple to conduct and require minimum support from the unit. After the crawl stage, training becomes incrementally more difficult, requiring more resources from the unit and home station, and increasing the level of realism. At the run stage, the level of difficulty for the training event intensifies. Run stage training requires optimum resources and ideally approaches the level of realism expected in combat. Progression from the walk to the run stage for a particular task may occur during a one-day training exercise or may require a succession of training periods over time. Achievement of the Army standard determines progression between stages.

(1) In crawl-walk-run training, the tasks and the standards remain the same; however, the conditions under which they are trained change. Commanders may change the conditions, for example, by increasing the difficulty of the conditions under which the task is being performed, increasing the tempo of the task training, increasing the number of tasks being trained, or by increasing the number of personnel involved in the training. Whichever approach is used, it is important that all leaders and soldiers involved understand in which stage they are currently training and understand the Army standard.

(2) An AAR is immediately conducted and may result in the need for additional training. Any task that was not conducted to standard should be retrained. Retraining should be conducted at the earliest opportunity. Commanders should program time and other resources for retraining as an integral part of their training plan. Training is incomplete until the task is trained to standard. Soldiers will remember the standard enforced, not the one discussed.

c. Recovery from Training. The recovery process is an extension of training, and once completed, it signifies the end of the training event. At a minimum, recovery includes conduct of maintenance training, turn-in of training support items, and the conduct of AARs that review the overall effectiveness of the training just completed.

(1) Maintenance training is the conduct of post-operations preventive maintenance checks and services, accountability of organizational and individual equipment, and final inspections. Class IV, Class V, TADSS, and other support items are maintained, accounted for, and turned-in and training sites and facilities are closed out.

(2) AARs conducted during recovery focus on collective, leader, and individual task performance, and on the planning, preparation, and conduct of the training just completed. Unit AARs focus on individual and collective task performance, and identify shortcomings and the training required to correct deficiencies. AARs with leaders focus on tactical judgment. These AARs contribute to leader learning and provide opportunities for leader development. AARs with trainers and evaluators provide additional opportunities for leader development.

1.6 Training Assessment

Assessment is the commander's responsibility. It is the commander's judgment of the organization's ability to accomplish its wartime operational mission. Assessment is a continuous process that includes evaluating individual training, conducting an organizational assessment, and preparing a training assessment. The commander uses his experience, feedback from training evaluations, and other evaluations and reports to arrive at his assessment. Assessment is both the end and the beginning of the training management process. Training assessment is more than just training evaluation, and encompasses a wide variety of inputs. Assessments include such diverse systems as training, force integration, logistics, and personnel, and provide the link between the unit's performance and the Army standard. Evaluation of training is, however, a major component of assessment. Training evaluations provide the commander with feedback on the demonstrated training proficiency of soldiers, leaders, battle staffs, and units. Commanders cannot personally observe all training in their organization and, therefore, gather feedback from their senior staff officers and NCOs.

a. Evaluation of Training. Training evaluations are a critical component of any training assessment. Evaluation measures the demonstrated ability of soldiers, commanders, leaders, battle staffs, and units against the Army standard. Evaluation of training is integral to standards-based training and is the cornerstone of leader training and leader development. STPs describe standards that must be met for each soldier task.

(1) All training must be evaluated to measure performance levels against the established Army standard. The evaluation can be as fundamental as an informal, internal evaluation performed by the leader conducting the training. Evaluation is conducted specifically to enable the individual undergoing the training to know whether the training standard has been achieved. Commanders must establish a climate that encourages candid and accurate feedback for the purpose of developing leaders and trained soldiers.

(2) Evaluation of training is not a test; it is not used to find reasons to punish leaders and soldiers. Evaluation tells soldiers whether or not they achieved the Army standard and, therefore, assists them in determining the overall effectiveness of their training plans. Evaluation produces disciplined soldiers, leaders, and units. Training without evaluation is a waste of time and resources.

(3) Evaluations are used by leaders as an opportunity to coach and mentor soldiers. A key element in developing leaders is immediate, positive feedback that coaches and leads subordinate leaders to achieve the Army standard. This is a tested and proven path to develop competent, confident adaptive leaders.

b. Evaluators. Commanders must plan for formal evaluation and must ensure the evaluators are trained. These evaluators must also be trained as facilitators to conduct AARs that elicit maximum participation from those being trained. External evaluators will be certified in the tasks they are evaluating and normally will not be dual-hatted as a participant in the training being executed.

c. Role of Commanders and Leaders. Commanders ensure that evaluations take place at each echelon in the organization. Commanders use this feedback to teach, coach, and mentor their subordinates. They ensure that every training event is evaluated as part of training execution and that every trainer conducts evaluations. Commanders use evaluations to focus command attention by requiring evaluation of specific mission essential and battle tasks. They also take advantage of evaluation information to develop appropriate lessons learned for distribution throughout their commands.

d. After Action Review. The AAR, whether formal or informal, provides feedback for all training. It is a structured review process that allows participating soldiers, leaders, and units to discover for themselves what happened during the training, why it happened, and how it can be done better. The AAR is a professional discussion that requires the active participation of those being trained.

CHAPTER 2

Trainer's Guide

2.1 General

The MOS Training Plan (MTP) identifies the essential components of a unit training plan for individual training. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion, and similar factors. Therefore, the MTP should be used as a guide for conducting unit training and not a rigid standard. The MTP consists of two parts. Each part is designed to assist the commander in preparing a unit training plan which satisfies integration, cross training, training up, and sustainment training requirements for soldiers in this MOS.

Part One of the MTP shows the relationship of an MOS skill level between duty position and critical tasks. These critical tasks are grouped by task commonality into subject areas.

Section I lists subject area numbers and titles used throughout the MTP. These subject areas are used to define the training requirements for each duty position within an MOS.

Section II identifies the total training requirement for each duty position within an MOS and provides a recommendation for cross training and train-up/merger training.

- **Duty Position Column**. This column lists the duty positions of the MOS, by skill level, which have different training requirements.
- **Subject Area Column**. This column lists, by numerical key (see Section I), the subject areas a soldier must be proficient in to perform in that duty position.
- **Cross Train Column**. This column lists the recommended duty position for which soldiers should be cross trained.
- **Train-up/Merger Column**. This column lists the corresponding duty position for the next higher skill level or MOSC the soldier will merge into on promotion.

Part Two lists, by general subject areas, the critical tasks to be trained in an MOS and the type of training required (resident, integration, or sustainment).

- **Subject Area Column**. This column lists the subject area number and title in the same order as Section I, Part One of the MTP.
- **Task Number Column**. This column lists the task numbers for all tasks included in the subject area.
- **Title Column**. This column lists the task title for each task in the subject area.
- **Training Location Column**. This column identifies the training location and the leadership domain (institutional, operational, or self-development) where the task is first trained to soldier training publications standards. If the task is first trained to standard in the unit, the abbreviation "OP" will be in this column. If the task is first trained to standard in the training base, it will identify, by brevity code "S-D, INST", the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.

INST	Institutional
OP	Operational/Unit
S-D	Self-development

Figure 2-1

Training Locations

- **Sustainment Training Frequency Column**. This column indicates the recommended frequency at which the tasks should be trained to ensure soldiers maintain task proficiency. Figure 2-2 identifies the frequency codes used in this column.

BA	Biennially
AN	Annually
SA	Semi-annually
QT	Quarterly
BM	Bimonthly
MO	Monthly
BW	Biweekly
WK	Weekly
DA	Daily
HR	Hourly
OT	One time
OTHER	Other

Figure 2-2

Sustainment Training Frequency Codes

- **Sustainment Training Skill Level Column**. This column lists the skill levels of the MOS for which soldiers must receive sustainment training to ensure they maintain proficiency to soldier's manual standards.

2-2. Part One, Section I. Subject Area Codes.

Skill Level 1

1 Initial Cargo Operations (Air)
2 Initial Cargo Rigging Operations
3 Initial Cargo Checking Operations
4 Initial Hagglunds Crane Operations
5 4,000-lb Rough Terrain Forklift Operations
6 10,000-lb All Terrain Lifter Army System (ATLAS)
7 5K Light Capability Rough Terrain Forklift
8 40-ton Rough Terrain Container Crane Operations
9 53,000-lb Rough Terrain Container Handler Operations (Kalmar)
10 Initial Shipboard Fire Fighting / Damage Control
11 Initial Cargo Operations (Ship and Shore)
12 Initial Cargo Operations (Rail)
13 Initial Cargo Operations (Ship)
14 Initial Seamanship Maintenance
15 Initial Drill and Survival Measures
16 Initial Cargo Operations (Materials Handling Equipment)

Skill Level 2

17 Primary Cargo Operations (Air)
18 Primary Maintenance & Rigging Operations
19 Primary Cargo Documentation
20 Primary Cargo Operations (Ship and Shore)
21 Primary Hagglunds Crane Operations
22 Primary 40-ton Crane Operations
23 Primary Cargo Operations (Ship)
24 Primary Cargo Operations (Rail)

Skill Level 3

25 Basic Cargo Checking Operations
26 Basic Cargo Operations (Air)
27 Basic Cargo Operations (Shore)
28 Basic Cargo Documentation
29 Basic Cargo Operations (Ship)
30 Basic Cargo Operations (Ship and Shore)
31 Basic Cargo Operations (Kalmar-RTCH)

Skill Level 4

32 Advanced Cargo Operations (Air)
33 Advanced Cargo Operations (Ship)
34 Advanced Cargo Documentation
35 Advanced Cargo Operations (Shore)
36 Advanced Cargo Operations (Ship and Shore)
37 Advanced Cargo Operations (Rail)

2-3. Part One, Section II, Duty Position Training Requirements.

SKILL LEVEL	DUTY POSITION	SUBJECT AREAS	CROSS TRAIN	TRAIN-UP/MERGER
SL1	Cargo Checker/Handler	1-16	N/A	88H20/Cargo Specialist
SL1	Crane Operator	1-16	N/A	88H20/Cargo Specialist
SL1	RT Forklift Operator	1-16	N/A	88H20/Cargo Specialist
SL2	Cargo Checker	17-24	N/A	88H30/Cargo Specialist
SL2	Container Handler	17-24	N/A	88H30/Cargo Specialist
SL2	Senior Forklift Operator	17-24	N/A	88H30/Cargo Specialist
SL2	Senior Crane Operator	17-24	N/A	88H30/Cargo Specialist
SL3	Section Chief	25-31	N/A	88H40/Cargo Specialist
SL3	Assistant Operations Sergeant	25-31	N/A	88H40/Cargo Specialist
SL3	Load Planner	25-31	N/A	88H40/Cargo Specialist
SL3	Foreman	25-31	N/A	88H40/Cargo Specialist
SL4	Operations Sergeant	32-37	N/A	88Z/Transportation Senior Sergeant
SL4	Platoon Sergeant	32-37	N/A	88Z/Transportation Senior Sergeant
SL4	Terminal Operations Sergeant	32-37	N/A	88Z/Transportation Senior Sergeant

2-4. Part Two, Critical Tasks List.

MOS TRAINING PLAN
MOS 88H

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
Skill Level SL1				
Subject Area 1 Initial Cargo Operations (Air)				
551-88H-1501	Perform Hookup Team Duties	INST	AN	1-2
551-88H-1514	Load Married 463L Pallets	INST	SA	1-2
551-88H-1509	Place 463L Pallet System into Storage	INST	SA	1-2
551-88H-1515	Construct a 463L Pallet	INST	SA	1-2
551-88H-1506	Secure Cargo Aboard Aircraft	INST	SA	1-2
551-88H-1508	Mark Center of Balance for a Multi-axle or Tracked Vehicle	INST	AN	1-2
551-88H-1511	Escort Passengers and Chalks to Aircraft	INST	SA	1-2
Subject Area 2 Initial Cargo Rigging Operations				
551-88H-1518	Open Hatches	INST	SA	1-2
551-88H-1504	Top Standard Booms Equipped with Single-topping Lift	INST	SA	1-2
551-88H-1517	Inspect Cargo Handling Gear	INST	MO	1-2
551-88H-1520	Reeve Triple-sheave Blocks	INST	SA	1-2
551-88H-1502	Prepare Electric Winches for Operation to Load or Discharge Cargo	INST	SA	1-2
551-88H-1505	Top Standard Booms Equipped with Multiple-topping Lift (Boom in Cradle)	INST	SA	1-2

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88H-1519	Rig the Three Standard Rigs of Cargo Booms	INST	SA	1-2
Subject Area 3 Initial Cargo Checking Operations				
551-88H-1510	Record Onward Movement of Cargo on DD Form 1384	INST	SA	1-2
551-88H-1516	Tally Cargo	INST	SA	1-2
551-88H-1507	Check Cargo into In-transit Storage Area	INST	SA	1-2
Subject Area 4 Initial Hagglunds Crane Operations				
551-88H-1403	Prepare Hagglunds Crane for Operation	INST	AN	1-2
551-88H-1416	Stow Containers Aboard a Cargo Vessel	INST	SA	1-2
551-88H-1405	Operate Hagglunds Crane in Single Mode	INST	AN	1-2
551-88H-1413	Load Flatracks Aboard a Cargo Vessel	INST	AN	1-2
551-88H-1406	Place Hagglunds Crane in Twin Mode	INST	AN	1-2
551-88H-1407	Perform Spreader Operations with Hagglunds Crane Using 20- and 40-foot Spreader	INST	AN	1-2
551-88H-1414	Stow General Cargo at Assigned Hatch	INST	AN	1-2
551-88H-1415	Secure Vehicles or Cargo in Seasheds	INST	AN	1-2
551-88H-1421	Perform Standard Hand and Arm Signals for Hagglunds Crane Operations	INST	AN	1-2
Subject Area 5 4,000-lb Rough Terrain Forklift Operations				
551-88H-1533	Operate the 4,000-lb Rough Terrain Forklift	OP	AN	1-2
Subject Area 6 10,000-lb All Terrain Lifter Army System (ATLAS)				
551-88H-1537	Operate ATLAS Rough Terrain Forklift Without a Load	INST	AN	1-2
551-88H-1538	Operate ATLAS Rough Terrain Forklift With a Load	INST	AN	1-2
Subject Area 7 5K Light Capability Rough Terrain Forklift				
551-88H-1530	Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) With a Load	INST	AN	1-2
551-88H-1532	Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) Without a Load	INST	AN	1-2
551-88H-1529	Prepare the 5K Light Capacity Rough Terrain Forklift (LCRTF) for Operation	INST	AN	1-2
Subject Area 8 40-ton Rough Terrain Container Crane Operations				
551-88H-1606	Operate RT875 Rough Terrain Container Crane Without a Load	INST	MO	1-2
551-88H-1602	Prepare RT875 Rough Terrain Container Crane for Operations	INST	MO	1-2
551-88H-1424	Perform Emergency Boom Operating Procedures on the RT875 Rough Terrain Container Crane	INST	AN	1-2
551-88H-1425	Perform Emergency Load Lowering Procedures on the RT875 Rough Terrain Container Crane	INST	AN	1-2
Subject Area 9 53,000-lb Rough Terrain Container Handler Operations (Kalmar)				
551-88H-1540	Operate RT240 Rough Terrain Container Handler (RTCH) With a Load	INST	AN	1-2
551-88H-1539	Operate RT240 Rough Terrain Container Handler (RTCH) Without a Load	INST	AN	1-2
551-88H-1541	Operate RT240 Rough Terrain Container Handler (RTCH) Under Unusual Conditions	INST	AN	1-2
Subject Area 10 Initial Shipboard Fire Fighting/Damage Control				
551-88H-1801	Perform Fire Fighting Techniques	INST	SA	1-2
Subject Area 11 Initial Cargo Operations (Ship and Shore)				
551-88H-1422	Perform Standard Hand and Arm Signals for Winch Operations	INST	AN	1-2
551-88H-1503	Operate Electric Winches to Load or Discharge Cargo	INST	AN	1-2

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88H-1512	Load Cargo into Containers	OP	SA	1-2
Subject Area 12 Initial Cargo Operations (Rail)				
551-88H-1302	Load Vehicles on Flatcar	INST	AN	1-2
551-88H-1305	Identify Dangerous Cargo for Rail Transport	INST	SA	1-2
Subject Area 13 Initial Cargo Operations (Ship)				
551-88H-1417	Load Wheeled and Tracked Vehicles Aboard Cargo Vessel	INST	SA	1-2
551-88H-1525	Stow Wheeled and Tracked Vehicles on RO/RO Deck	INST	AN	1-2
551-88H-1524	Perform Vehicle Guide Duties During RO/RO Operations	INST	AN	1-2
Subject Area 14 Initial Seamanship Maintenance				
551-88H-1703	Tie Basic Seamanship Knots	INST	SA	1-2
Subject Area 15 Initial Drill and Survival Measures				
551-88H-1701	Perform Water Survival Techniques	INST	AN	1-2
Subject Area 16 Initial Cargo Operations (Materials Handling Equipment)				
551-88H-1401	Perform Preventive Maintenance Checks and Services on Materials Handling Equipment (MHE)	INST	SA	1-2
551-88H-1527	Communicate with Hand and Arm Signals During MHE Operations	INST	AN	1-2
Skill Level SL2				
Subject Area 17 Primary Cargo Operations (Air)				
551-88H-2508	Direct Marking Center of Balance for a Multi-axle or Tracked Vehicle	OP	AN	2-3
551-88H-2510	Direct Storage of 463L Pallet System	OP	SA	2-3
551-88H-2512	Direct Construction of a 463L Pallet	OP	SA	2-3
551-88H-2501	Lead Hookup Team Duties	OP	AN	2-3
551-88H-2504	Direct Securing of Cargo Aboard Aircraft	OP	SA	2-3
551-88H-2507	Inspect Vehicles for Air Movement	OP	SA	2-3
Subject Area 18 Primary Maintenance and Rigging Operations				
551-88H-2517	Rig Yard-and-Stay With a Double Purchase	OP	SA	2-3
551-88H-2518	Direct the Preparation of the Three Standard Rigs of Cargo Booms	OP	AN	2-3
551-88H-2523	Direct Inspection of Cargo Handling Gear	OP	MO	2-3
551-88H-2519	Direct the Rigging of Four Booms with a Block-in-Bight	OP	AN	2-3
551-88H-2521	Direct the Rigging of Four Booms Doubled Up on a Double-rig Hatch	OP	AN	2-3
551-88H-2526	Direct Topping Booms Equipped with Multiple-topping Lifts (Boom in Cradle)	OP	AN	2-3
551-88H-2522	Direct Application of Wire Rope Clips Needed for Lashing Cargo	OP	SA	2-3
Subject Area 19 Primary Cargo Documentation				
551-88H-2520	Perform Cargo Planning Calculations	OP	SA	2-3
551-88H-2525	Review Cargo Markings to Facilitate Handling	OP	SA	2-3
Subject Area 20 Primary Cargo Operations (Ship and Shore)				
551-88H-2503	Determine Materials Handling Equipment Required for Operations	OP	SA	2-3
551-88H-2527	Supervise Loading of Cargo In and Out of Containers	OP	MO	2-3
Subject Area 21 Primary Hagglunds Crane Operations				
551-88H-2408	Direct Hatch Cover Operations	OP	MO	2-3
551-88H-2412	Supervise Stowage of Containers Aboard a Cargo Vessel	OP	MO	2-3
551-88H-2404	Direct Stowing Hagglunds Crane in Parking Support	OP	MO	2-3
551-88H-2403	Direct Preparation of Hagglunds Crane for Operations	OP	AN	2-3
551-88H-2406	Direct Set-up Procedures on Hagglunds Crane for Twin Mode Operations	OP	MO	2-3

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88H-2407	Direct Spreader Operations with Hagglunds Crane using 20- and 40-foot Spreader	OP	MO	2-3
Subject Area 22 Primary 40-ton Crane Operations				
551-88H-2607	Supervise RT875 Rough Terrain Container Crane Operations	OP	AN	2-3
Subject Area 23 Primary Cargo Operations (Ship)				
551-88H-2513	Direct Stowage of Wheeled and Tracked Vehicles on RO/RO Deck	OP	AN	2-3
551-88H-2528	Check Winch Operations	OP	SA	2-3
Subject Area 24 Primary Cargo Operations (Rail)				
551-88H-2305	Compute Blocking and Bracing Materials Required for Rail Movement	OP	MO	2-3
551-88H-2306	Conduct Rail Loading Operations	OP	AN	2-3
Skill Level SL3				
Subject Area 25 Basic Cargo Checking Operations				
551-88H-3524	Check Stowage of General Cargo at Assigned Hatch	INST	SA	3-4
551-88H-3505	Protect Cargo Against Pilferage	OP	SA	3-4
Subject Area 26 Basic Cargo Operations (Air)				
551-88H-3519	Direct Dangerous or Hazardous Cargo Operations for Air Movement	OP	MO	3-4
551-88H-3512	Manage Aircraft Load Teams	OP	SA	3-4
551-88H-3501	Manage Helicopter External Sling Load Operations	INST	AN	3-4
551-88H-3523	Rig a Cargo Net (Helicopter)	INST	AN	3-4
551-88H-3522	Rig a Single Point Load for External Air Transport	INST	AN	3-4
Subject Area 27 Basic Cargo Operations (Shore)				
551-88H-3518	Direct Temporary Storage of Dangerous or Hazardous Cargo	OP	SA	3-4
551-88H-3517	Direct Dangerous or Hazardous Cargo Operations for Motor Transport Movement	OP	SA	3-4
Subject Area 28 Basic Cargo Documentation				
551-88H-3527	Determine Compatibility of Dangerous or Hazardous Cargo	INST	SA	3-4
551-88H-3509	Review Ocean Cargo Documentation for Loading or Discharge	INST	MO	3-4
551-88H-3525	Locate Cargo Designated for Discharge	INST	SA	3-4
551-88H-3530	Interpret Data on Manifest	INST	SA	3-4
Subject Area 29 Basic Cargo Operations (Ship)				
551-88H-3521	Supervise Loading of Flatracks Aboard a Cargo Vessel	INST	MO	3-4
551-88H-3507	Direct Cargo Operations (Breakbulk)	INST	AN	3-4
551-88H-3526	Supervise Stowage of Wheeled and Tracked Vehicles Aboard a Cargo Vessel (Breakbulk)	INST	SA	3-4
551-88H-3528	Supervise Donning Crew Work Vest	OP	AN	3-4
551-88H-3508	Direct Cargo Operations (RO/RO)	INST	AN	3-4
551-88H-3511	Direct Lashing Containers on the Deck of a Landing Craft	INST	AN	3-4
551-88H-3513	Direct Loading Lighters at Shipside During Logistics Over-the-Shore Operations	INST	AN	3-4
Subject Area 30 Basic Cargo Operations (Ship and Shore)				
551-88H-3506	Inspect Cargo Checker's Tally for Correctness	OP	MO	3-4
551-88H-3520	Direct the Preparation of a Hatch for Handling Military Explosives	INST	SA	3-4
551-88H-3529	Supervise Safety Procedures in the Handling of Dangerous or Hazardous Cargo	OP	SA	3-4
Subject Area 31 Basic Cargo Operations (KALMAR-RTCH)				
551-88H-2609	Attach Forklift Kit to RT240 Rough Terrain Container Handler	OP	AN	2-3

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88H-2608	Prepare RT240 Rough Terrain Container Handler for Air Movement	OP	AN	2-3
551-88H-3510	Supervise Materials Handling Equipment (MHE) Operations	OP	MO	3-4
Skill Level SL4				
Subject Area 32 Advanced Cargo Operations (Air)				
551-88H-4501	Monitor External Sling Load Operations	OP	SA	4-5
551-88H-4502	Monitor Air Terminal Operations	INST	AN	4-5
551-88H-4512	Brief Troop Commander on Flight Safety	OP	SA	4-5
Subject Area 33 Advanced Cargo Operations (Ship)				
551-88H-4508	Monitor Marine Terminal Operations	INST	AN	4-5
551-88H-4510	Monitor the Handling of Dangerous or Hazardous Cargo Aboard a Cargo Vessel	INST	AN	4-5
551-88H-4511	Monitor Dangerous or Hazardous Cargo Operations for Motor Transport Movement	OP	MO	4-5
Subject Area 34 Advanced Cargo Documentation				
551-88H-4504	Review Pre-stowage Plan	INST	AN	4-5
551-88H-4509	Monitor Marine Terminal Operations Productivity and Analysis	INST	AN	4-5
Subject Area 35 Advanced Cargo Operations (Shore)				
551-88H-4503	Monitor Cargo Stowage and Securing Operations	INST	AN	4-5
551-88H-4506	Monitor Cargo Security Procedures	INST	AN	4-5
Subject Area 36 Advanced Cargo Operations (Ship and Shore)				
551-88H-4507	Monitor Handling of Refrigerated Cargo	OP	MO	4-5
Subject Area 37 Advanced Cargo Operations (Rail)				
551-88H-4301	Review Rail Plan for Loading/Unloading Cargo	INST	AN	4-5

CHAPTER 3

MOS/Skill Level Tasks

Skill Level 1
Subject Area 1: Initial Cargo Operations (Air)

551-88H-1501
Perform Hookup Team Duties

DANGER

Adhere to all DANGER statements listed in this task. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in this task. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in this task. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to perform hookup team duties in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, inside/outside signalmen, frequency modulated (FM) radio, a hookup person, a helicopter, static wand, sling assembly, flashlights (if required), a load, assistance from a sling leg crew, and a designated field site..

Standards: Perform individual hookup team duties, to include outside signalman, static wand person, hookup person, and sling leg crew duties without injury to personnel or damage to equipment or surroundings.

Special Condition: Static wand personnel must be trained on the effects of static electricity.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with hooking up cargo for slingload operations.

Note: None

Performance Steps

1. Perform pre-operations checks.

a. Inspect sling equipment for serviceability.

b. Ensure load being lifted is within aircraft weight limits.

c. Ensure cargo being transported is correctly prepared, rigged, and inspected for sling load movement.

d. Receive a safety briefing.

e. Ensure ground crew/helicopter support team (HST) personnel have protective equipment.

f. Ensure landing zone is free of debris before start of operation.

g. Maintain radio communication with helicopter pilot and aircrew.

h. Ensure outside signalman gives hand and arm signals to pilot.

NOTE: The inside signalman is a part of the aircrew and ensures the aircraft is properly positioned over the load.

2. Perform outside signalman duties.

a. Establish location of the load to be lifted.

b. Position yourself approximately 45 degrees off the nose of aircraft (left or right) depending on which pilot has control as helicopter approaches the load.

c. Provide hand/arm signals to pilot to position aircraft over the load.

NOTE: Signalman must ensure pilot can always see signals by moving with the aircraft.

d. Communicate hand/arm signals to inside signalman with primary directions when aircraft is over the load.

e. Signal ground crew to connect or disconnect to load.

f. Clear aircraft for departure once load is off the ground.

3. Perform static wand personnel duties.

a. Connect the static discharge wand to the cargo hookup (see Figure 3-1).

NOTE: When performing the hookup team duties the static discharge wand is not required if the reach pendant is being used (see Figure 3-2).

b. Ensure that static discharge wand maintains contact until the hookup/manual release crew clears the load.

c. Hookup/manual release crew clears the load.

NOTE: If contact is lost, all personnel will pull back until contact is reestablished between the wand and the aircraft's cargo hook. A strong static charge can jump up to 12 inches.

DANGER

A helicopter willl generate static electricity within 5 seconds after grounding is disconnected. Static electricity is dangerous and may cause death or injury.

4. Perform hookup personnel duties.

a. Ensure hookup person is on or near the load in a stable position (see Figure 3-3).

b. Attach the sling or net apex fitting to the cargo hook.

WARNING

In an emergency, the ground crewman or aircrew members can rotate the knob or lever counterclockwise and open the cargo hook.

c. Manually release the cargo hook (if required).

5. Perform sling leg crew duties.

a. Direct the sling leg crew to position themselves on or near the load on a stable surface.

b. Ensure they hold the sling legs clear of obstructions until the aircraft has lifted enough to apply tension.

c. Ensure they exit the area of the load and move to the team rendezvous point or exit direction.

d. Direct team to stand by to return to the load upon signal in case helicopter dips down and sling legs become entangled in the load.

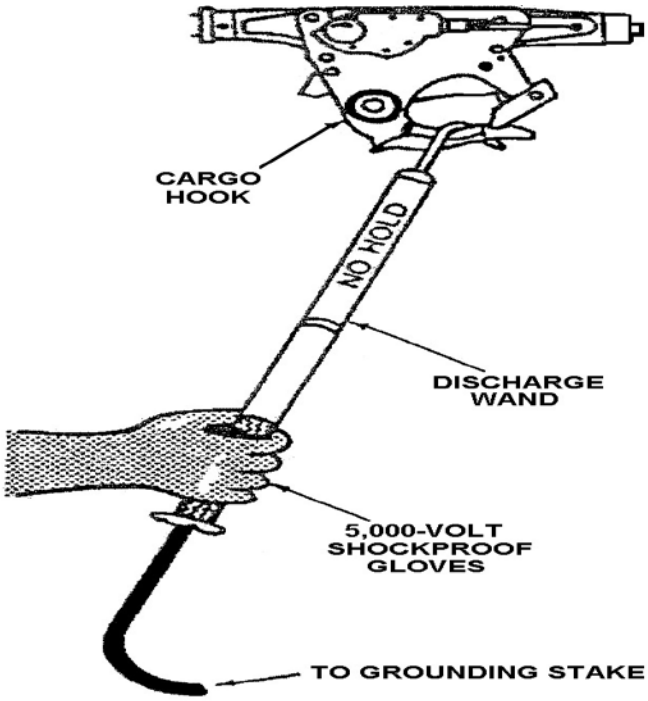


Figure 3-1

Connecting the Static Discharge Wand to the Cargo Hookup

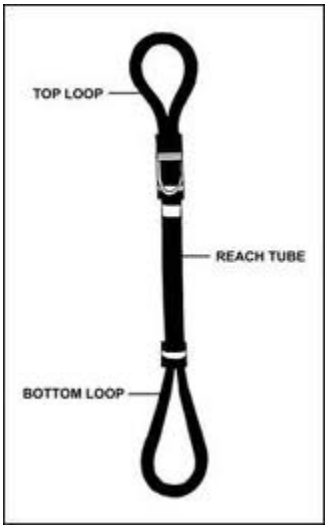


Figure 3-2

Reach Pendant

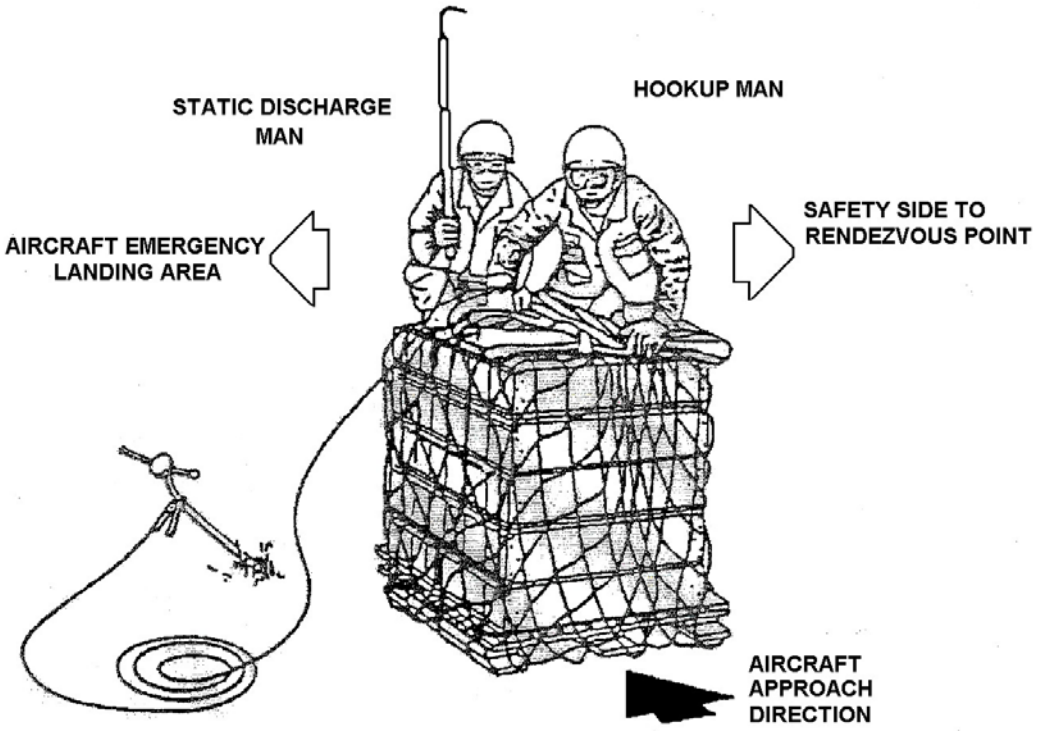


Figure 3-3

Hookup Person On or Near the Load in a Stable Position

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing hookup team duties.

Performance Measures	**GO**	**NO GO**
1. Performed pre-operations checks.	_____	_____
2. Performed outside signalman duties.	_____	_____
3. Performed static wand personnel duties.	_____	_____
4. Performed hookup personnel duties.	_____	_____
5. Performed sling leg crew duties.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TM 4-48.09 Multiservice Helicopter Sling Load: Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}	

Required	Primary
TM 4-48.10 Multiservice Helicopter Sling Load: Single-point Load Rigging Procedures {MCRP 4-11.3E, VOL II NTTP 3-04.12 AFMAN 11-223 (I), VOL II COMDTINST M13482.3B}	

551-88H-1514
Load Married 463L Pallets

Conditions: Assigned as a cargo checker/handler with the requirement to load married 463L pallets in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, two 463L pallets, a loading dock with rollers, spacers, chains, and tie-down devices (B1, B2), and load team chief supervision at an air terminal or designated field area.

Standards: Ensure that the two pallets are fastened together (married) securely by tie-down chains and loaded as directed by the load team chief without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with loading married 463L pallets.

Note: None

Performance Steps

1. Obtain two (2) serviceable pallets.

    a. Obtain B1/B2 tie-down device from storage.

    b. Obtain minimum of two (2) spacers from storage.

    c. Inspect all items for defects and serviceability.

NOTE: If any deficiency is noted, turn defective item in for repair.

2. Marry two 463L pallets.

    a. Place and align the pallets on the cargo loading dock.

    b. Align the indents and detents on the 108-inch side of each pallet (see Figure 3-4).

NOTE: Two (2) spacers are required as a minimum (see Figure 3-5).

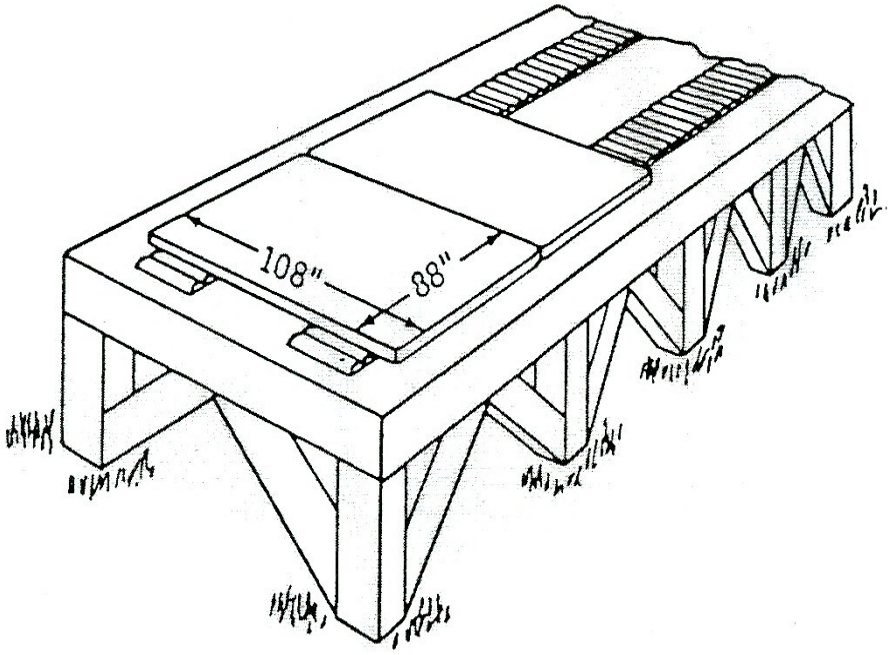


Figure 3-4

Aligning Indents and Detents

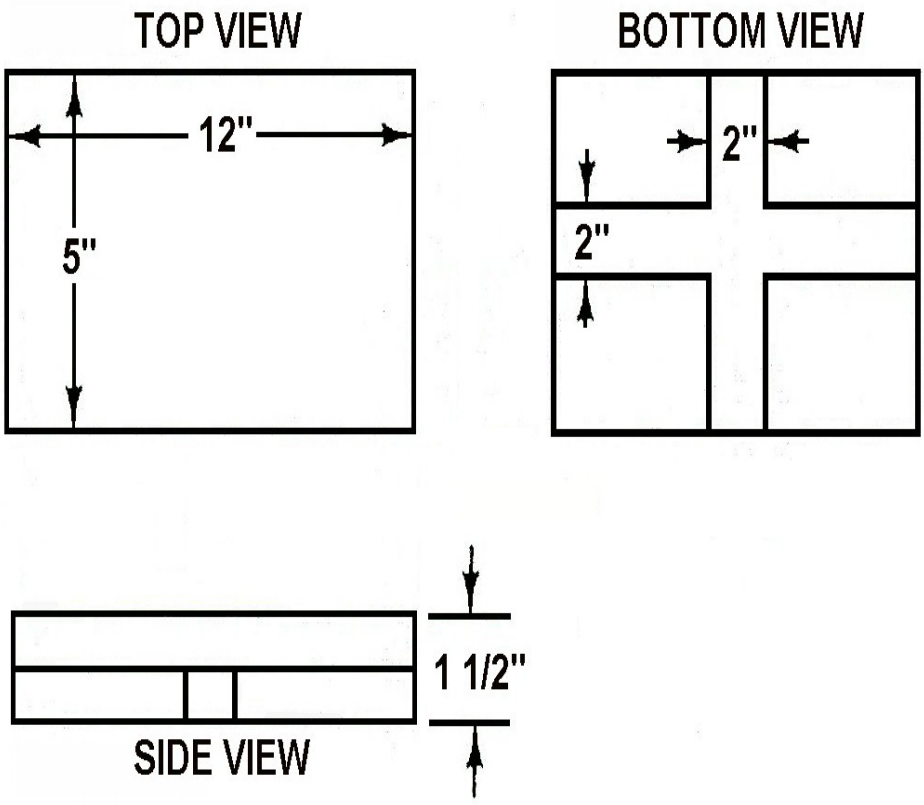


Figure 3-5

Use of Spacers

c. Place spacers between the pallets between the two ends in the indents and detents (see Figure 3-6).

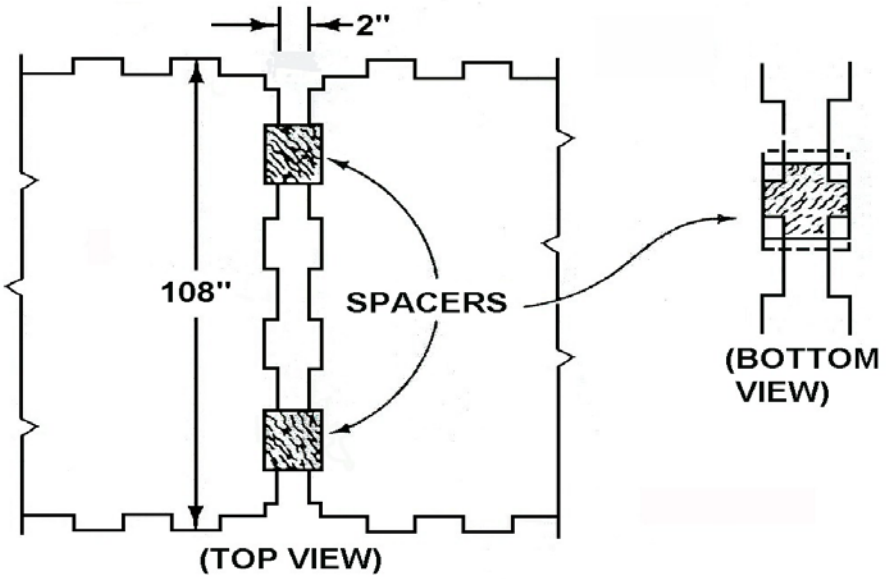


Figure 3-6

Spacers Placed Between Pallets

d. Chain pallets together using tie-down devices (see Figure 3-7).

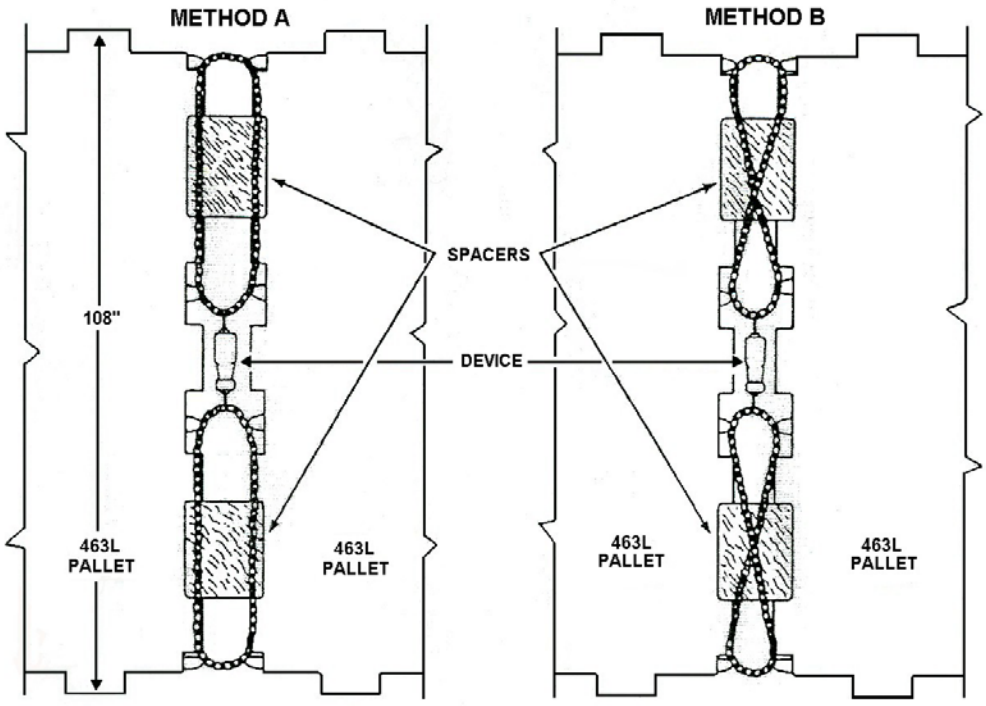


Figure 3-7

Chain Pallets Attached Using Tie-down Devices

e. Tighten chains securely.

3. Load married 463L pallets.

a. Place all dense, boxed, or crated cargo on the pallet first.

b. Place crushable and light density cargo on top of boxed and crated cargo.

c. Place containers marked "THIS END UP" in an upright position.

d. Place cargo with special labels on the pallet so that the labels are facing out whenever possible.

e. Place heavy items in the middle and lighter items near the end.

f. Build the load to form a cube or pyramid shape (as much as possible).

g. Inform the cargo checker that the pallets are married so that the tally sheet will be correct and attach one copy of the tally sheet to the cargo.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on loading married 463L pallets.

Performance Measures	**GO**	**NO GO**
1. Obtained two (2) serviceable pallets.	_____	_____
2. Married two (2) 463L pallets.	_____	_____
3. Loaded married 463L pallets.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1509
Place 463L Pallet System into Storage

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to place the 463L pallet system into storage in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety clothing, 463L pallets, dunnage, top and side nets, and forklift with operator.

Standards: Place 463L pallet system into storage without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been tasked to place 463L pallets into storage.

Note: None

Performance Steps

1. Inspect 463L pallets before placing pallets into storage.

    a. Ensure each 463L pallet is cleaned.

    b. Conduct serviceability check on each 463L pallet (top and bottom).

NOTE: Do not place any unserviceable pallets in storage. Check for dents, gouges, or scratches. If the skin is not fractured, pallets can be kept and stored. If pallet has bent rails, is missing tie-down rings, or the metal skin is peeling, turn pallet in for repair.

2. Store 463L pallets by laying out three-point dunnage to prevent damage and warping according to one of the following dunnage methods:

a. Arrange wooden 4- x 4- x 84-inch boards to form three rows of support.

b. Arrange a minimum of nine sandbags to provide two outer and one centerline of support.

c. If required, arrange a minimum of nine (9) un-serviceable, military-type, 5-gallon gasoline cans on edge to form three rows of support.

NOTE: Use military 5-gallon cans as a last resort.

3. Stack pallets on dunnage, adhering to the following guidelines:

a. Stack pallets, topside up, no more than 40 high with three pieces of dunnage between each group of 10 (see Figure 3-8).

b. Exercise care when using forklifts with bare tines.

NOTE: If pallets are stacked upside down, the tie-down rings will be damaged and the skin will be torn.

c. Never push or slide pallets across concrete floors or ramp surfaces.

4. Tally the number of serviceable pallets stored and report the total to the supervisor.

5. Inspect 463L top and side nets before storage (see Figure 3-9).

a. Lay out complete set of nets; one top and two side nets.

NOTE: Lay nets on floor, untangle and inspect for missing attachments (hooks and straps). If one net is rejected for damage, send the complete set in for repair.

b. Inspect each complete set of nets for breaks in the webbing or straps, missing rings or hooks, and attachments.

c. Check webbing for mildew and fiber deterioration.

d. Clean and dry nets before storing.

NOTE: Never store wet or unserviceable nets.

e. Place nets in storage location using these guidelines:

(1) Lay out two side nets and top net as a set.

(2) Fold the nets and secure the three nets together.

(3) Stack and store the nets, in sets, in a cool, dry, well-ventilated storage area with overhead cover.

(4) Keep nets away from heat, direct sunlight, damp areas, acid, batteries, chemicals, and alkalies.

(5) Do not place nets on cement, wood, or asphalt floors.

6. Tally the number of serviceable nets stored and report the total to the supervisor.

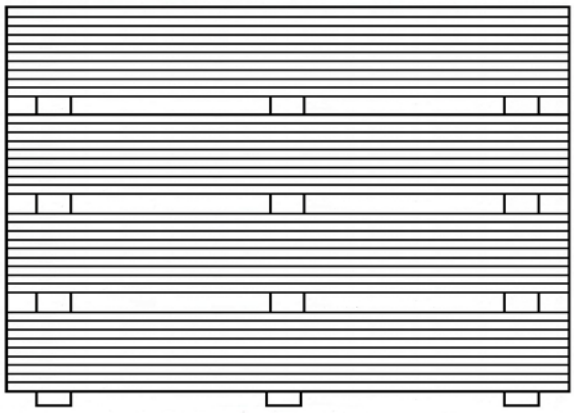


Figure 3-8

Stacking Pallets

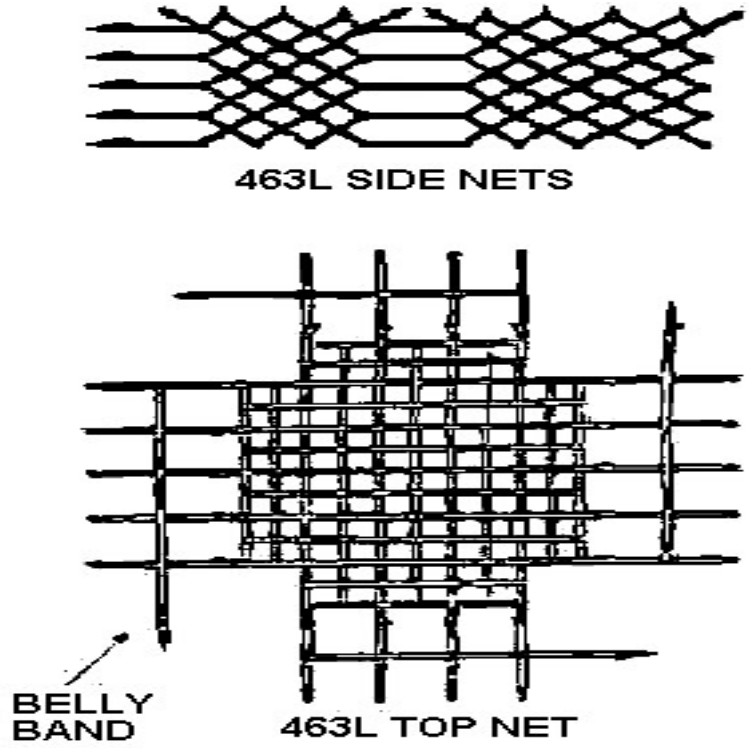


Figure 3-9

463L Top and Side Nets

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on placing 463L pallets into storage.

Performance Measures	**GO**	**NO GO**
1. Inspected 463L pallets before placing into storage.	_____	_____

Performance Measures	GO	NO GO
2. Stored 463L pallets by laying out three-point dunnage to prevent damage and warping.	_____	_____
3. Stacked pallets on dunnage.	_____	_____
4. Tallied the number of serviceable pallets stored and reported the total to the supervisor.	_____	_____
5. Inspected 463L top and side nets before storage.	_____	_____
6. Tallied the number of serviceable nets stored and reported the total to the supervisor.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1515
Construct a 463L Pallet

Conditions: Assigned as a cargo checker/handler with the requirement to construct a 463L pallet in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, 463L pallets, dunnage, top and side nets, a forklift operator, and cargo at an air terminal or designated field area.

Standards: Construct a 463L pallet without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You assigned as a cargo checker/handler tasked to construct 463L pallets to ready cargo for air movement.

Note: None

Performance Steps

1. Inspect 463L pallets before loading cargo on the pallet.

a. Coordinate with NCO/team leader before building or loading 463L pallets.

b. Inspect to ensure each 463L pallet is cleaned.

c. Conduct a serviceability check on each 463L pallet (top and bottom).

d. Inspect top and two (2) side nets for serviceability. Inspect each complete set of nets for breaks in the webbing or straps; tears where the webbing is sewn; or missing rings, hooks, and attachments.

NOTE: Do not use any unserviceable pallets or nets.

2. Load cargo on a 463L pallet.

a. Lay out three-point dunnage to prevent damage and warping according to one of the following dunnage methods:

(1) Arrange wooden 4- x 4- x 84-inch boards to form three rows of support.

(2) Arrange a minimum of nine sandbags to provide two outer and one centerline of support.

b. Palletize cargo from the heaviest to the lightest items by following these guidelines (see Figure 3-10):

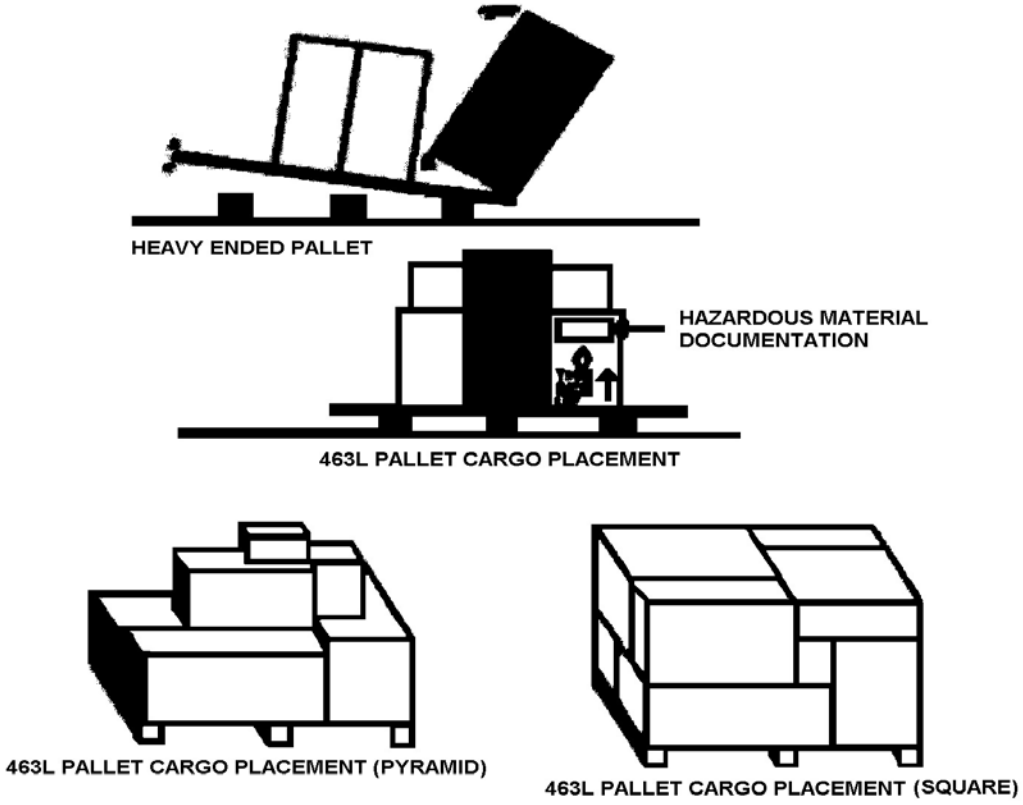


Figure 3-10

Palletizing Cargo

(1) Place all dense, boxed, or crated cargo on the pallet first.

(2) Distribute large/heavy items evenly out from the center.

(3) Build load in a square or pyramid shape for stability.

(4) Place containers marked "THIS SIDE UP" in upright position.

(5) Place labeled cargo with their labels facing out.

(6) Place crushable/light density cargo on top of boxed and crated cargo.

NOTE: 1. Use a pallet template or measuring stick to ensure the height restrictions are not exceeded (maximum height is 96"). 2. Never push or slide a pallet across concrete floors or ramp surfaces. Always lift before moving to avoid damage to pallet.

3. Secure cargo to the pallet.

a. Cover the pallet of cargo with plastic pallet cover before netting the cargo to the pallet.

b. Lay out a complete set of nets.

c. Attach the top net to the side nets by hooks and rings. The two side nets are attached to the rings on the pallets and go around the side of the load and a top net goes over the top of the cargo.

d. Use two sets of side nets when more than 5,500 pounds of cargo is loaded on the pallet.

NOTE: A set of large 463L pallet nets has a maximun capacity of 10,000 pounds at 8Gs when properly installed.

e. Begin with the left ring-side of the 463L pallet and work from left to right. Attach hook #1 on the side of the net to ring #1 on the pallet (see Figure 3-11).

NOTE: The side net hooks are connected inward to the 463L pallet. The top net is connected to the rings on the side net with hook facing out.

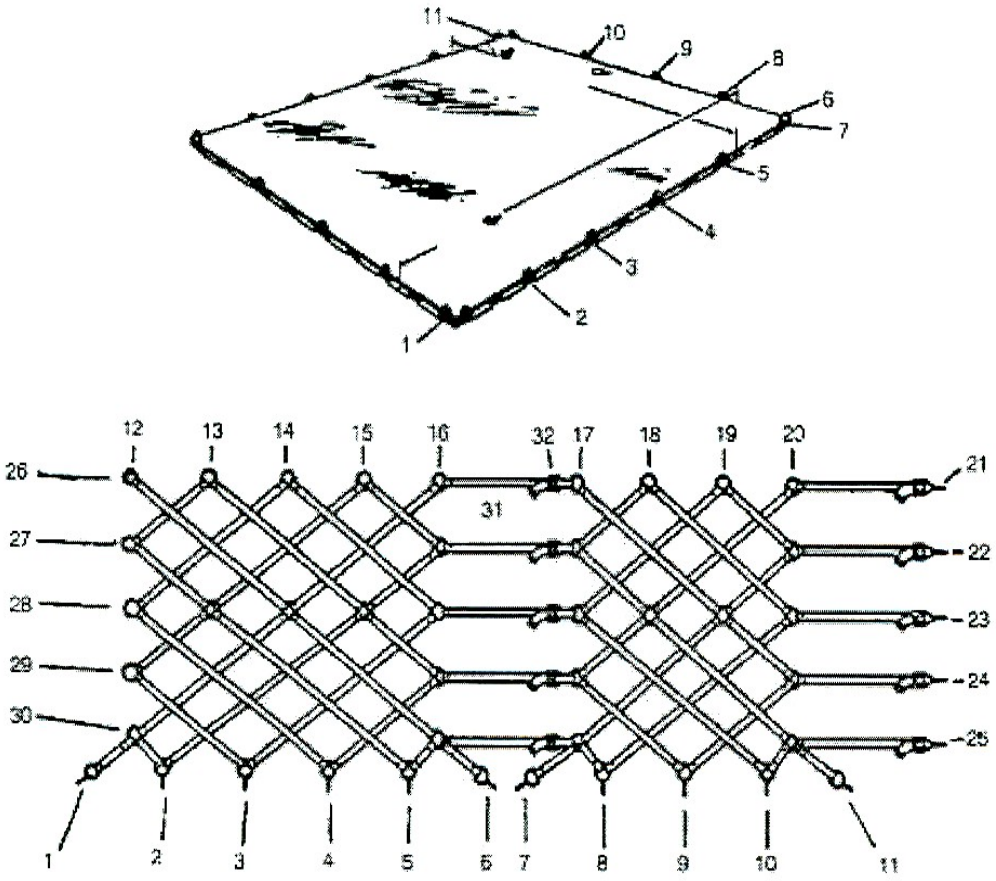


Figure 3-11

Attaching Hook #1 to Ring #1 on the Pallet

f. Attach both side nets and attach straps, then lift straps over the corner of the cargo.

g. After the side nets are attached and adjusted, place the top net over the pallet.

h. Secure the ends of the straps, tuck them in to ensure they will not become caught in the rail system when loading the pallet aboard the aircraft or in storage (see Figure 3-12).

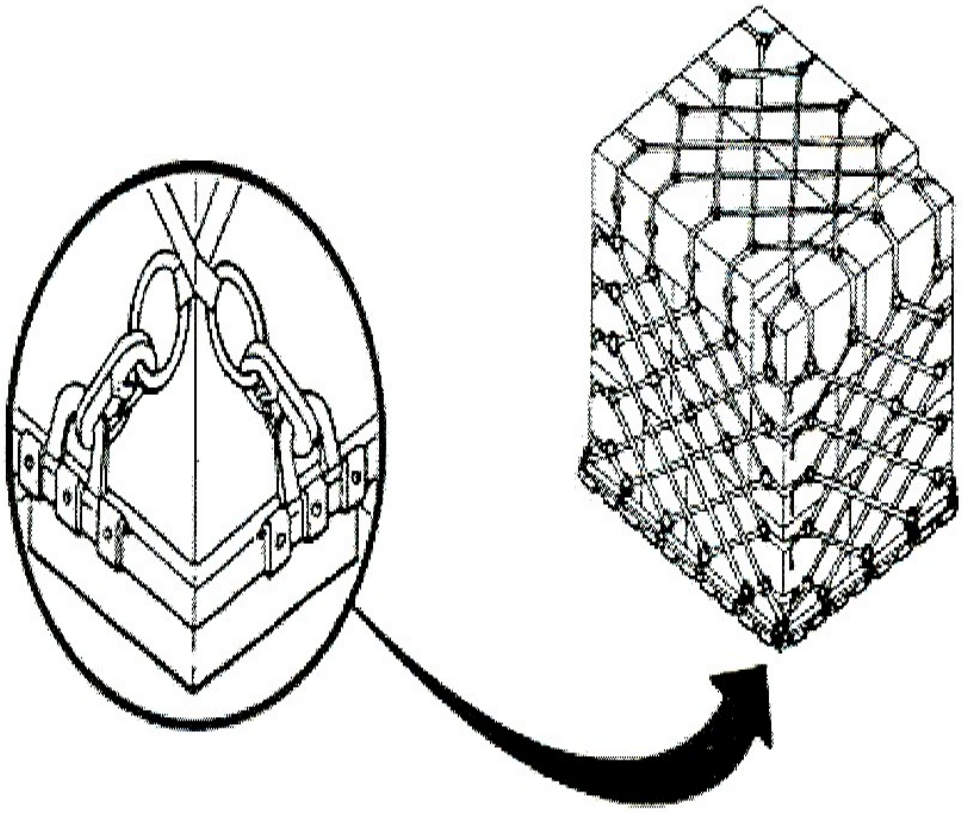


Figure 3-12

Securing the Ends of the Straps

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on constructing a 463L pallet.

Performance Measures	**GO**	**NO GO**
1. Inspected 463L pallets before loading cargo on the pallet.	_____	_____
2. Loaded cargo on a 463L pallet.	_____	_____
3. Secured cargo to the pallet.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1506
Secure Cargo Aboard Aircraft

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler on an aircraft load team with the requirement to secure cargo aboard aircraft in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, a cargo load plan, an aircraft, standard tie-down devices, chains, cargo to be loaded, and an air terminal or designated field area.

Standards: Secure cargo using aircraft tie-down devices without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler and a member of an aircraft load team and tasked to secure cargo using tie-down devices.

Note: None

Performance Steps

1. Position vehicle at prescribed station number in accordance with aircraft load plan.

NOTE: 1. Position rolling, approach, or parking shoring prior to moving (if needed) vehicle onto aircraft. 2. Ensure that the center of balance marking is aligned with the designated station number and the vehicle is centered from left to right of the aircraft floor.

2. Apply shoring if vehicle weighs over 20,000 pounds and has low pressure off-road tires to prevent the load from bouncing during the flight to avoid damage to aircraft.

3. Select tie-down devices.

a. Identify gross weight of the load.

b. Determine the force to be restrained.

c. Identify number and capacity of tie-down devices.

4. Install tie-down devices (see Figure 3-13).

NOTE: 1. Do not place chains against brake, hydraulic, or fuel lines, tires, or electrical wiring. Do not attach tie-down devices to steering mechanism, tie-rods, drive shafts, grills, fenders, or body braces. Do not apply more than 50 percent of required tie-down devices to the vehicle axles. 2. Before attaching tie-down devices, make certain that the tie-down fitting is the same capacity of the tie-down device. 3. CGU-1/B and tie-down devices must be attached in a symmetrical pattern and in pairs. Whenever possible, install tie-down devices at an angle of 30 degrees from the cargo floor and 30 degrees from the longitudinal axis.

a. Attach the hook end of the tie-down device to the aircraft floor with the hook end pointed up and apply tension to the top of the ring.

b. Attach the chain end of the tie-down device to the structural points of the vehicle.

c. Ensure chains pull in a straight line and not against one another.

5. Install CGU-1/B tie-down devices (see Figure 3-14).

NOTE: 1. Use cargo protective padding when using CGU-1/B strap to secure cargo with sharp edges. 2. Use cargo straps on cargo that may be damaged by chains. 3. Before using the CGU-1/B tie-down device, unwind the spool.

a. Attach the stationary end of the hook to aircraft floor with the hook end pointed up.

b. Apply tension to the strap by operating the handle with a rocking motion until it tightens.

NOTE: Do not force with added leverage and do not use nylon devices over sharp edges.

6. Tighten tie-down devices.

a. Tighten devices with equal tension.

b. Conduct final inspection of tie-down restraints.

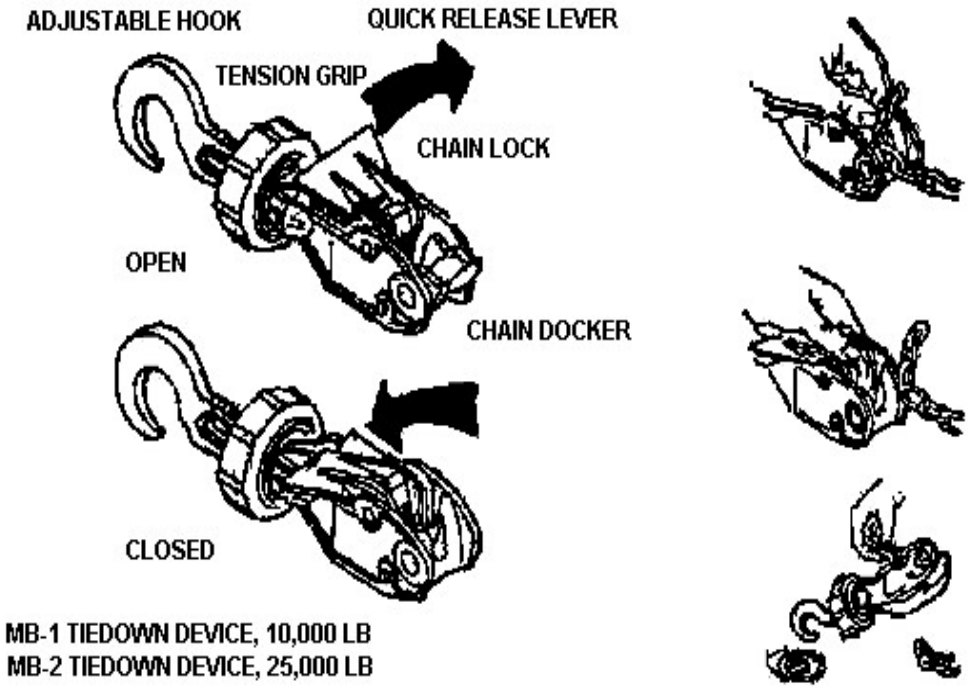


Figure 3-13

Tie-down Devices

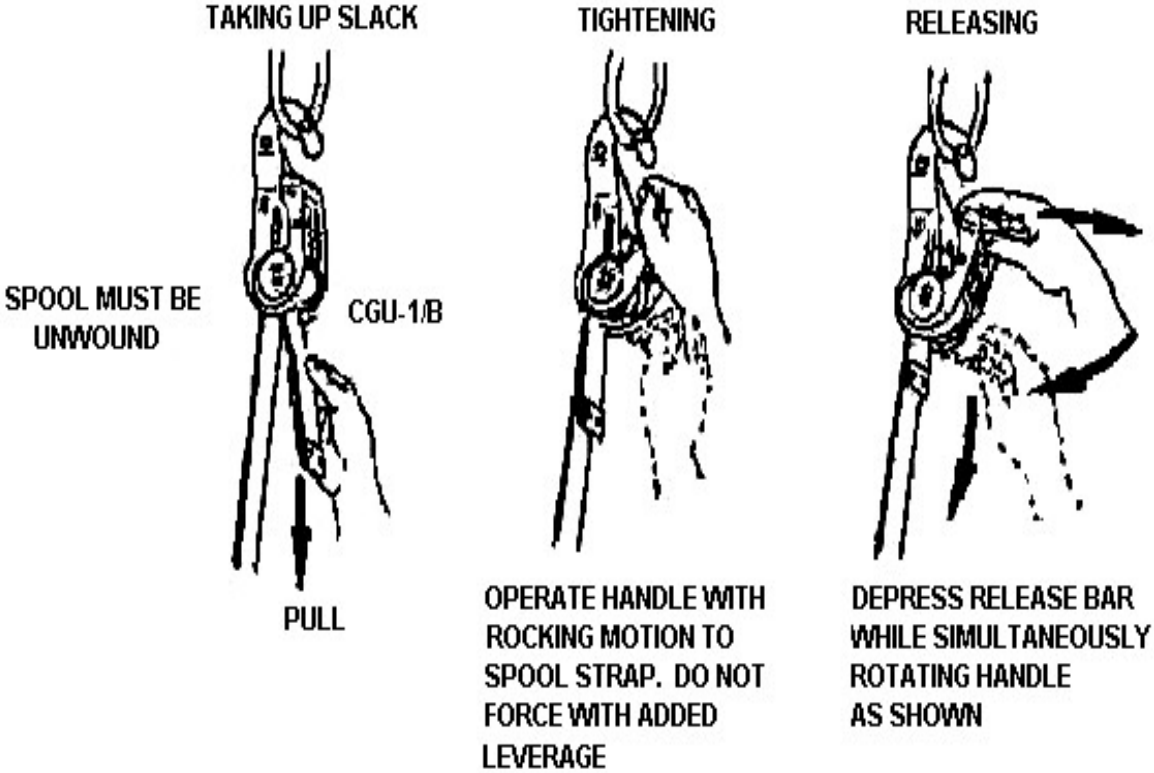


Figure 3-14

CGU-1/B Tie-down Devices

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on securing cargo aboard aircraft.

Performance Measures	**GO**	**NO GO**
1. Positioned vehicle at prescribed station number in accordance with aircraft load plan.	_____	_____
2. Applied shoring (if required).	_____	_____
3. Selected tie-down devices.	_____	_____
4. Installed tie-down devices.	_____	_____
5. Installed CGU-1/B tie-down devices.	_____	_____
6. Tightened tie-down devices.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1508
Mark Center of Balance for a Multi-axle or Tracked Vehicle

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to mark the center of balance for a multi-axle or tracked vehicle in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, safety clothing and protective equipment, a multi-axle vehicle or tracked vehicle with operator, masking tape, black marker, calculator, pencil, note pad, clipboard, tape measure, a minimum of two calibrated scales, and wooden beam.

Standards: Mark center of balance for a multi-axle or tracked vehicle without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been tasked to mark center of balance for multi-axle or tracked vehicles for deployment/redeployment.

Note: None

Performance Steps

1. Identify all vehicle measurement points (see Figure 3-15).

NOTE: The following terms are used to calculate the center of balance:
CB = Center of balance - vehicle center of balance measured in inches from the reference datum line.
RDL = Reference datum line - forward front edge of the vehicle.
FAW = Front axle weight - total weight of the front axle measured in pounds.
FFE = Front Forward Edge - forward front edge of the vehicle.

IAW = Intermediate axle weight - total weight of the intermediate axle measured in pounds.
RAW = Rear axle weight - total weight of the rear axle measured in pounds.
GW = Gross weight - total weight of the vehicle measured in pounds.
D1 = Distance 1 - distance from the RDL to the center of the front axle measured in inches.
D2 = Distance 2 - distance from the RDL to the center of the intermediate axle measured in inches.
D3 = Distance 3 - distance from the RDL to the center of the rear axle measured in inches.
FOH = Front overhang - distance in inches from front bumper to center of front axle.
ROH = Rear overhang - distance from rear axle or center of tandem axles to rear bumper.
WB = Wheel base - distance in inches from center of front axle to center of rear axle or center of tandem axles.
W1 = Weight 1 - total weight of the front axle measured in pounds.
W2 = Weight 2 - total weight of the intermediate axle measured in pounds.
W3 = Weight 3 - total weight of the rear axle measured in pounds.
Moment = the product obtained by multiplying the axle weight by the distance of that axle from the RDL.

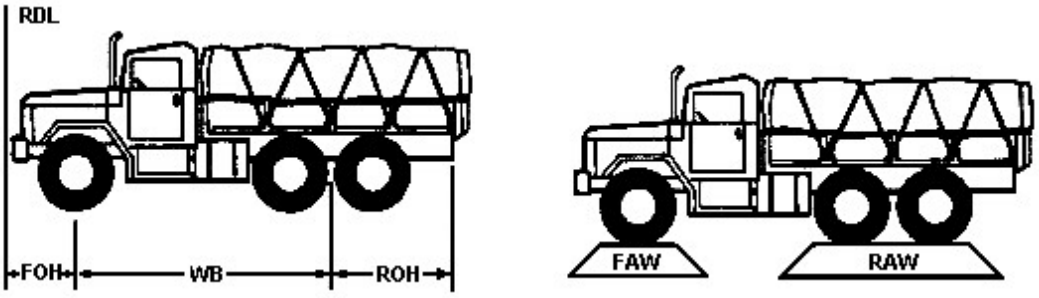


Figure 3-15

Vehicle Measurement Points

CAUTION

You must ground guide the vehicle every time it moves. Do not stand directly in front of the vehicle while ground guiding it.

2. Weigh axles (see Figure 3-16).

a. Instruct driver to position front axle of vehicle on scales.

b. Instruct driver to apply parking brake, turn off ignition, and dismount vehicle.

c. Obtain weight from scales for front axle.

d. Combine the weight from the two scales to make W1.

e. Record FAW on note pad as W1.

f. Apply strip of masking tape above front axle on both sides of the vehicle.

g. Record FAW on the masking tape (example: FAW = 12,500 pounds).

h. Instruct driver to remount vehicle and drive forward until the intermediate axle is centered on the scales.

i. Instruct driver to apply parking brake, turn off ignition, and dismount vehicle.

j. Obtain weight from the scales for intermediate axle.

k. Combine weight from the two scales to make W2.

l. Record IAW on note pad as W2.

m. Apply strip of masking tape above intermediate axle on both sides of vehicle.

n. Record IAW on the masking tape (example: IAW = 12,900 pounds).

o. Instruct driver to remount vehicle and drive forward until the rear axle is centered on the scales.

p. Instruct driver to apply parking brake, turn off ignition, and dismount the vehicle.

q. Obtain weight from scales for the rear axle.

r. Combine the weight from the two scales to make W3.

s. Record RAW on note pad as W3.

t. Apply strip of masking tape above the rear axle on both sides of the vehicle.

u. Record RAW on the masking tape (example: RAW = 12,700 pounds).

v. Order driver to remount vehicle and drive forward until vehicle has cleared the scales.

NOTE: If enough portable scales are available, the entire vehicle can be taken onto the scales at one time. Chalk can be used if tape is not available.

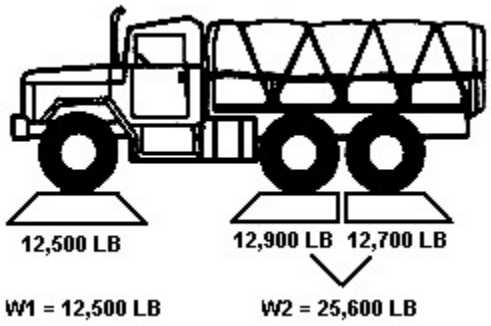


Figure 3-16

Axle Weights

3. Measure axle distances (see Figure 3-17).

NOTE: Measure the intermediate and rear axles separately when they are 48 inches or more apart measured from center to center.

a. Measure distance from the RDL to the center of the front axle wheel hub.

b. Record distance on worksheet as D1 in inches (example: D1 = 70 inches).

c. Measure from the RDL to the center of the intermediate axle wheel hub.

d. Record distance on worksheet as D2 in inches (example: D2 = 222 inches).

e. Measure from the RDL to the center of the rear axle wheel hub.

f. Record distance on the worksheet as D3 in inches (example: D3 = 276 inches).

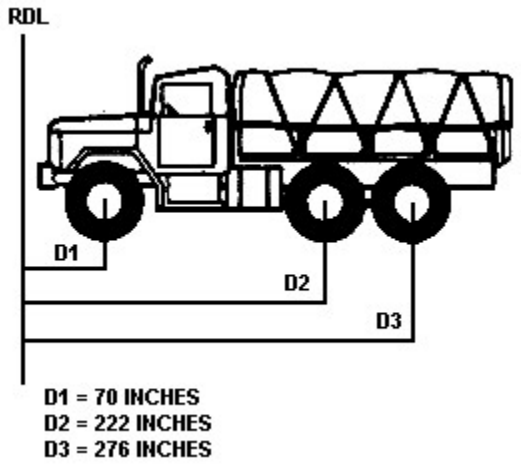


Figure 3-17

Axle Distances

4. Determine axle distance for tandem axle vehicles (see Figure 3-18).

NOTE: Compute CB from RDL to tandem midpoint. Use this method only when intermediate and rear axles are less than 48 inches apart measured from the center of intermediate to the center of the rear axle.

a. Measure distance from the RDL to the center of the front axle wheel hub.

b. Record distance on the worksheet as D1 in inches (example: D1 = 70 inches).

c. Measure from the RDL to the center of the tandem axles.

d. Record distance on the worksheet as D2 in inches (example: D2 = 249 inches).

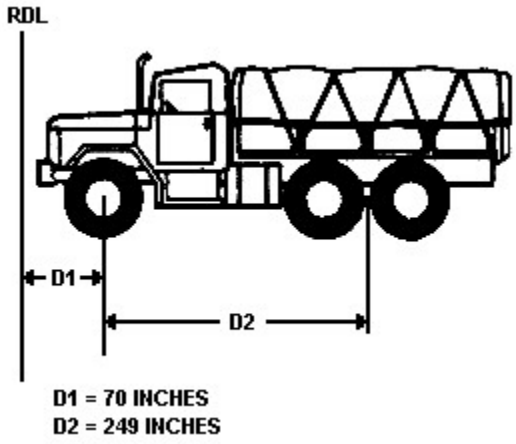


Figure 3-18

Determining Axle Distance for Tandem Axle Vehicles

5. Compute center of balance.

a. Determine moments by multiplying weights by distances to obtain moments and then adding moments together.

b. Determine gross weight by adding all axle weights together.

c. Divide the total moments by the gross weight to obtain the center balance in inches.

d. Round off answer to the nearest whole inch (example: 56.9 inches is rounded up to 57 inches).

Example formula:
3-axle vehicle: (W1 x D1) + (W2 x D2) + (W3 x D3) = Center of Balance
_____
Gross Weight

Example computation:
(70" x 12,500 lbs) + (222" x 12,900 lbs) + (276" x 12,700 lbs) = 190" from RDL
_____
38,100 lbs

NOTE: When using tandem formula, simply add the weight of the intermediate and rear axles to form one weight (W2). In this case there would not be a W3.

Example formula:
Tandem-axle vehicle: (W1 x D1) + (W2 x D2) = Center of Balance
_____
Gross Weight

Example computation:
(70" x 12,500 lbs) + (249" x 25,600 lbs) = 190" from RDL
_____
38,100 lbs

6. Mark center of balance.

a. Measure from RDL to CB distance that was obtained from computations (see Figure 3-19).

b. Mark CB by forming a T-shape with masking tape or by making "T" with chalk; the vertical portion of the "T" represents the center of balance mark (see Figure 3-20).

c. Write gross weight on the horizontal portion of the "T" formed by the masking tape or chalk mark.

d. Write the letters "CB" on the vertical portion of the T-shape; also annotate the CB in inches (example: 190 inches).

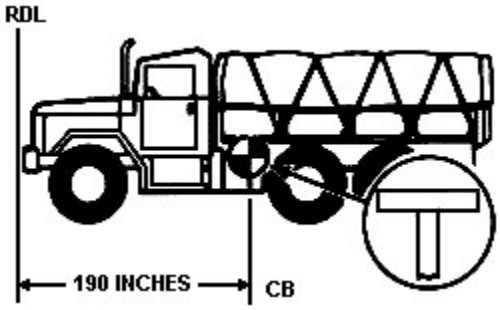


Figure 3-19

Measuring from RDL to CB

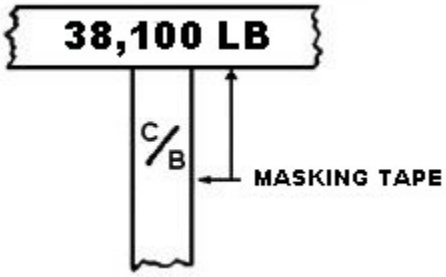


Figure 3-20

Marking the CB

7. Determine the weight of a tracked vehicle.

a. Order driver to drive vehicle onto a platform scale large enough to accommodate the entire vehicle (see Figure 3-21).

b. Record weight of tracked vehicle.

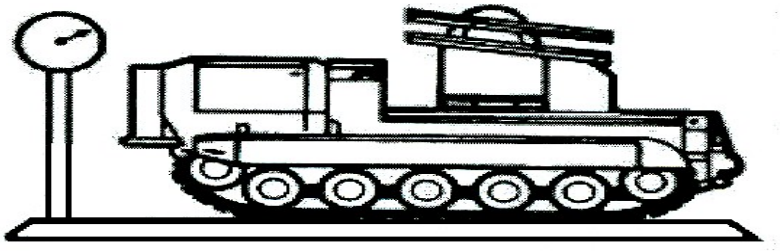


Figure 3-21

Determining the Weight of a Tracked Vehicle

8. Determine center of balance of a tracked vehicle.

a. Order driver to drive the vehicle onto a wooden beam or pole until the vehicle tilts forward (see Figure 3-22).

b. Mark the side of the vehicle at the point of tilt.

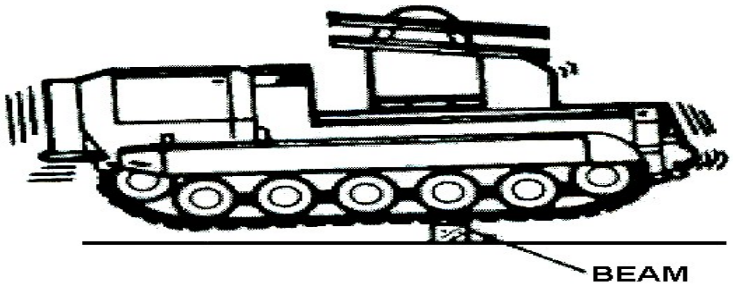


Figure 3-22

Determining the Center of Balance of a Tracked Vehicle

9. Mark center of balance and gross weight of a tracked vehicle.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on marking the center of balance for a multi-axle or tracked vehicle.

Performance Measures	**GO**	**NO GO**
1. Identified vehicle measurement points.	_____	_____
2. Weighed axles.	_____	_____
3. Measured axle distances.	_____	_____
4. Determined axle distance for tandem axles (if applicable).	_____	_____
5. Computed center of balance.	_____	_____
6. Marked center of balance.	_____	_____
7. Determined weight of tracked vehicle.	_____	_____

Performance Measures	GO	NO GO
8. Determined center of balance of tracked vehicle.	_____	_____
9. Marked center of balance and gross weight of tracked vehicle.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TB 55-46-1 Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Item Number Sequence) {NAVFAC P-1055}	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1511
Escort Passengers and Chalks to Aircraft

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnnel and damage to equipment.

WARNING

Do not approach within 50 feet of an engine intake or within 200 feet of the blast area to the rear when the jet engines are running.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to escort passengers and chalks to aircraft in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, hand-held radio, personnel, manifest, and chalks consisting of passengers and vehicles with operators to be escorted and loaded aboard an aircraft at an air terminal or designated field area under supervision of the ramp Noncommissioned Officer (NCO)/loadmaster.

Standards: Safely escort personnel (chalks) to the aircraft as directed by the ramp NCO or loadmaster without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler that has been tasked to escort personnel and chalks to the aircraft.

Note: None

Performance Steps

1. Prepare to escort personnel chalks to aircraft.

    a. Ensure communication equipment is working properly.

    b. Coordinate with ramp NCO or loadmaster before proceeding with escorting personnel chalks.

    c. Identify the location of the aircraft and loading ramp.

d. Coordinate with ramp NCO or loadmaster to obtain airfield clearance.

2. Conduct safety briefing for all deploying personnel and inform them:

a. A chalk commander will be assigned to each personnel chalk.

b. Troops will move onto the airfield in a controlled formation.

c. They will halt at least 100 feet from the edge of runways, taxi strips, and ramp area awaiting clearance.

d. No smoking is allowed on the aircraft parking ramp or flight line, except in designated areas.

e. Not to allow trash or debris to be thrown on the flight line. Police up any trash or debris immediately.

f. Not to stand or walk directly in front of or behind vehicles being driven or backed into the aircraft.

g. Not to approach within 50 feet of an engine intake or within 200 feet of the blast area to the rear when jet engines are running.

h. To observe a 3-MPH walking speed when within 10 feet of the aircraft.

i. Troops not allowed on flight line without an Air Force or A/DACG escort.

j. Propeller-driven aircraft danger area is 10 feet in front and 200 feet to the rear.

k. To walk to the outside of the wing tips and keep a minimum of 10 feet from the aircraft.

l. After receiving instruction on various hand and arm signals used on the airfield, obey all hand and arm signals used while on flight line or terminal area.

m. To wear ear protection.

n. To enter the aircraft upon direction of the aircraft loadmaster.

3. Escort personnel chalks to the aircraft.

a. Identify personnel (chalks) sequence as described by the manifest.

b. Direct designated team chiefs to form troops prior to proceeding to the flight line.

c. Direct all chalk commanders to follow you as you walk toward the aircraft, using hand and arm signals to control troop movements.

d. Halt formations at least 100 feet from the edge of the runway, taxi strip, or flight line awaiting an Air Force or A/DACG escort.

e. Direct movement of troops upon arrival of Air Force or A/DACG escort by following them to the aircraft.

f. Direct movement of troops into the aircraft under the direction of the ramp NCO or loadmaster.

g. Report all violations of instructions and no-show passengers to your supervisor for immediate corrective action.

4. Prepare to escort cargo chalks to aircraft.

a. Establish hand-held radio communication.

b. Ensure communication equipment is working properly.

c. Coordinate with ramp NCO or loadmaster before proceeding with escorting vehicle chalks.

d. Identify the location of the aircraft and loading ramp.

e. Coordinate with ramp NCO or loadmaster to obtain airfield clearance.

5. Conduct safety briefing by informing all vehicle operators and vehicle spotters of the following safety guidelines:

a. Speed limit for all vehicles on the flight line is 15 MPH.

b. Speed limit for all vehicles within 25 feet of the aircraft is 5 MPH.

c. Speed limit for all vehicles within 10 feet of the aircraft, on the aircraft loading ramp, and inside the aircraft is extremely slow and cautious.

d. They must not approach within 50 feet of an engine intake or within 200 feet of the blast area to rear when jet engines are running.

e. They must approach an aircraft in a vehicle with the driver's side nearest the aircraft.

f. They do not drive under any part of the aircraft or between the wing tips of parked aircraft.

g. No vehicle will be parked closer than 10 feet to an aircraft, except those being loaded.

h. Propeller-driven aircraft danger area is 10 feet in front and 200 feet to the rear.

i. The inside of the aircraft is controlled by the loadmaster.

j. All vehicles must be loaded from the rear of aircraft and spotters must be placed at the front and rear corners of the vehicle.

k. Spotters must walk to the outside of the wing tips and keep a minimum of 10 feet from the aircraft during exit procedures

l. Vehicle operators and spotters are not to stand or walk directly in front or directly behind vehicles being escorted or loaded.

m. Vehicle operators and spotters obey all hand and arm signals used while on flight line or in terminal area.

n. They are not to back vehicles towards or into an aircraft without spotters being placed at the front or rear corner's of the vehicles.

o. There is no smoking on the parking ramp area except in designated smoking zones.

p. The wearing of jewelry is not authorized and they must wear gloves and goggles.

q. Report any violations of instructions to the ramp NCO or loadmaster for immediate corrective action.

6. Escort vehicle chalks to the aircraft (see Figure 3-23).

a. Identify vehicle (chalks) sequence.

b. Direct operators to start their engines.

c. Direct all operators to follow you as you walk toward the aircraft, using hand and arm signals to control vehicle movement.

d. Ensure vehicles approach the aircraft so that the driver's side is toward the aircraft.

e. Ensure no vehicle drive under any part of the aircraft or between the wing tips of parked aircraft.

f. Ensure the spotters are not directly in front or behind any moving vehicle.

g. Ensure the aircraft loadmaster directs all backing of vehicle onto the aircraft.

h. Ensure the vehicle operator stay in vehicles until cleared by NCO or loadmaster.

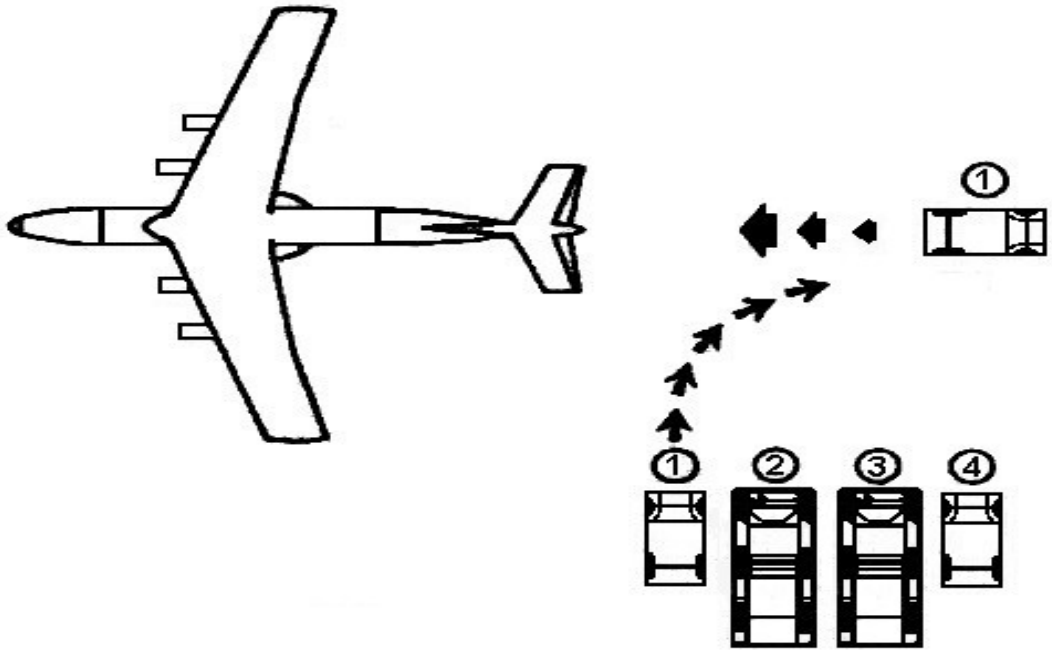


Figure 3-23

Escorting Vehicle Chalks to the Aircraft

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on escorting passengers and chalks to aircraft.

Performance Measures	GO	NO GO
1. Prepared to escort personnel chalks to aircraft.	_____	_____
2. Conducted safety briefing for all deploying personnel.	_____	_____
3. Escorted personnel chalks to the aircraft.	_____	_____
4. Prepared to escort cargo chalks to aircraft.	_____	_____
5. Conducted safety briefing for all vehicle operators and vehicle spotters.	_____	_____
6. Escorted vehicle chalks to the aircraft.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 2: Initial Cargo Rigging Operations

551-88H-1518
Open Hatches

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to compy may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to compy may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to compy may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to open hatches in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a cargo vessel with pontoon covers, tarpaulins, folding metal or hydraulic hatches, ship's gear, dunnage, safety clothing, and foreman supervision.

Standards: Open hatches without injury to personnel or damage to equipment.

Special Condition: Open hatches during large, medium speed roll-on/roll-off (LMSR) and fast sealift ship (FSS) hatch operations.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to open hatches to load/discharge cargo.

Note: None

Performance Steps

1. Open hatches (see Figure 3-24).

    a. Folding metal hatch cover operated by cable or hydraulics.

    b. Hinged hatch cover operated by cable or hydraulics.

    c. Pontoon or removable type hatch cover (for breakbulk).

(1) Knock out the wedges.

(a) Gather them all.

(b) Stow them together in one place.

(2) Remove the battens and lay them on the deck next to the hatch coaming.

(3) Remove the tarpaulin and place it on the non-working side of the vessel.

(4) Attach the O-ring of the bridal slings to the cargo hook.

(5) Attach the four legs of the bridal slings to each corner fitting of the pontoon/removable hatch cover. HOOKS MUST FACE OUT.

(6) Remove the hatch cover and place it on the non-working side of the vessel.

(7) Remove each succeeding pontoon/removable hatch cover and stack them no higher that the hatch coaming.

2. Complete preparation of hatches (LMSR and FSS).

NOTE: These are the two most commonly used ships in transporting cargo. Both are equipped with hard back (pontoon covers) and hinge cover hatch. Equipment needed to service these types of pontoon covers are ship cranes/off ship cranes, four legged bridles, tag lines, D-rings, stanchion, T-wrench, and dunnage.

a. Place dunnage on the non-working hatch cover.

b. Release the hatch cover using a T-wrench.

NOTE: Use a 2 3/8-inch box or open-end wrench if a T-wrench is not available.

c. Secure tag lines with a bowline knot to the closest D-ring of each hatch cover corner.

d. Center the cargo hook and four (4) legged bridle sling to the cargo hook.

e. Lower the cargo hook and attach four legged bridle sling to the cargo hook.

f. Attach the sling shackle with hook facing outward to the yellow D-ring on the hatch cover.

g. Attend the tag lines.

h. Slowly raise the hatch cover slightly above the non-working hatch cover.

i. Position and lower the hatch cover directly over the non-working hatch cover.

j. Apply the stanchion.

NOTE: The stanchion is not designed to protect you. It is used to section off the work area.

3. Close hatches.

a. To close the hatch cover, perform the above steps in the reverse order of the hatch cover's opening and removal.

b. Secure tools and police the area.

c. Notify the hatch foreman of any deficiencies.

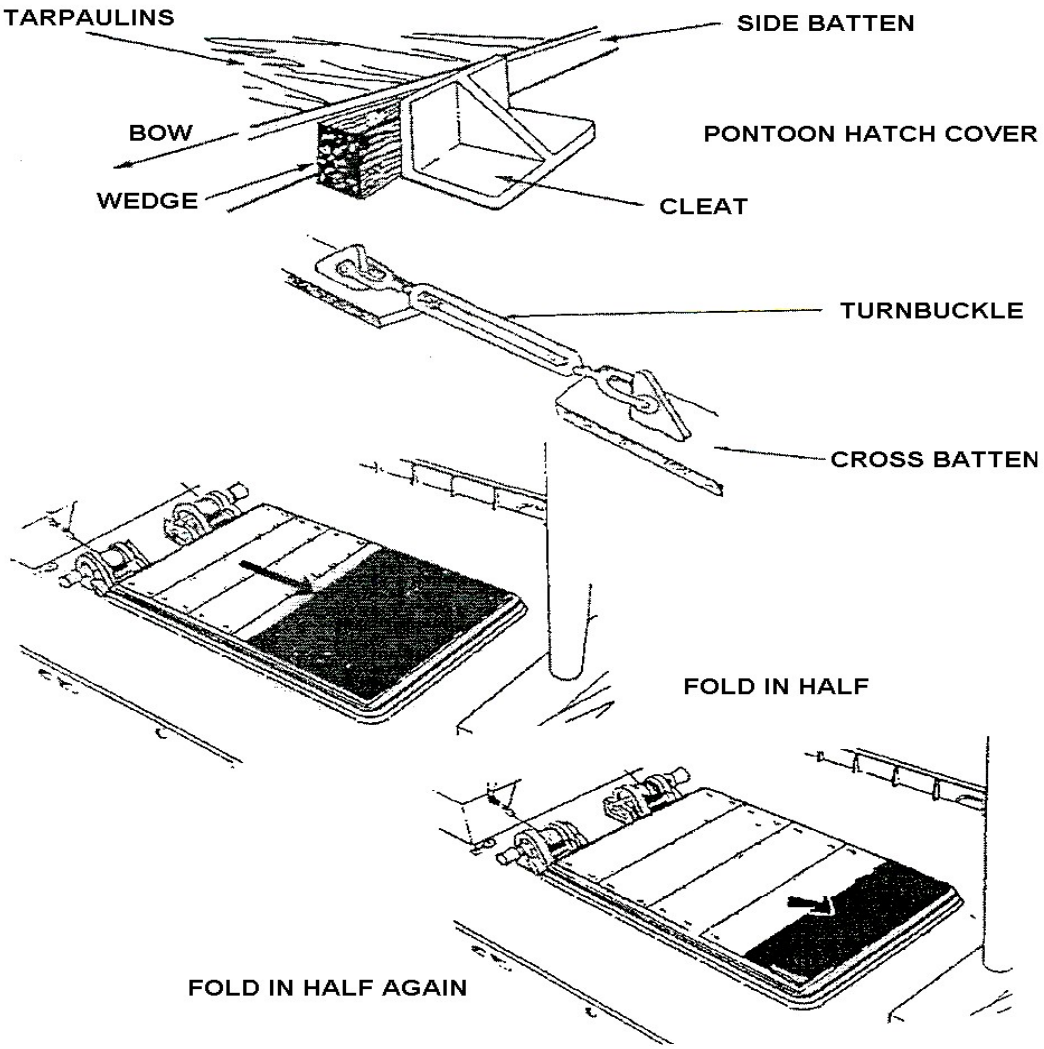
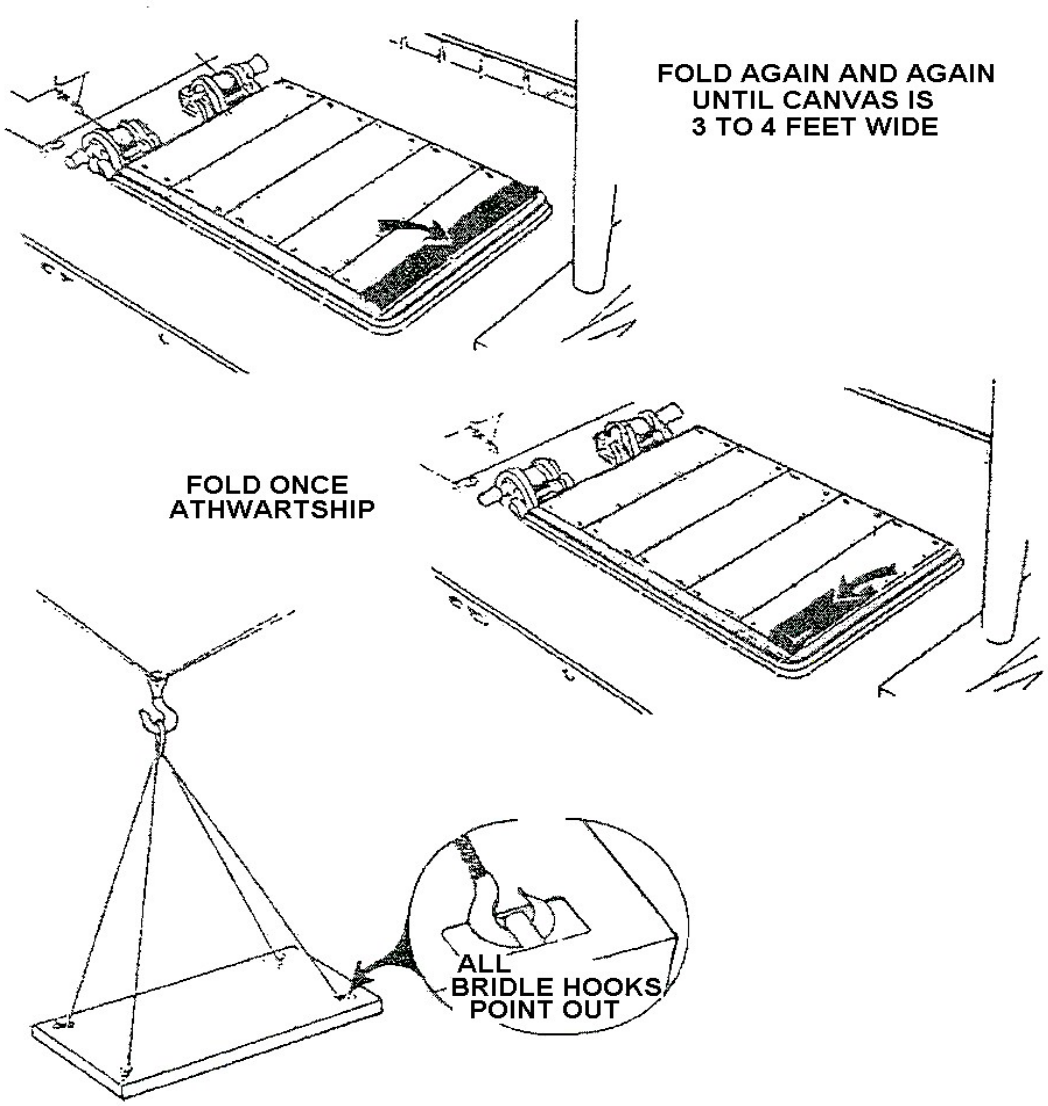


Figure 3-24

Operating Hatches



LIFTING PONTOON WITH BRIDLE

Figure 3-24

Operating Hatches (continued)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on opening hatches.

Performance Measures	**GO**	**NO GO**
1. Opened hatches.	_____	_____
2. Completed preparation of hatches (LMSR and FSS).	_____	_____
3. Closed hatches.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1504
Top Standard Booms Equipped with Single-topping Lift

DANGER

Adhere to all DANGER statements listed in the equipment operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator given the requirement to top standard booms equipped with single-topping lift in an operational environment, during the day or night, in normal weather conditions, given a cargo vessel with standard boom rigging, standard boom equipped with a single-topping lift, safety briefing, safety gear, instruction from the foreman, and a completed risk assessment.

Standards: Top standard booms equipped with single-topping lift without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been assigned to top standard booms equipped with a single-topping lift.

Note: None

Performance Steps

1. Raise the boom equipped with a single-topping lift.

NOTE: Ensure the work area is clean and that ship's gear has been inspected. Report any deficiencies to the hatch foreman.

a. Lay out guy to proper fittings.

b. Lay topping lift wire along the deck or over the rail.

NOTE: 1. The hatch gang will place the hauling part of the topping-lift wire in a wire rope snatch block.
2. On a vessel rigged with single-topping lifts, the catheads are equipped with a fitting to which the bull

rope can be fastened. When the fitting is available, the bull rope is secured to it, instead of the five (5) turns being taken around the cathead (see Figure 3-25).

c. Attach the guys to the deck fittings and to the inboard and outboard guys.

d. Overhaul the runner as the boom is being topped.

e. Raise the boom to the desired height; shackle the bull chain to the deck (see Figure 3-26).

(1) Slack off the bull line slowly until the chain supports the weight of the boom.

(2) Remove the bull line from the cathead and coil it around the cleat.

f. Secure the bull line to the topping lift cleat by taking three (3) round turns on the cleats followed by three (3) figure eights.

g. Tie or mouse the figure eights with a piece of yarn or wire.

2. Lower the boom equipped with a single-topping lift.

a. Remove the bull rope from the cleat.

b. Run the bull rope through a snatch block (if not already done) and then to the cathead.

c. Secure the bull rope by taking five (5) turns around the cathead in the same direction as the cargo runner (over the cathead) or attach the bull rope to the fitting on the cathead.

d. Raise the boom slightly to remove the weight from the bull chain.

e. Remove the shackle that secures the bull chain to the deck.

f. Lower the boom.

g. Secure the gear to the lowered boom.

h. Rewind the runners on the drum of the winch.

i. Secure the cargo hook to a pad eye with a slight strain on the cargo runner.

j. Secure guys to the heel block or fittings on the mast table and pull taut.

k. Coil the hauling part of the outboard and inboard guys over the guy tackles.

l. Tie off the guys.

m. Make amidships guys fast to the cleat on the mast.

n. Secure the topping lift wire to the pad eye on deck.

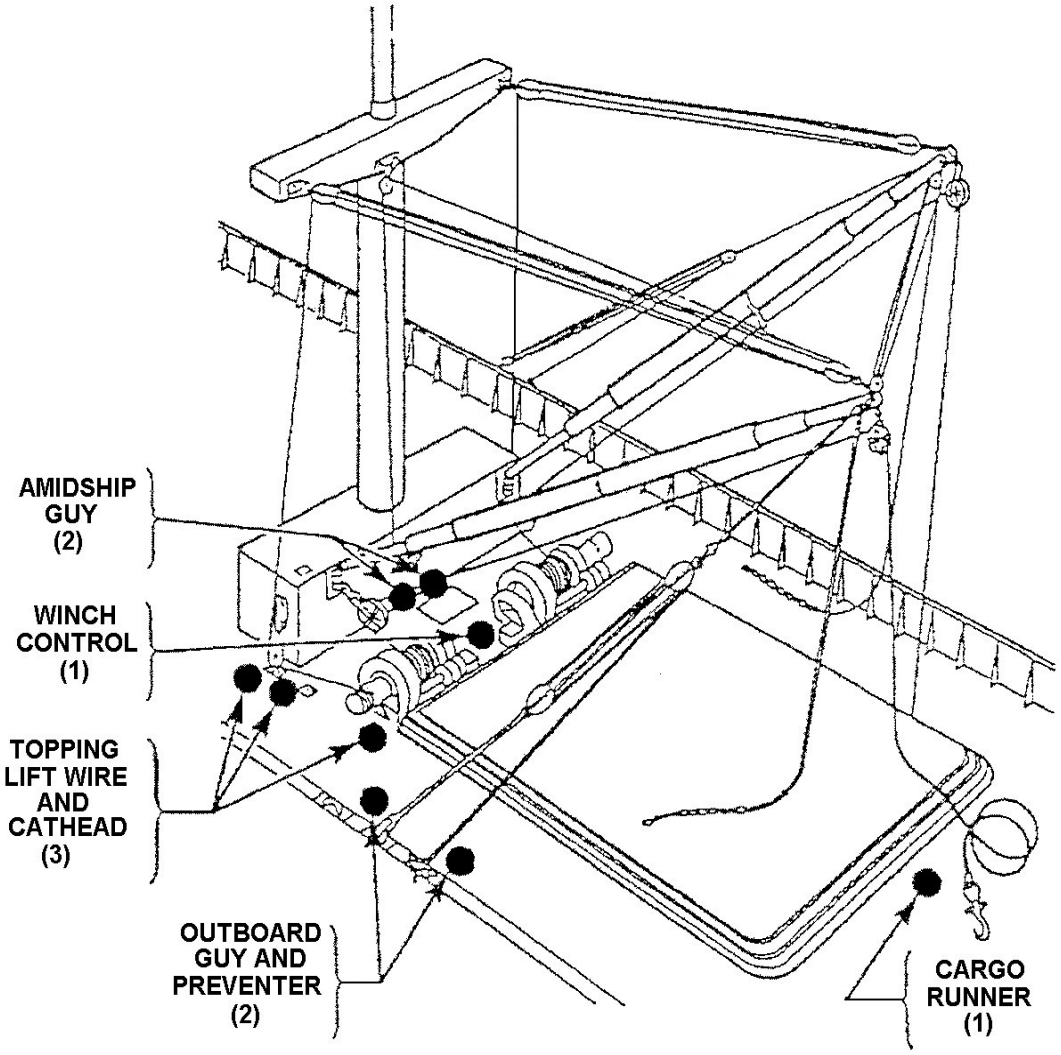


Figure 3-25

Assignment of Hatch Gang

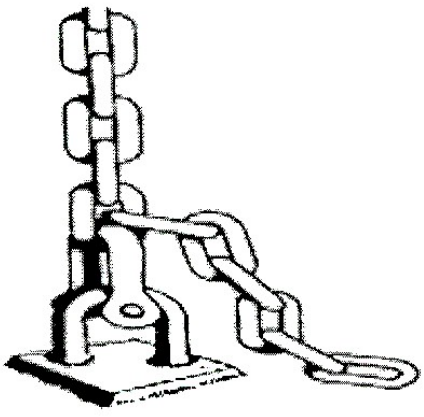


Figure 3-26

Shackling the Bull Chain to the Deck

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on topping standard booms equipped with a single-topping lift.

Performance Measures	**GO**	**NO GO**
1. Raised the boom equipped with a single-topping lift.	_____	_____
2. Lowered the boom equipped with a single-topping lift.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1517
Inspect Cargo Handling Gear

DANGER

Adhere to all DANGER statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to inspect cargo handling gear in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a cargo vessel, and cargo handling gear.

Standards: Inspect cargo handling gear without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with inspecting the cargo handling gear prior to starting operations.

Note: None

Performance Steps

1. Inspect fiber ropes for chafing, breaking, and evidence of mildew.
2. Inspect wire rope such as cargo runners, preventers, guy pendants, and topping lifts.
    a. Check for fraying.
    b. Check for kinking
    c. Check for wear (obvious loss of metal due to metal to metal contact).
    d. Check for corrosion.

e. Check for cuts.

f. Check for broken strands

NOTE: Inspect wire rope for broken strands within each strand allowing no more than three broken wires in one strand of 6 X 7 rope, six broken wires within one strand of 6 X 19 rope, or nine broken wires within one strand of 6 X 37 rope.

3. Inspect wire rope cargo blocks for serviceability.

a. Inspect for cracks, splits, or any evidence of the sheave wearing on the frame.

b. Check the sheave pin to see if it is bent; check the inside of the frame for wear.

c. Check the hook shackle or beckets for any evidence of damage or distortion.

d. Check to see if the swivel turns freely.

e. Check to see if the snatch block gate is working properly.

f. Check the block for lubrication.

4. Inspect chains, shackles, and hooks.

a. Check for cracks.

b. Check for dents

c. Check for sharp nicks.

d. Check for cuts.

e. Check for worn surfaces.

f. Check for paint.

g. Check for distortion.

NOTE: Do not use painted chains, shackles, and hooks: they cannot be inspected for serviceability.

5. Inspect winches to ensure that runners are wound in the correct direction and that they are free of foreign objects that could damage equipment.

6. Inspect standing rigging (see Figure 3-27).

a. Check for rust.

b. Check for bent booms.

c. Check for worn spots.

d. Check for oily spots.

e. Check for safe working load (SWL) of cargo booms.

NOTE: A wire preventer is shackled to the head of each boom and to any suitable fitting near the heel of each boom.

7. Inspect running rigging (see Figure 3-28).

   a. Check for kinks.

   b. Check for worn spots.

   c. Check for broken strands of wire rope.

   d. Check for broken fiber in fiber rope.

8. Inspect deck fittings and shackles (see Figure 3-29).

   a. Check for rust.

   b. Check for worn spots.

   c. Check for paint.

   d. Check for distortion.

9. Report defective equipment to the hatch foreman.

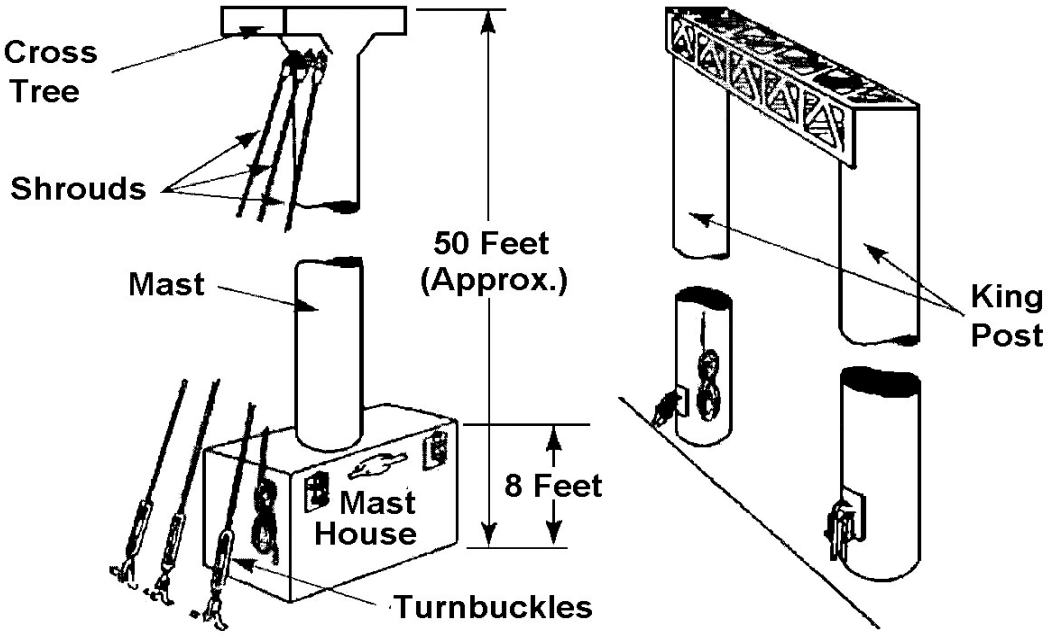


Figure 3-27

Standing Rigging

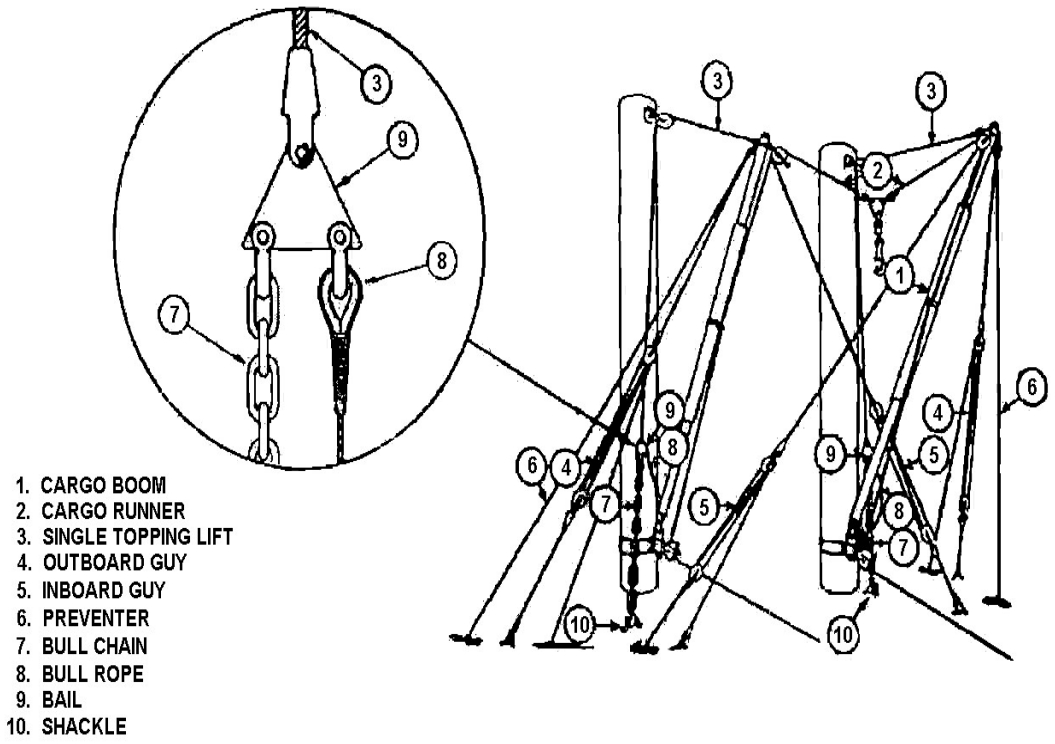


Figure 3-28

Running Rigging

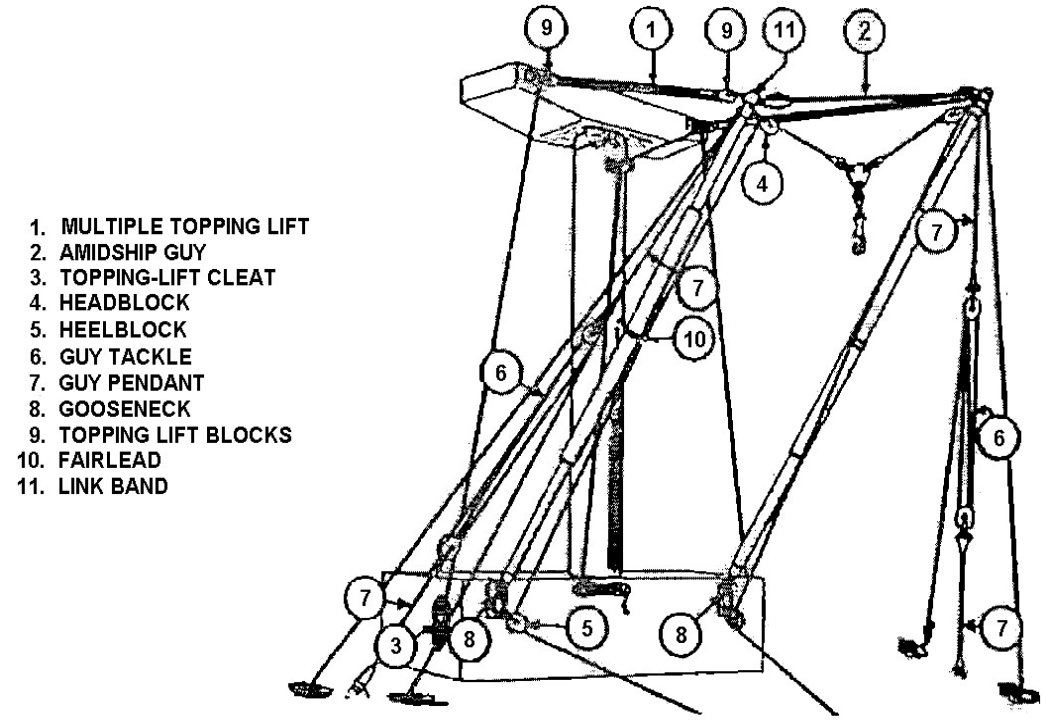


Figure 3-28

Running Rigging (continued)

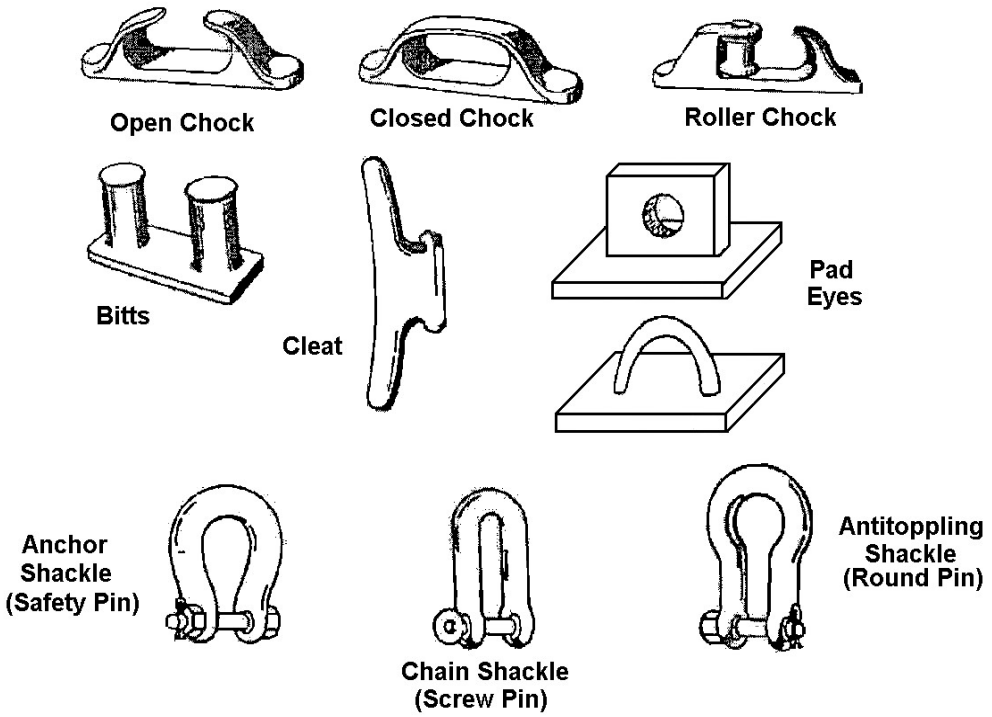


Figure 3-29

Deck Fittings and Shackles

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on inspecting cargo handling gear.

Performance Measures	**GO**	**NO GO**
1. Inspected fiber ropes for chafing, breaking, and evidence of mildew.	_____	_____
2. Inspected wire rope such as cargo runners, preventers, guy pendants, and topping lifts.	_____	_____
3. Inspected wire rope cargo blocks for serviceability.	_____	_____
4. Inspected chains, shackles, and hooks.	_____	_____
5. Inspected winches to ensure that runners were wound in the correct direction and that they were free of foreign objects that could damage equipment.	_____	_____
6. Inspected standing rigging.	_____	_____
7. Inspected running rigging.	_____	_____
8. Inspected deck fittings and shackles.	_____	_____
9. Reported defective equipment to the hatch foreman.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

551-88H-1520
Reeve Triple-sheave Blocks

Conditions: Assigned as a cargo checker/handler with the requirement to reeve triple-sheave blocks in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, two triple sheave blocks, and fiber rope.

Standards: Reeve triple-sheave blocks, ensuring that sheaves move freely and are free of cuts without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to reeve triple-sheave blocks.

Note: None

Performance Steps

1. Lay the blocks out (see Figure 3-30).
2. Place the blocks so that the sheaves on one block are at right angles to the sheaves of the other block.
3. Inspect each sheave on the blocks for cuts and ensure that it turns freely.
4. Lay a coil of rope beside either block.
5. Pass the running end of the line through the center sheave of block 1 from the front.
6. Bring the line down and through the right sheave of block 2 from the back.
7. Pass the line behind and through the right sheave of block 1.
8. Bring the line through the left sheave of block 2 from the front.
9. Pass the line through the center sheave of block 1 from the front.
10. Bring the line through the center sheave of block 2 from behind.

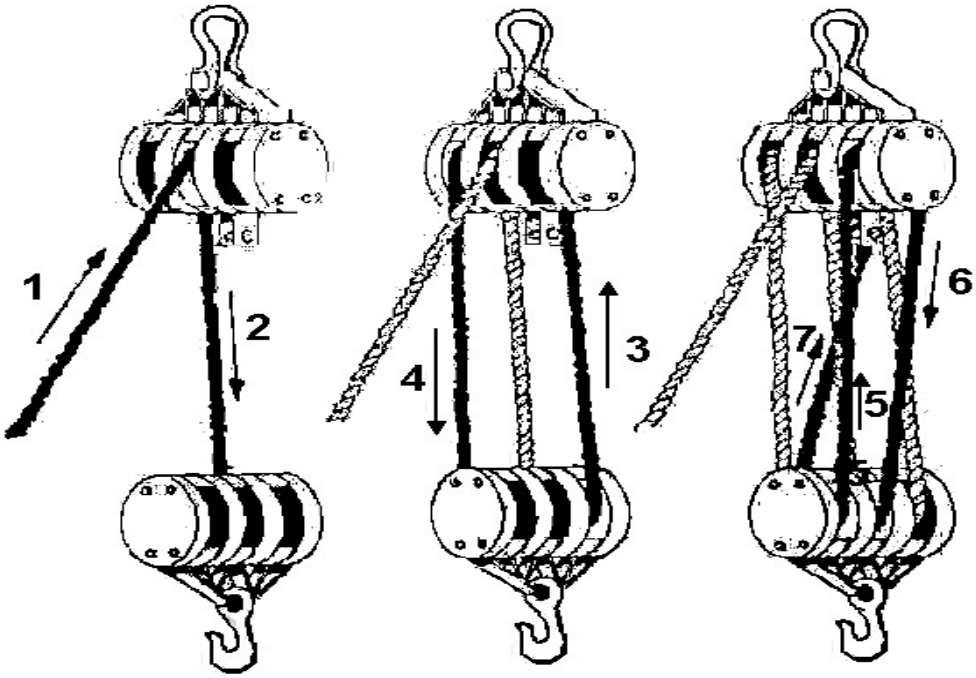


Figure 3-30

Reeve Triple Sheave Blocks

11. Secure the line to the becket.

a. Lead the rope to the center sheaves of the second block.

b. Bring the rope back to the becket of the first block, using a square knot at the end of the becket.

NOTE: Reeve the rope through the blocks so that no part of the rope chafes another part of the rope.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on reeving triple-sheave blocks.

Performance Measures		**GO**	**NO GO**
1.	Laid the blocks out.	_____	_____
2.	Placed the blocks so that the sheaves on one block were at right angles to the sheaves of the other block.	_____	_____
3.	Inspected each sheave on the blocks for cuts and ensured they turned freely.	_____	_____
4.	Laid a coil of rope beside either block.	_____	_____
5.	Passed the running end of the line through the center sheave of block 1 from the front.	_____	_____
6.	Brought the line down and through the right sheave of block 2 from the back.	_____	_____
7.	Passed the line behind and through the right sheave of block 1.	_____	_____

Performance Measures	GO	NO GO
8. Brought the line through the left sheave of block 2 from the front.	_____	_____
9. Passed the line through the center sheave of block 1 from the front.	_____	_____
10. Brought the line through the center sheave of block 2 from behind.	_____	_____
11. Secured the line to the becket.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

551-88H-1502
Prepare Electric Winches for Operation to Load or Discharge Cargo

DANGER

Adhere to all the DANGER statements listed in the equipment technical operator's manual applicable to the procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all the WARNING statements listed in the equipment technical operator's manual applicable to the procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all the CAUTION statements listed in the equipment technical operator's manual applicable to the procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to prepare electric winches for operation to load or discharge cargo in an operational environment, during the day or night, in normal weather conditions, given a cargo vessel, a completed risk assessment, safety briefing, safety clothing, ship's gear, and foreman supervision.

Standards: Prepare electric winches for operation to load or discharge cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked with loading or discharging a vessel with electric winches.

Note: None

Performance Steps

1. Inspect the winch for operation.

a. Inspect winches to ensure runners are wound in correct direction over the top of the drum and free of foreign objects (such as dunnage, paper, rags, and trash) (see Figure 3-31).

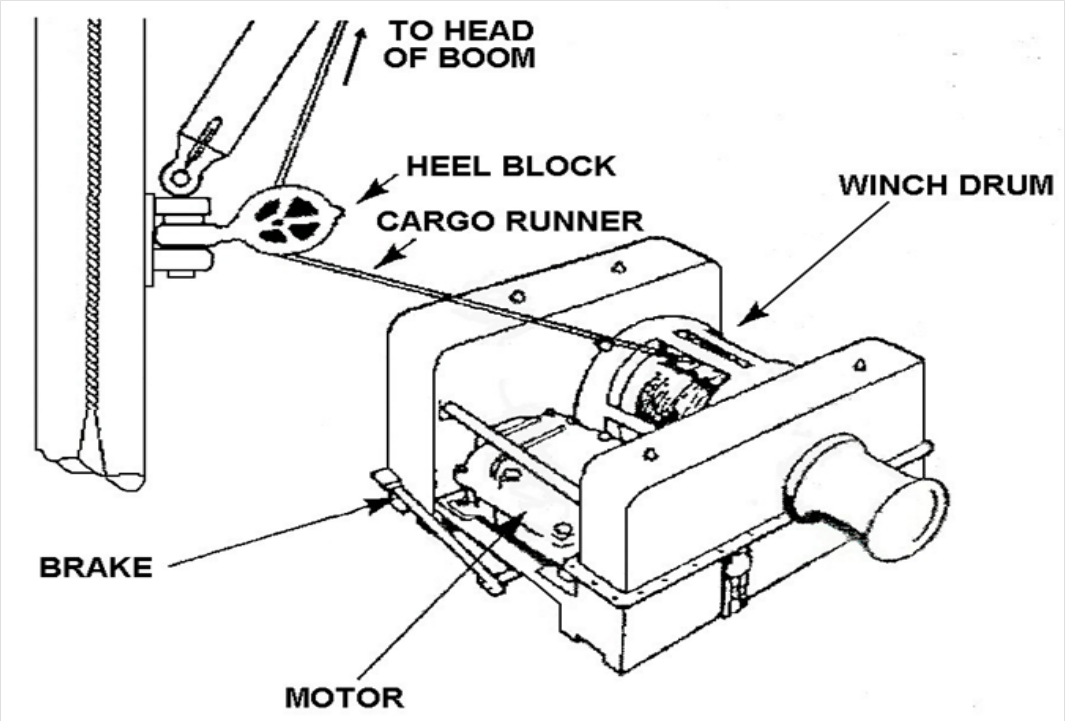


Figure 3-31

Cargo Runner Led Over Drum

b. Open ventilation cover and ensure that the ventilation safety pin pops out.

NOTE: If the ventilation safety pin does not pop out, you may have to pull it out by hand.

2. Prepare the winch for operation.

a. Turn each power switch ON, one at a time and listen for the fan to come on (see Figure 3-32).

NOTE: Gloves will not be worn while operating the winch.

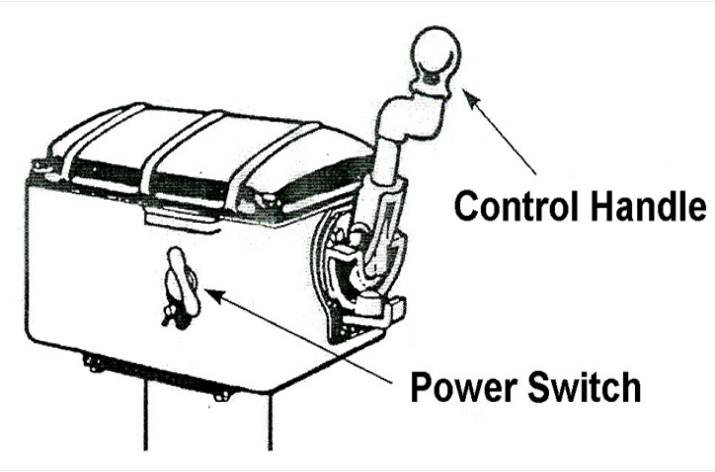


Figure 3-32

Winch Controller

b. Push the winch control to the lower position to remove the cargo hook from the pad eyes.

c. Move the winch controls to ensure that the winches are running smoothly.

d. Turn switches to the off position before leaving the winch controls.

e. Contact the hatch foreman if the winches do not function properly.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on preparing electric winches for operation to load or discharge cargo.

Performance Measures	**GO**	**NO GO**
1. Inspected the winch for operation.	_____	_____
2. Prepared the winch for operation.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1505
Top Standard Booms Equipped with Multiple-topping Lift (Boom in Cradle)

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to top standard booms equipped with multiple-topping lift (boom in cradle) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo vessel, ship's gear, and standard boom equipped with a multiple-topping lift.

Standards: Raise and secure the booms at the desired height as directed by the hatch foreman without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked with topping standard booms with multiple-topping lift (boom in cradle).

Note: None

Performance Steps

1. Lay out guy to proper fittings.

2. Lay topping lift wire along the deck or over the rail.

3. Place hauling part of topping lift wire in a wire rope snatch block.

4. Make five turns with topping lift wire around the cathead in the direction opposite the cargo runner (underneath the cathead).

5. Clear the topping lift wire.

6. Attend to the cathead.

7. Attach guys to deck fittings and to the inboard and outboard guys, as directed.

8. Overhaul the runner as the boom is being topped.

9. Top the boom to the desired height.

10. Take in on the hauling end of the topping lift wire that is wound around the cathead.

11. Apply the stopper chain in order to secure the topping lift wire.

12. Slack off the topping lift slowly until the weight of the topping lift is transferred from the cathead to the stopper chain.

13. Remove the topping lift wire from the cathead, securing it to the topping lift cleat by taking three round turns followed by three or more figure eights.

14. Tie/mouse the figure eights with a piece of rope or wire.

15. Coil the remainder of the wire around the cleat.

16. Remove the stopper chain.

17. Execute the procedures required to lower standard booms equipped with multiple-topping lift (see Figure 3-33).

a. Inspect stopper chain to ensure serviceability.

b. Secure the topping wire with the stopper chain.

c. Apply the stopper chain to pad eye on deck.

(1) Pass the running end of the stopper chain completely around the topping lift wire, ensuring the running end of the chain passes under the standing end of the chain.

(2) Run the running end of the stopper chain around the topping lift wire again, ensuring this turn passes over the first turn.

(3) The chain's running end again goes under the standing end at completion of the turn, holding the stopper hitch tightly in place.

d. Remove all the topping lift wire (except the three round turns from the topping lift cleat and slack off on the topping lift wire (surges) until the stopper chain supports the weight of the boom.

e. Transfer the wire from the cleat through the snatch block to the cathead, taking five turns in the same direction as the cargo runner (over the cathead).

f. Take up on the winch until all the strain is transferred from the stopper to the cathead.

g. Remove the stopper chain.

h. Lower the boom using the winch.

i. Rewind the runner smoothly on drum of the winch and secure the cargo hook to a ring of a pad eye with a slight strain.

j. Secure the guys to the heel block of fittings on the mast table and pull taut.

k. Coil the hauling parts of the outboard and inboard guys over the guy tackle and tie off the guys.

l. Make the amidship guys fast to the cleat on the mast.

m. Secure the topping lift wires to the topping lift cleat.

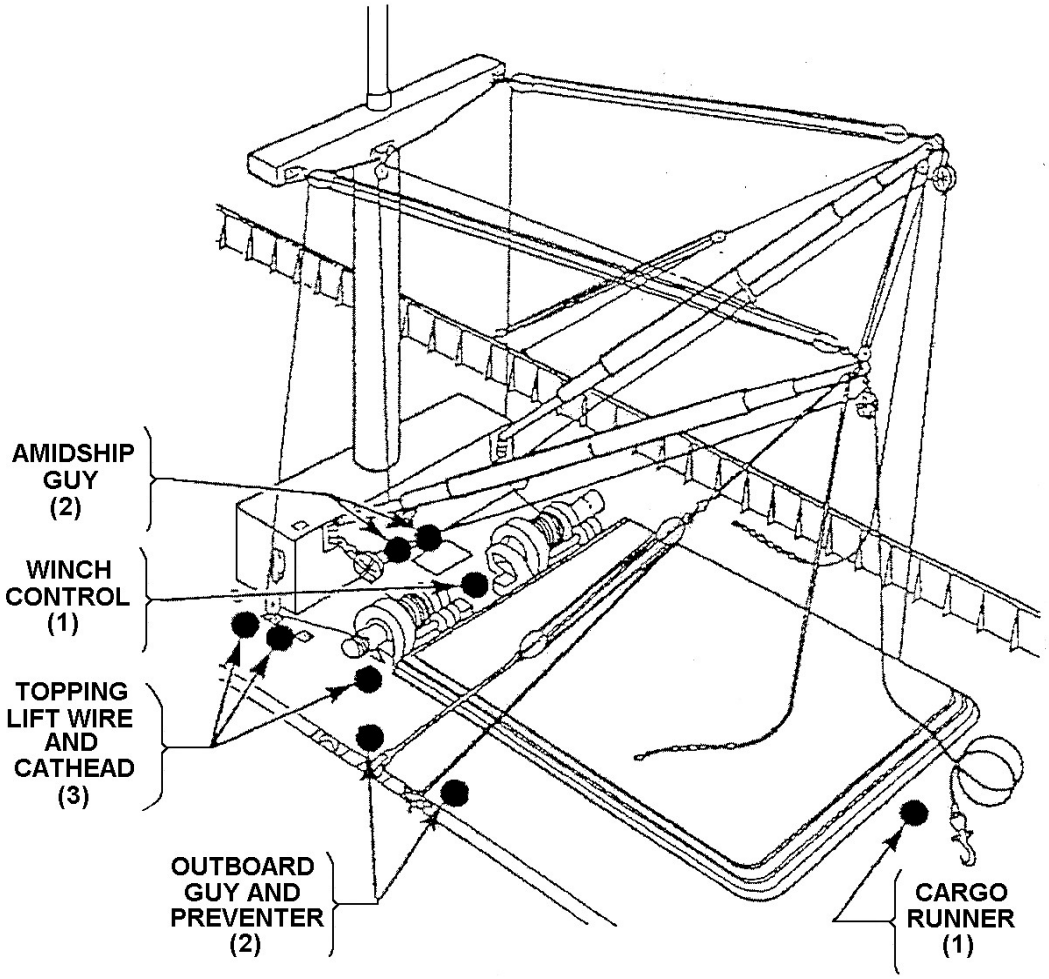


Figure 3-33

Lowering Standard Booms Equipped with Multiple-topping Lift

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on topping standard booms equipped with multiple-topping lift (boom in cradle).

Performance Measures		GO	NO GO
1.	Laid out guy to proper fittings.	_____	_____
2.	Laid topping lift wire along the deck or over the rail.	_____	_____
3.	Placed hauling part of topping lift wire in a wire rope snatch block.	_____	_____
4.	Made five turns with topping lift wire around the cathead in the direction opposite of the cargo runner (underneath the cathead).	_____	_____
5.	Cleared the topping lift wire.	_____	_____
6.	Attended to the cathead.	_____	_____
7.	Attached guys to deck fittings and to the inboard and outboard guys, as directed.	_____	_____
8.	Overhauled the runner as the boom was being topped.	_____	_____
9	Topped the boom to the desired height.	_____	_____
10.	Took in on the hauling end of the topping lift wire that was wound around the cathead.	_____	_____
11.	Applied the stopper chain to secure the topping lift wire.	_____	_____
12.	Slacked off the topping lift slowly until the weight of the topping lift was transferred from the cathead to the stopper chain.	_____	_____
13.	Removed the topping lift wire from the cathead, securing it to the topping lift cleat by taking three round turns followed by three or more figure eights	_____	_____
14.	Tied/moused the figure eights with a piece of rope or wire.	_____	_____
15.	Coiled the remainder of the wire around the cleat.	_____	_____
16.	Removed the stopper chain.	_____	_____
17.	Executed the procedures required to lower standard booms equipped with multiple-topping lift.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1519
Rig the Three Standard Rigs of Cargo Booms

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to rig the three standard rigs of cargo booms in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, ship's gear, and topped booms, TC 4-13.17, and TM 3-34.86.

Standards: Rig the three standard rigs of cargo booms without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to rig the three standard cargo booms.

Note: None

Performance Steps

1. Rig a yard-and-stay rig (see Figure 3-34).

    a. Position cargo booms.

        (1) Position the inboard boom over the center of the hatch.

NOTE: To spot or position the booms, haul in or slack off on the outboard guy while slacking off or hauling in on the amidships or inboard guy depending on where the head block of the boom needs to be positioned.

(2) Position the outboard boom over the side of the vessel about 2 to 4 feet beyond the spotting position.

b. Equalize and secure guys and preventers after both booms are flying (in position).

NOTE: To equalize guys and preventers, take in all the slack in the inboard/amidship guys as other members slack off slowly on the outboard guys until the desired equalization is attained, then secure the guy to a cleat on the deck.

c. Place a strain on the outboard guys and preventer by lifting a draft half the distance between the booms.

d. Take in all slack in the inboard/amidship guys.

e. Secure inboard/amidship guy lines to cleats on deck.

NOTE: Make on the spot corrections and report any deficiencies found in the rigging operation to the hatch foreman.

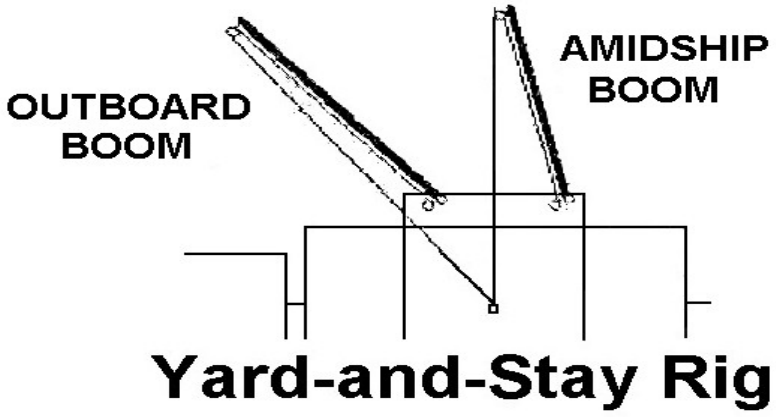


Figure 3-34

Yard-and-Stay Rig Standard Cargo Rig

2. Rig a west coast rig (see Figure 3-35).

a. Position cargo booms.

(1) Position the amidship boom half way between the hatch coaming and the ship's side.

(2) Position the outboard boom over the ship's side.

b. Equalize and secure guys and preventers.

NOTE: Make on the spot corrections and report any deficiencies found in the rigging operation to the hatch foreman.

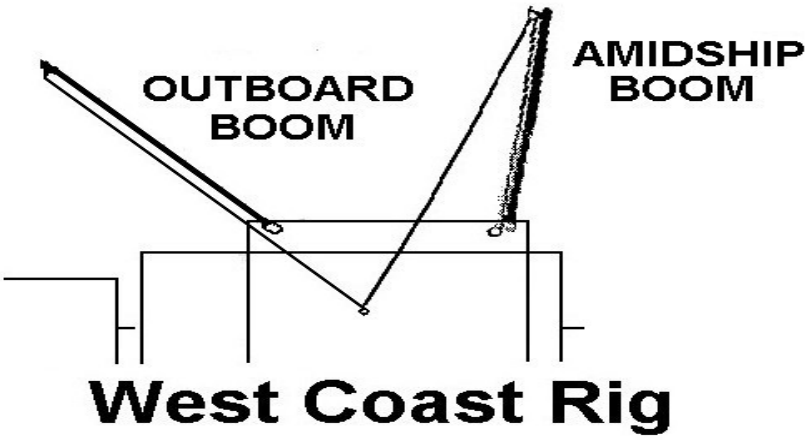


Figure 3-35

West Coast Rig Standard Cargo Rig

3. Rig a wing-and-wing rig (see Figure 3-36).

   a. Position cargo booms at the desired positions over the sides of the ship.

   b. Equalize and secure guys and preventers.

NOTE: Make on the spot corrections and report any deficiencies found in the rigging operation to the hatch foreman.

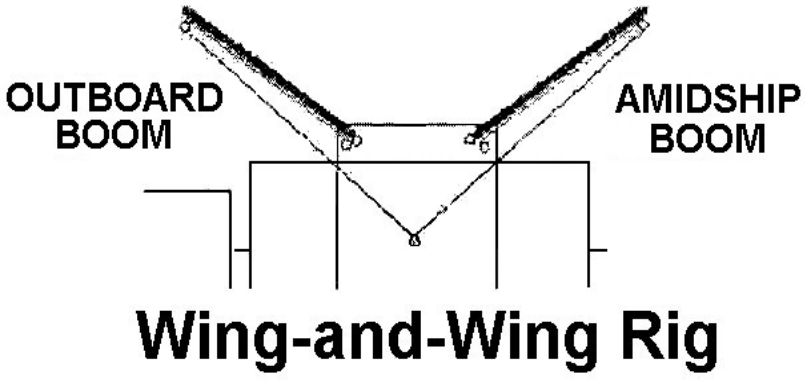


Figure 3-36

Wing-and-Wing Standard Cargo Rig

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on rigging the three standard rigs of cargo booms.

Performance Measures	**GO**	**NO GO**
1. Rigged a yard-and-stay rig.	_____	_____
2. Rigged a west coast rig.	_____	_____

Performance Measures	GO	NO GO
3. Rigged a wing-and-wing rig.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

Subject Area 3: Initial Cargo Checking Operations

551-88H-1510
Record Onward Movement of Cargo on DD Form 1384

Conditions: Assigned as a cargo checker/handler with the requirement to record onward movement of cargo on DD Form 1384 (Transportation Control and Movement Document) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, vehicle with operator, cargo, pen or pencil, and clipboard.

Standards: Record onward movement of cargo on DD Form 1384 ensuring accurate and legible entries without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to record the onward movement of cargo on a DD Form 1384.

Note: None

Performance Steps

1. Record onward movement of cargo.

a. Verify the transportation control number (TCN) on DD Form 1384 against the TCN given in the address and markings on the cargo (see Figure 3-37).

NOTE: Ensure that the information on DD Form 1384 is accurate and legible.

b. Tally cargo below the past checker's tally, noting discrepancies, shortages, or overages.

c. Verify or record applicable entries of the DD Form 1384, line 27, blocks d, e, and f.

NOTE: Keep one copy of the DD Form 1384 for record and give the remaining copies to the material handler or the driver transporting the cargo or equipment.

2. Finalize procedures for movement of cargo.

a. Ensure the driver signs for receipt of the cargo.

b. Remove one copy of the DD Form 1384 for turn-in to the senior cargo checker.

c. Give remaining copies of DD Form 1384 to the driver.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 1

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TXJ		N00604 PEARL HARBOR	594Z9 PUMPS		XE2 PEARL HARBOR	UM4 NSD YOKOSUKA

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
9	CR	N6264922060149XXX	N6249 NSD YOKOSUKA	3	141		123	0	N125

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				2	810	36

25. a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
XE2	123	H12	130		P7680		2LTF			Ryan Miller
26. UM4	124	A 17								Lindy Ruff
27.										

28. CONSIGNEE	29. DATE RECEIVED/OFFERED *(Sign)*	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER - CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	43. Proj b.	43. Stow Loc Shpd c.	43. Stow Loc ETA d.	43. Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.

SAMPLE

DD FORM 1384, OCT 2000 PREVIOUS EDITIONS MAY BE USED.

Figure 3-37

Sample of DD Form 1384 (Transportation Control and Movement Document)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on recording onward movement of cargo on DD Form 1384.

Performance Measures	**GO**	**NO GO**
1. Recorded onward movement of cargo.	_____	_____
2. Finalized procedures for movement of cargo.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
DD FORM 1384 Transportation Control and Movement Document

DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement

TC 4-13.17 Cargo Specialist's Handbook

Primary

551-88H-1516
Tally Cargo

Conditions: Assigned as a cargo checker/handler with the requirement to tally cargo on DD Form 1384 (Transportation Control and Movement Document) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo, tally sheets, pen or pencil, and clipboard.

Standards: Tally cargo, inspect cargo for damage, and ensure accurate and legible entries are made on DD Form 1384 without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to tally cargo.

Note: None

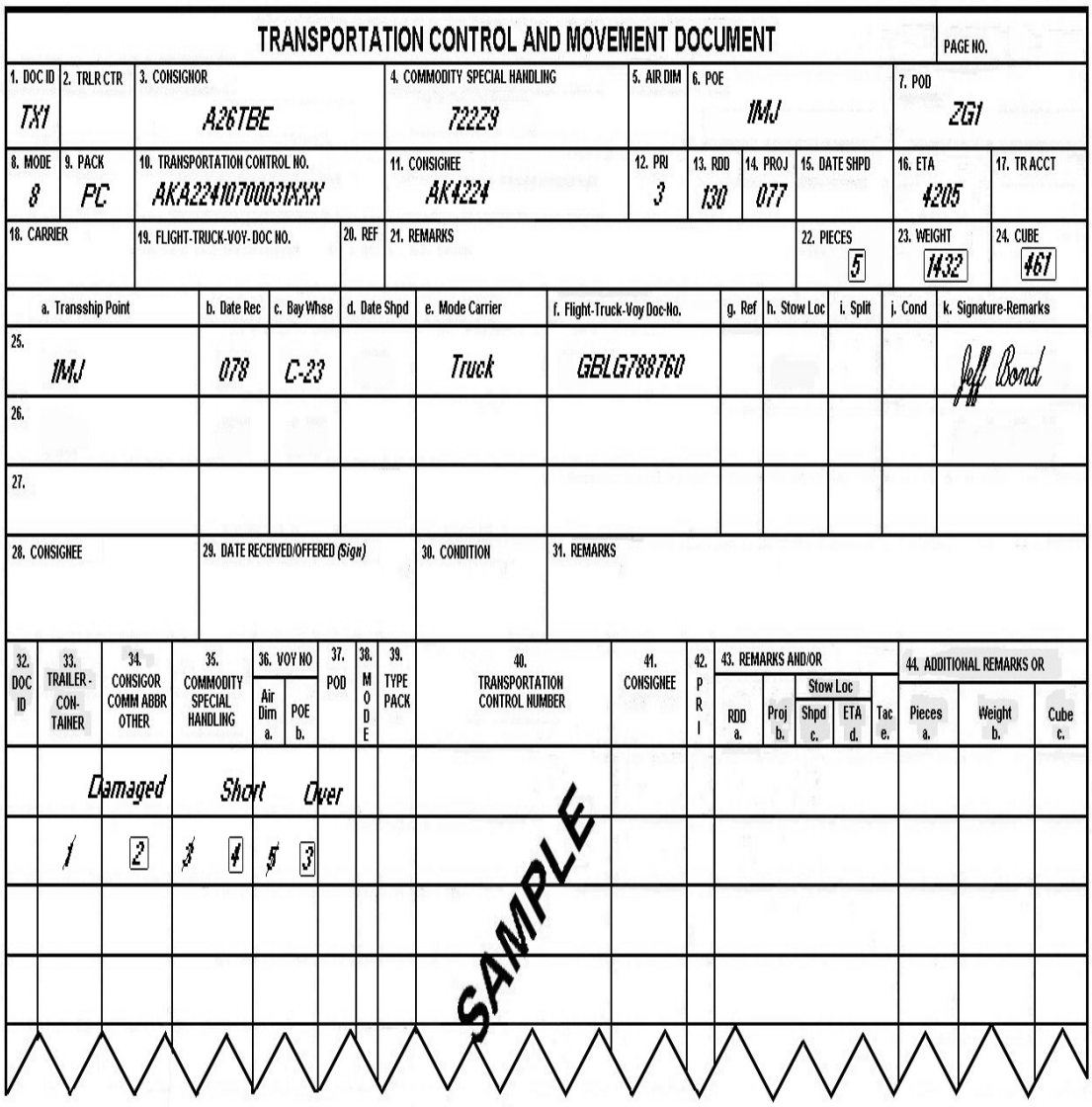
Performance Steps

1. Tally individually numbered pieces of cargo, using the package method (see Figure 3-38).

NOTE: Checking cargo involves two general functions: inspecting cargo for quantity, condition, and identifying marks, and making observations a matter of record.

The package method is used to tally individual pieces of cargo. The cargo checker lists each piece number on the tally sheet. As the numbered piece is discharged, the checker crosses out the corresponding number on the tally sheet. The piece number and total number of pieces are shown at the bottom of the address label. If a piece is missing or damaged, the checker draws a circle around the appropriate piece number and identifies it as short or damaged.

When a discrepancy of the type described is detected; the checker should circle blocks 22, 23, and 24 of DD Form 1384, if it is being used as a tally sheet and boldly draw circles around these three blocks in order to alert documentation personnel that a discrepancy exists. The cargo checker, using information on the shipping label, computes the weight and volume of cargo on hand and places this information in blocks 44a, b, and c.



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TX1		A26TBE	72229		IMJ	ZG1

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
8	PC	AKA2241070003IXXX	AK4224	3	130	077		4205	

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				5	1432	461

25.	a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
	IMJ	078	C-23		Truck	GBLG788760					Jeff Bond
26.											
27.											

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER - CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	Proj b.	Stow Loc Shpd c.	Stow Loc ETA d.	Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.
	Damaged		Short	Over															
	1	2	3	4	5	3													

SAMPLE

Figure 3-38

Tallying General Cargo Using Package Method

2. Tally items with serial numbers (trucks, MILVANS, and so on), using the unit method (see Figure 3-39).

NOTE: The unit method is used to tally equipment such as trucks, MILVANS, SEAVANS, and other large serial numbered items that are handled separately. The lower portion of the DD Form 1384 contains trailer data to describe the vehicle, including its serial number.

The cargo checker compares the serial number stenciled on the vehicle with the serial number recorded in the trailer data line entry. If they correspond a check mark is placed on the tally to indicate the vehicle has been received. Under certain circumstances, the description of the item may not be included as a trailer data line entry. In this case, the cargo checker enters such identifying information on the tally. This type of information is entered on the bottom of the DD Form 1384.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO.

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TV0		A25TBB	867ZZ		IGC	JF1

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
D	VO	AKA335920900IXXX	AK4334	3	253		221	2	4205

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				1	12880	1690

	a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25.	S.S. Minnon	260									J.B. Hale
26.	JF1	261	Yard								R.U. Denver
27.											

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER - CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	Proj b.	Stow Loc Shpd c.	Stow Loc ETA d.	Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.
TV5		M35	86727	IGO		JF1	3	LO	MK433172010011XXX	AK4331	3	00255LO96M111H - USA					4L76H		
			NOTE: Left side of windshield broken																
			Left headlight broken																
			Hood dented - R.U. Denver																

SAMPLE

Figure 3-39

Tallying General Cargo Using Unit Method

3. Tally uniform drafts consisting of equal numbers of pieces on each pallet or in each draft, using the block method (see Figure 3-40).

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO.

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TXO		A33HRV	51AZ9		IMJ	RGI

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
A	CS	AT88874004002XXX	AT8887		057		020	3	A205

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				382	21,392	573

a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25. IMJ	023	C-42								K.B Delk
26.										
27.										

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER-CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	Proj b.	Stow Loc Shpd c.	Stow Loc ETA d.	Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.
(48)	LH1	11+46=	382																

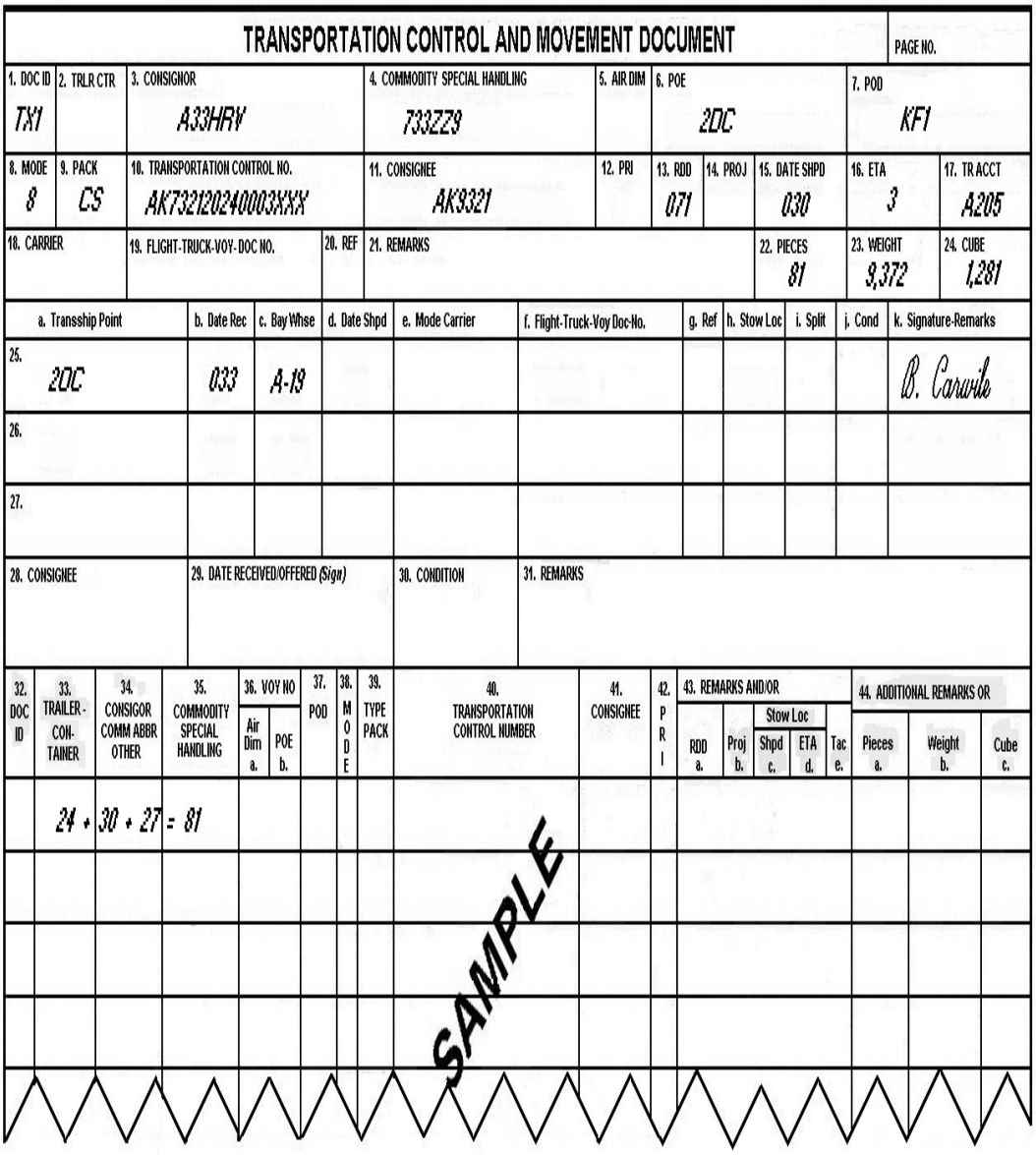
SAMPLE

Figure 3-40

Tallying General Cargo Using Block Method

4. Tally general cargo with different amounts in each draft, using the straight method (see Figure 3-41).

NOTE: When cargo with different amounts in each draft is involved, the checker cannot use the other three methods, therefore he employs the straight method. This method requires the checker to make an individual count of each piece in each draft and enter the count on the tally sheet as each draft is transferred.



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TX1		A33HRV	733ZZ9		2DC	KF1

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
8	CS	AK73212024000 3XXX	AK9321		071		030	3	A205

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				81	9,372	1,281

25.	a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
	2DC	033	A-19								B. Carwile
26.											
27.											

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER-CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	43. Proj b.	43. Stow Loc Shpd c.	43. Stow Loc ETA d.	43. Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.
	24 +	30 +	27 = 81																

SAMPLE

Figure 3-41

Tallying General Cargo Using Straight Method

5. Check DD Form 1384 for completeness

a. Check the consignee's address on the tally sheet against the address marking on the cargo (individual pieces), ensuring that both are the same.

b. Check cargo, while it is being tallied, for damages, shortages, and overages.

c. Record all discrepancies, damages, overages, and shortages on the tally sheet or DD Form 1384.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on tallying cargo.

Performance Measures	GO	NO GO
1. Tallied individually numbered pieces of cargo, using the package method.	_____	_____
2. Tallied items with serial numbers (trucks, MILVANS, and so on), using the unit method.	_____	_____
3. Tallied uniform drafts consisting of equal numbers of pieces on each pallet or in each draft, using the block method.	_____	_____
4. Tallied general cargo with different amounts in each draft, using the straight method.	_____	_____
5. Checked DD Form 1384 for completeness.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
DD FORM 1384 Transportation Control and Movement Document	
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1507
Check Cargo into In-transit Storage Area

Conditions: Assigned as a cargo checker/handler with the requirement to check cargo into an in-transit storage area using DD Form 1384 (Transportation Control and Movement Document) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo, pen or pencil, and clipboard.

Standards: Check cargo into in-transit storage area, ensuring accurate and legible entries on DD Form 1384 without injury to personnel or damage to cargo or equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with checking cargo into an in-transit storage area.

Note: None

Performance Steps

1. Check the transportation control number (TCN) for completeness.

    a. Verify the TCN on DD Form 1384 with cargo markings.

    b. Tally cargo on DD Form 1384 below the first checked tally.

    c. Record proper entries on DD Form 1384 on line 26, blocks a, b, and c, to include the bay and warehouse letter or number in block c.

2. Verify the proper posting to the DD Form 1384 (see Figure 3-42).

    a. Sign DD Form 1384 in block k, line 26.

    b. Remove one copy of DD Form 1384 for turn-in to the document section.

    c. Attach remaining copies of DD Form 1384 to the cargo.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 1

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TXJ		N00604 PEARL HARBOR	594Z9 PUMPS		XE2 PEARL HARBOR	UM4 NSD YOKOSUKA

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
9	CR	N6264922060149XXX	N6249 NSD YOKOSUKA	3	141		123	0	N125

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				2	810	36

25.	a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25.	XE2	123	H12	130		P7680		2LTF			Ryan Miller
26.	UM4	124	A 17								Lindy Ruff
27.											

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAN FR - CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	43. Proj b.	43. Stow Loc Shpd c.	43. Stow Loc ETA d.	43. Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.

SAMPLE

DD FORM 1384, OCT 2000 PREVIOUS EDITIONS MAY BE USED.

Figure 3-42

Sample of DD Form 1384 (Transportation and Control Movement Document)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on checking cargo into an in-transit storage area.

Performance Measures	**GO**	**NO GO**
1. Checked the TCN for completeness.	_____	_____
2. Verified the proper posting to the DD Form 1384.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 1384 Transportation Control and Movement Document	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 4: Initial Hagglunds Crane Operations

551-88H-1403
Prepare Hagglunds Crane for Operation

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to prepare the Hagglunds crane for operation in an operational environment, during the day or night, in normal weather conditions, given a Hagglunds crane, a completed risk assessment, safety briefing, safety gear, pen or pencil, and DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

Standards: Prepare Hagglunds crane for operation without injury to personnel or damage to crane.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked with preparing the Hagglunds crane for operation.

Note: None

Performance Steps

1. Perform pre-operational checks on the Hagglunds crane (see Figure 3-43).

   a. Ensure ship is not listing more than 5 degrees.

   b. Unclamp jib, check wires and sheaves.

   c. Check wired ropes for fraying, kinking, or worn and flattened spots.

d. Check the brakes indicators (point and scales) to ensure the point registers in the red.

NOTE: Check all six emergency brakes for proper setting.

e. Check the six emergency stops for proper setting, ensuring that the red knobs are in the pull out position.

f. Start the feed pump 24 hours before operation during winter months.

g. Place winter/summer switch on winter if outside temperature is below 40 degrees Fahrenheit (F).

h. Place winter/summer switch on summer if outside temperature is above 40 degrees F.

NOTE: This step is rated only in winter months.

i. Check hydraulic oil level by looking through the sight glass indicator on the oil tank to ensure the level is just below the maximum mark.

j. Ensure control levers are in the neutral (N) position.

k. Press start button to start the crane. The crane is ready for operation when the red light goes out.

l. Annotate deficiencies on DA Form 2404.

m. Report deficiencies to the hatch foreman or ship's mate.

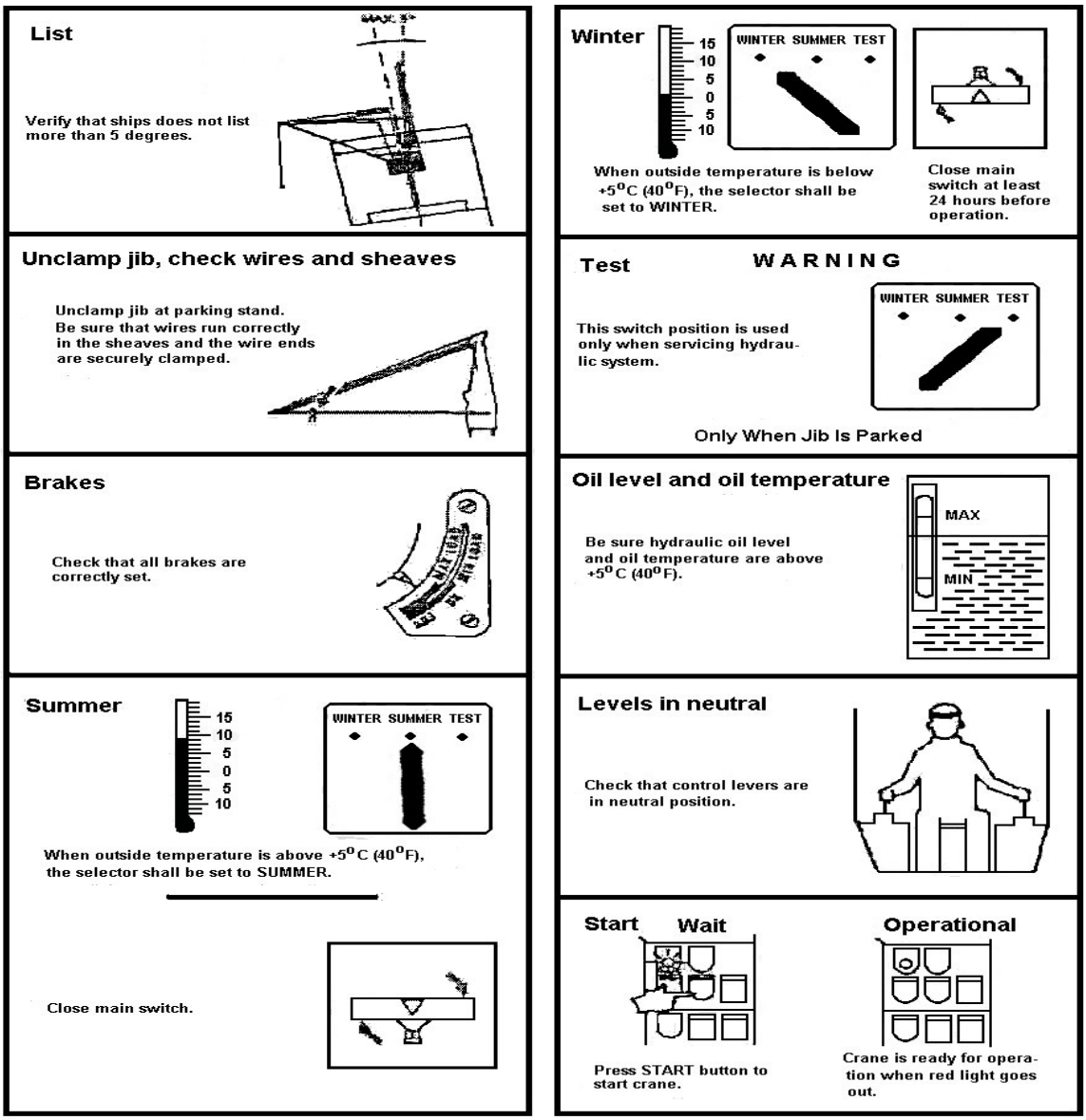


Figure 3-43

Hagglunds Crane Checklist

2. Unstow the Hagglunds crane from the parking support.

   a. Ensure the boom is unclamped.

   b. Start the Hagglunds crane and turn single/twin selector to single position.

   c. Remove the hook from the fastening device and slightly raise the hook.

   d. Raise the boom to the desired height.

   e. Slew the crane toward the area of operation.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on preparing the Hagglunds crane for operation.

Performance Measures	**GO**	**NO GO**
1. Performed pre-operational checks on the Hagglunds crane.	_____	_____
2. Unstowed the Hagglunds crane from parking support.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DA FORM 2404 Equipment Inspection and Maintenance Worksheet	
DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1416
Stow Containers Aboard a Cargo Vessel

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to stow containers aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, hatch on a fast sealift ship/large medium speed roll-on/roll-off (FSS/LMSR), ship's gear, semiautomatic toplift spreader, tag line, container, and lashing equipment.

Standards: Stow containers aboard a cargo vessel to prevent movement without injury to personnel or damage to cargo, vessel and equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with stowing cargo aboard a vessel.

Note: None

Performance Steps

1. Attach semi-automatic toplift spreader devices to containers.

    a. Attach the toplift spreader to the cargo hook.

    b. Signal the crane operator to hoist the toplift spreader.

    c. Signal the crane operator to lower the device onto the container.

d. Secure the device to the four corners of the container engaging twist locks.

e. Disengage the container bottom twist locks.

f. Signal the crane operator to hoist the container.

2. Stow containers aboard a vessel using lift-on/lift-off (LO/LO) loading procedures.

a. Select container to be loaded.

b. Direct the yard tractor operator to place the container directly under the cargo hook.

c. Check twist locks to ensure they engage and disengage.

d. Install twist lock devices into hatch cover fittings if required.

e. Attach semi-automatic toplift spreader device to the container (see Figure 3-44).

(1) Attach the toplift spreader to the cargo hook.

(2) Signal the crane operator to hoist the toplift spreader.

(3) Signal the crane operator to lower the spreader device, which has tag lines attached, onto the container.

(4) Secure the device to the four corners of the container (see Figure 3-45).

(5) Engage twist locks.

(6) Disengage the container bottom twist locks.

(7) Signal the crane operator to hoist the container.

f. Lift, guide, and deposit container into the especially designed vertical cell in the hatch or onto specially designed deck fittings.

g. Release the toplift spreader from the container and lift it away from the container.

h. Secure container with special locking devices.

(1) Activate and check twist locks to ensure that they are locked.

(2) Install stack fitting twist lock devices between containers when stacking. Stack containers no more than three (3) high.

(3) Attach lashing assemblies to front and rear of containers.

(4) Secure lashing assemblies to D-ring on top of hatch cover.

(5) Apply tension to the lashing device.

(6) Check devices to ensure proper tension has been applied.

3. Stow containers aboard a vessel using roll-on/roll-off (RO/RO) loading procedures.

a. Select container and chassis to be loaded.

b. Direct the yard tractor operator to drive the container and chassis aboard the vessel and to park in the stow location.

c. Secure the container and its chassis to the deck.

(1) Attach lashing assemblies to front and rear of containers.

(2) Apply tension to the lashing device.

(3) Check devices to ensure proper tension has been applied.

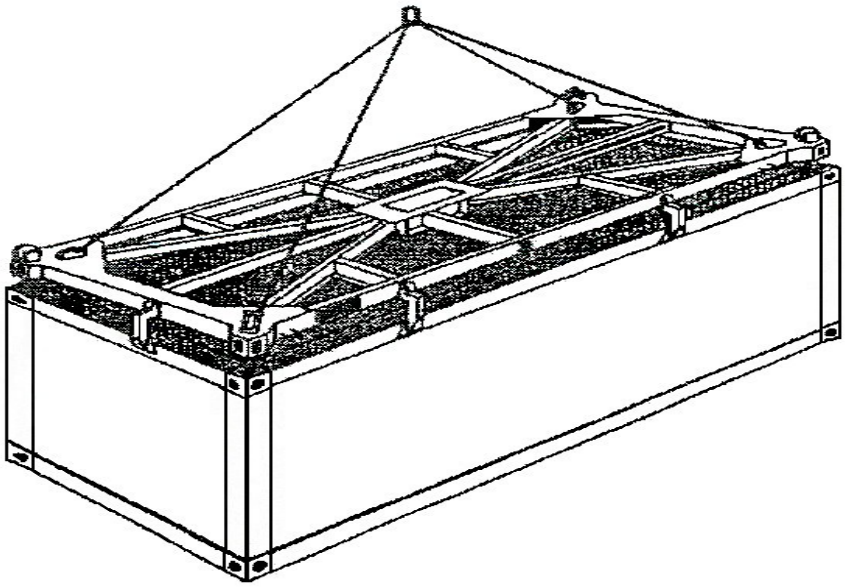


Figure 3-44

Attaching Semi-automatic Toplift Spreader Device to the Container

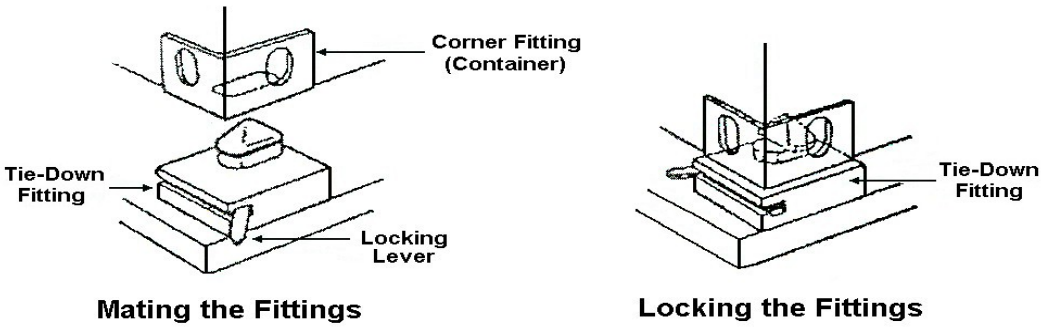


Figure 3-45

Securing the Device to the Corners of the Container

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on stowing containers aboard a cargo vessel.

Performance Measures	**GO**	**NO GO**
1. Attached semi-automatic toplift spreader devices to containers.	_____	_____
2. Stowed containers aboard a vessel using lift-on/lift-off (LO/LO) loading procedures.	_____	_____
3. Stowed containers aboard a vessel using roll-on/roll-off (RO/RO) loading procedures.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
ATP 4-13 Army Expeditionary Intermodal Operations	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1405
Operate Hagglunds Crane in Single Mode

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnnel or damage to equipment

Conditions: Assigned as a crane operator with the requirement to operate the Hagglunds crane in single mode in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, safety gear, Hagglunds crane, cargo, and signalman.

Standards: Raise, swing, and lower a load using the Hagglunds crane without injury to personnel or damage to crane or cargo.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked to operate the Hagglunds crane in single mode.

Note: None

Performance Steps

1. Place the Hagglunds crane into single mode operation.

   a. Place single/twin control switch on single control.

   b. Disengage slewing (swinging) locks on crane platform by pushing down on the swing lever until the lock disengages.

   c. Press the start button to start the Hagglunds crane (see Figure 3-46).

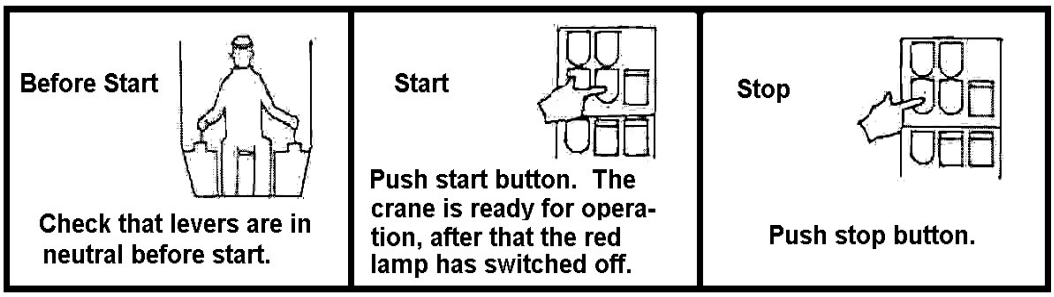


Figure 3-46

Pressing Start Button on Hagglunds Crane

2. Operate the controls on the Hagglunds crane.

a. Raise the boom (jib) by pulling the luffing/swing control to the rear, using the right hand.

b. Lower the boom (jib) by pushing the luffing/swing control forward using the right hand.

c. Swing the boom (jib) to the left by moving the luffing/swing control lever to the left, using the right hand.

d. Swing the boom (jib) to the right by moving the luffing/swing control lever to the right, using the right hand.

e. Raise the hook by moving the hoist control lever to the right and rear, using the left hand.

f. Lower the hook by moving the hoist control lever to the right and forward, using the left hand.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the Hagglunds crane in single mode.

Performance Measures	**GO**	**NO GO**
1. Placed the Hagglunds crane into single mode operation.	_____	_____
2. Operated the controls on the Hagglunds crane.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1413
Load Flatracks Aboard a Cargo Vessel

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler aboard a fast sealift ship (FSS) with the requirement to load flatracks aboard a cargo vessel in a operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, Hagglunds crane, spreader, and loaded flatrack.

Standards: Load flatracks aboard a cargo vessel without injury to personnel or damage to vessel or cargo. Stow flatracks to prevent movement or damage to cargo or vessel while underway.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to load flatracks aboard a cargo vessel.

Note: None

Performance Steps

1. Deploy empty flatrack for loading cargo.

NOTE: When removing flatracks from the cells of the vessel and placing them on the deck or pier, use dunnage to prevent damaging the corner guides on the flatracks (see TC 4-13.17, Chapter 8).

a. Attach tag lines to the spreader lifting frame.

b. Attach spreader lifting frame to the hook.

c. Position spreader frame over flatrack.

d. Secure spreader frame to flatrack.

e. Slowly lift the flatrack until it clears the side of the vessel.

f. Lower the flatrack onto the dock or landing craft.

g. Disconnect spreader from flatrack

2. Load cargo on flatrack.

NOTE: Flatracks are portable, open-top, open-side between deck conversion units which fit into cargo holds 5, 6, 7A, and 8F. Flatracks maximize the capability of containerships to lift and stow oversized loads of cargo (see Figure 3-47).

a. Load cargo or vehicles onto flatrack.

b. Ensure that vehicles or cargo are properly secured.

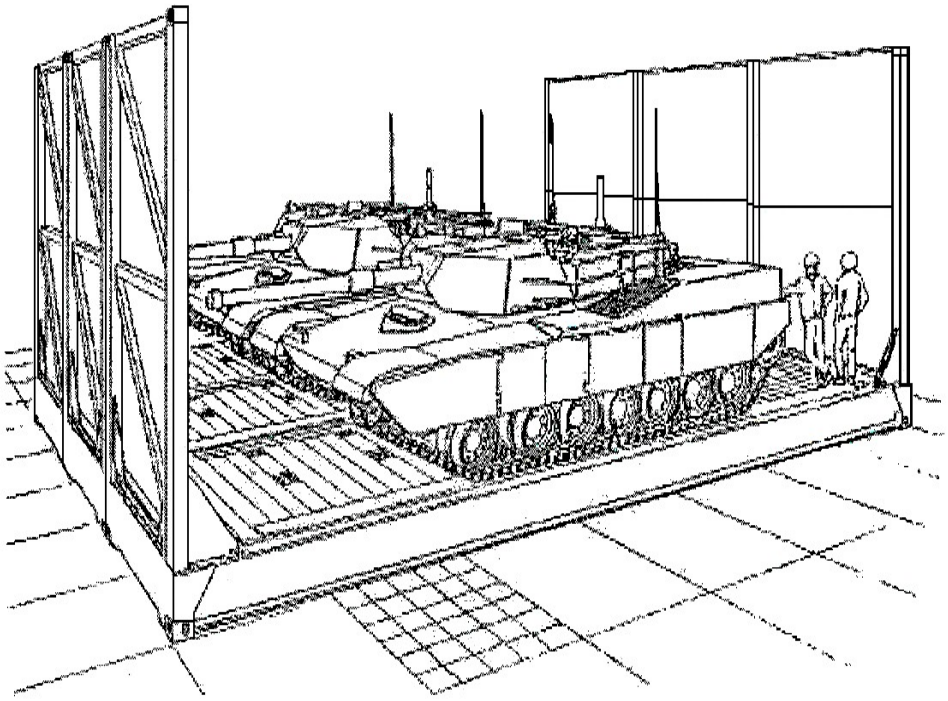


Figure 3-47

Cargo Loaded on Flatrack

3. Move loaded flatrack to hold of vessel.

a. Hook up the spreader and position over flatrack.

b. Lower spreader frame onto flatrack.

c. Attach tag lines to spreader.

d. Secure spreader frame to flatrack.

e. Slowly lift the flatrack until it clears the side of the vessel.

f. Position the flatrack over the hatch to be loaded.

g. Lower the flatrack into the hold.

h. Disconnect spreader frame from flatrack.

NOTE: Holds 5, 6, 7A, and 8F are equipped with cell guides. They guide the flatrack into its storage location and prevent movement of the flatrack.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on loading flatracks aboard a cargo vessel.

Performance Measures	**GO**	**NO GO**
1. Deployed empty flatrack for loading cargo.	_____	_____
2. Loaded cargo on flatrack.	_____	_____
3. Moved loaded flatrack to hold of vessel.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TEA PAM 700-7 Fast Sealift Ship Users' Manual	

551-88H-1406
Place Hagglunds Crane in Twin Mode

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to place Hagglunds crane in twin mode in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, Hagglunds crane, cargo, signalman, and assistant operator.

Standards: Set up and operate the Hagglunds crane in twin mode following safety guidelines without injury to personnel or damage to crane or cargo.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked to place the Hagglunds crane in twin mode.

Note: None

Performance Steps

1. Set up the Hagglunds crane in twin mode (see Figure 3-48).

NOTE: The master crane is #1 and the slave crane is #2.

a. Position assistant operator on crane #2 (slave) platform.

b. Ensure that the controls are in the neutral (N) position.

c. Start crane by pressing the start button on the control panel in crane #2.

d. Raise the angle of the boom to 45 degrees.

e. Slew (swing) crane #2 into the twin position by using the bypass slewing limit switch.

f. Move the right control lever to the right.

g. Using the right hand, move the right control lever to the right to swing the crane into the twin position.

h. Instruct the assistant operator to extract the safety pin from the slewing lock lever to engage the slewing lock on crane # 2.

NOTE: Same procedures are applied to crane #1 (master) to engage the slewing lock.

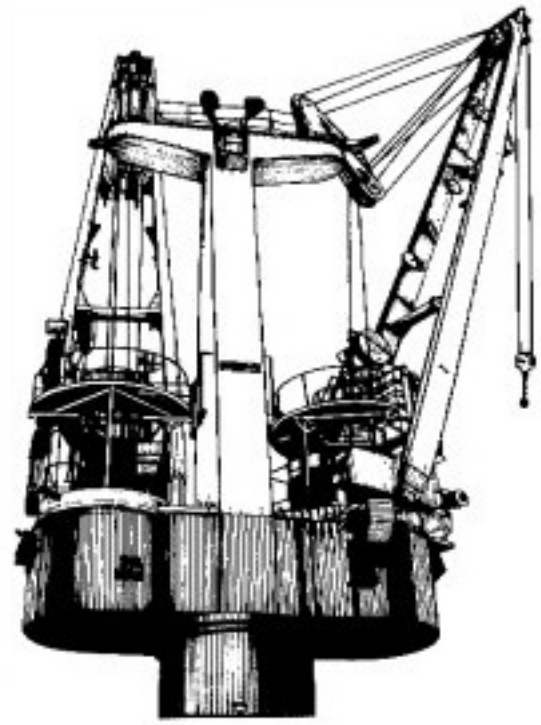


Figure 3-48

Hagglunds Crane in Twin Mode

2. Operate the Hagglunds crane in twin mode.

a. Place the single/twin control switch on twin mode in the (master) crane.

b. Press the start/stop button on the control panel in crane #1 to start both cranes (twin mode).

c. Slew the crane in either direction or 360 degrees by moving the control lever slowly to the left or right, using the right hand.

d. Stop the slew of the crane or change the crane's direction by returning the right-hand control lever to the N position.

e. Raise the boom by moving the right-hand control lever slowly straight to the rear, using the right hand.

CAUTION

Always return the control levers to the NEUTRAL position before changing direction of the boom, crank, and hook.

f. Lower the boom by moving the right-hand control lever slowly straight forward, using the right hand.

g. Lower the hook by moving the left-hand control lever slowly straight forward, using the left hand.

h. Raise the hook by moving the left-hand control lever slowly to the rear, using the left hand.

NOTE: The control lever for the hook and boom have speeds of high and low range.

i. Synchronize the booms by using the twin reset button; continue to move the booms up and down until both booms move together at the same height.

j. Synchronize the hooks by using the differential synchro knob for twin mode; move the hooks up and down until both hooks move together at the same time.

CAUTION

Switch on the emergency shutdown switch if the low oil light comes on.

k. Commence operations by securing a twin hook to the single hooks.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on placing the Hagglunds crane in twin mode.

Performance Measures	**GO**	**NO GO**
1. Set up the Hagglunds crane in twin mode.	_____	_____
2. Operated the Hagglunds crane in twin mode.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1407
Perform Spreader Operations with Hagglunds Crane Using 20- and 40-foot Spreaders

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to perform spreader operations with the Hagglunds crane using 20- and 40-foot spreaders in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, a Hagglunds crane, 20- and 40-foot spreader frames, and containers.

Standards: Perform spreader operations with Hagglunds crane using the 20- and 40-foot spreaders without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator on the Hagglunds crane tasked with loading or discharging cargo with the 20- and 40-foot spreaders.

Note: None

Performance Steps

1. Perform spreader operations with Hagglunds crane.

    a. Attach tag lines to the spreader frame.

    b. Attach the spreader to the cargo hook.

    c. Wait for signalman's signal to hoist.

d. Move the spreader horizontally until alignment flippers make contact with the ends of the container.

e. Lower the spreader onto the container when the signalman gives the signal.

f. Check that all four bayonet cones lock evenly into all four container corner fittings.

NOTE: The automatic spreader can be locked from the inside of the cab on the Hagglunds crane.

2. Lift containers using 20- and 40-foot spreaders.

a. Hoist the container when the signalman gives the signal.

b. Move the container to the designated stowage area on the vessel.

c. Align the container over the cell guides on the hatch being loaded or on the designated spot on the vessel's deck.

d. Lower the container slowly into the hatch or onto the deck when the signalman gives the signal.

e. Unlock the spreader from the container.

NOTE: 1. The automatic container spreader can be unlocked from the inside of the cab on the Hagglunds crane.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing spreader operations with the Hagglunds crane using 20- and 40-foot spreaders.

Performance Measures	**GO**	**NO GO**
1. Performed spreader operations with Hagglunds crane.	_____	_____
2. Lifted containers using 20- and 40-foot spreaders.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TM 10-3990-205-12&P Operator’s, Unit Maintenance Manual and Repair Parts and Special Tools List	

551-88H-1414
Stow General Cargo at Assigned Hatch

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler aboard a fast sealift ship/large medium speed roll-on/roll-off (FSS/LMSR) with the requirement to stow general cargo at assigned hatch in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, ship's gear, hatch set, dunnage, cargo, blocking, bracing, and tie-down materials, stowage plan, low-mast forklift, and an operator.

Standards: Stow general cargo at assigned hatch without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with stowing general cargo at an assigned hatch.

Note: None

Performance Steps

1. Apply the general rules for stowing cargo.

   a. Ensure that cargo and vessel arrives at its destination undamaged.

   b. Stow as much cargo as possible in the compartment of the ship.

   c. Stow cargo so that the strongest structures of an item will bear the greatest pressures and weight of other items.

d. Ensure the hold is clean before storing cargo.

NOTE: If the hatch is not cleared, pieces of wood from broken crates may get under the pallets when they are put into stowage position. A lopsided pallet may cause the whole shipment of cargo to shift when the ship is at sea.

e. Use dunnage only in required quantities.

f. Avoid cargo damage by following the instructions on the cargo shipping handling labels.

g. Place a layer of dunnage stowed over cargo when it is necessary to walk over the top of it.

NOTE: Ensure dry wood dunnage is free of contamination harmful to the cargo.

h. Use dunnage for false decks to allow additional stowage.

2. Maximize use of hold's carrying capacity.

a. Load cargo so as to minimize broken stowage.

b. Conduct pre-stowage planning so that cargo will fill the hold without leaving large empty spaces.

c. Load cargo so as to ensure correct stowage and fit of irregularly shaped packages.

d. Use filler cargo where empty space occurs.

e. Nest cargo to ensure use of space that would otherwise be wasted.

f. Avoid excess use of dunnage.

3. Secure cargo.

NOTE: The shifting of cargo during voyage results in considerable damage to the ship and cargo. To prevent damage, cargo handlers must use proper stowage practices including the use of lashing and dunnage. Other means of securing cargo include: shoring, tie-down, blocking, and bracing.

a. Ensure that all deck cargo is lashed, in addition to being shored, blocked, and braced.

b. Secure cargo stored below deck with timbers firmly wedged, nailed, or lashed with either chains or wire rope material.

c. Secure cargo when a vessel is sailing in convoy and the master is not permitted to alter course or speed to avoid rough seas or foul weather.

d. Ensure the correct usage type, strength, and number of lashings are used on deck cargo.

e. Load general cargo, drummed cargo, and barreled cargo in the wings and ends of the hatch.

4. Use lashing as a means for securing.

NOTE: Lashing is the means of securing vehicles and other cargo by using wire rope, chains, steel bars, and turnbuckles.

a. Select lashing materials based on their availability and the type of cargo to be secured.

b. Ensure that all component parts of the lashing materials are of approximately equal strength.

5. Use dunnage.

NOTE: Dunnage consists of planks and pieces of wood used to protect a vessel and its cargo. Proper stowage is impossible without carefully applied dunnage.

a. Position dunnage to prevent shifting of cargo and chafing of cargo/vessel.

b. Use dunnage to chock off and secure containers.

c. Block off broken stowage.

d. Fill void spaces that cannot be filled with cargo.

e. Protect cargo from contact with water or liquids that may get into holds.

f. Place the bottom layer of dunnage in the direction of the drains.

g. Position dunnage to provide air passage for effective ventilation.

h. Position dunnage to distribute weight.

i. Position dunnage to separate cargo.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on stowing general cargo at assigned hatch.

Performance Measures	**GO**	**NO GO**
1. Applied the general rules for stowing cargo.	_____	_____
2. Maximized use of hold's carrying capacity.	_____	_____
3. Secured cargo.	_____	_____
4. Used lashing as a means for securing.	_____	_____
5. Used dunnage.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TEA PAM 700-4 Vessel Characteristics for Shiploading	

Required	Primary
TEA PAM 700-6 Large, Medium Speed, Roll-on/Roll-off Ships Users' Manual	
TEA PAM 700-7 Fast Sealift Ship Users Manual	

551-88H-1415
Secure Vehicles or Cargo in Seasheds

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury or damage to equipment.

Conditions: Assigned as a cargo checker/handler aboard a fast sealift ship/large medium speed roll-on/roll-off (FSS/LMSR) with the requirement to secure vehicles or cargo in seasheds in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, ship's gear, and hatch equipped with seasheds, TEA Pamphlet 700-6, TEA Pamphlet 700-7, and TC 4-13.17.

Standards: Secure vehicles or cargo in seasheds per TEA Pamphlet 700-6, TEA Pamphlet 700-7, and TC 4-13.17 without injury to personnel or damage to equipment or vessel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to secure vehicles or cargo in seasheds.

Note: None

Performance Steps

1. Operate seasheds system (see Figure 3-49).

NOTE: 1.Seasheds provide temporary multiple decks in containerships for transporting large military vehicles and oversized breakbulk cargo that cannot be placed into containers. 2. Seasheds are 40 feet long, 24 feet wide, and 12 feet 5 inches high. The FSS (T-AKR) series ships can carry eight, 35-foot seasheds. 3. Seasheds are open-top between deck conversions which fit into cargo holds 5 and 8 aft.

a. Check seasheds control panel to ensure the ship's power plug is connected, and check the switches on the circuit breaker.

NOTE: To open or close seasheds, electric winch motors are used and they can be manually operated using external whip.

b. Uncoil the remote control pendant from the stowage holster.

c. Raise the work-through floor (WTF).

d. Press the down button on the remote pendant that lowers the hook.

e. Lower the hook blocks past its stowage position and remove it.

f. Pair off the two hooks blocks until they reach the two recess rings in the floor.

g. Attach the two hook blocks to the recess rings and press the up button of the pendant.

h. Check to see if hooks are completely engaged in the floor rings.

i. Check winch cable to ensure that it is properly seated in the guide sheave and on the winch drum.

j. Press the up button on the remote pendant until the floor reaches the vertical position.

k. Check the floor latches to make sure they are engaged and disengaged.

NOTE: The ship's crew will open and close the folding work-through floor sections.

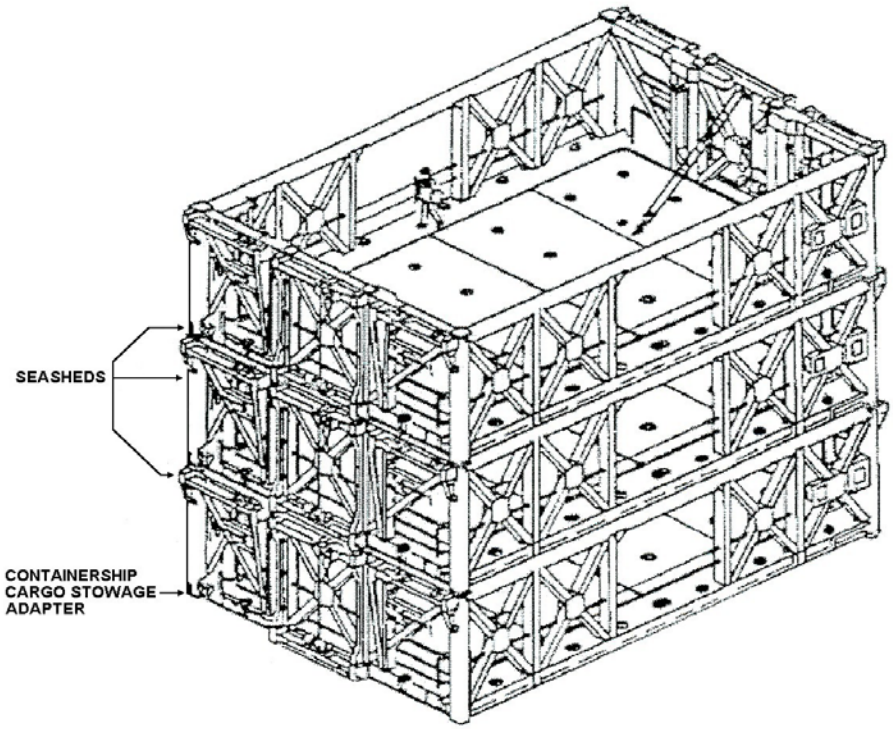


Figure 3-49

Seashed System

2. Secure vehicles or cargo in seasheds (see Figure 3-50).

a. Position vehicles or cargo in the desired location.

NOTE: The floor is equipped with 70,000 pound capacity cloverleaf-type flush-mounted tie-downs in the floor.

b. Attach tie-down to the cloverleafs and D-rings when securing cargo.

c. Cloverleafs are positioned in a 6' x 6' rectangular grid pattern.

d. Attach a minimum of four tie-down devices in a symmetrical pattern and in pairs.

e. Attach the swivel bulb hook or safety hook end of the tie-down devices to the vessel's D-ring or cloverleaf deck socket that points to the vehicle.

f. Attach the chain so that they are pulling in a straight line and not against one another.

g. Use tie-down devices of equal strength.

h. Lash down the vehicle with a tightening wrench.

NOTE: Attach no more than 50 percent of the required tie-down devices to the vehicle axles or through the track sprockets.

WARNING

When forming chain loops around axles and bumpers, place the loop against a solid part of the structure.

i. Vehicles must face the direction of stowage.

j. Stow vehicles in the fore and aft position and set hand brake.

k. Block sides, front, and back of the vehicle.

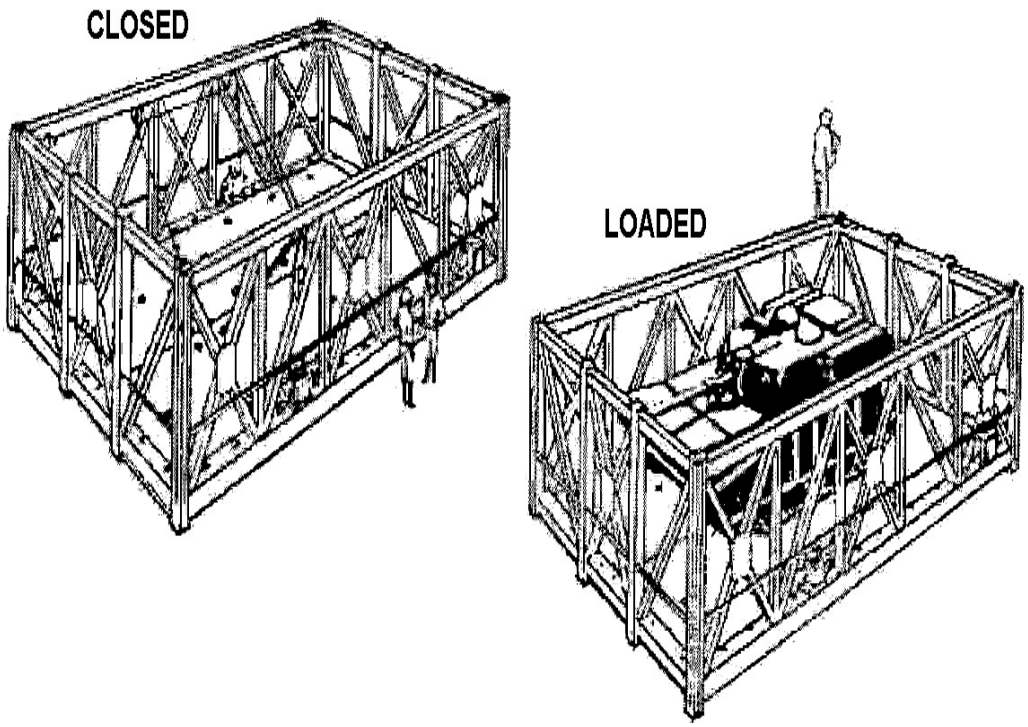


Figure 3-50

Seasheds Closed and Loaded

3. Lower the work-through floor (see Figure 3-51).

NOTE: When loading the lower seashed, the pass-through clearance of the upper seashed is 30 feet long and 18 feet wide.

a. Position two assistant operators on the floor latch ring chains.

b. Press the down button on the remote control pendant while the assistant operators pull down on the ring chain or push up on the lashes.

c. Continue to press the down button until the floor is completely lowered to the down position.

d. Pay out the hook block until there is enough slack to remove it from the recess ring.

e. Store one of the hook blocks on the D-ring and the other on the hook stowage eye on the winch.

f. Press the up button on the remote control pendant to take all slack out of the hook block.

g. Watch the winch drum while raising the hook block, to ensure that the cable is being wound evenly.

NOTE: The vertical clearance between the floors of the upper seashed bottom of the hatch cover above is 14 feet.

h. After all hinged floors are closed, the top seashed is ready to be loaded. Repeat the same procedure for the opposite floor (winch No. 2).

i. Secure vehicles in on the top floor symmetrically with standard tie-down devices 10K, 35K, and 70K.

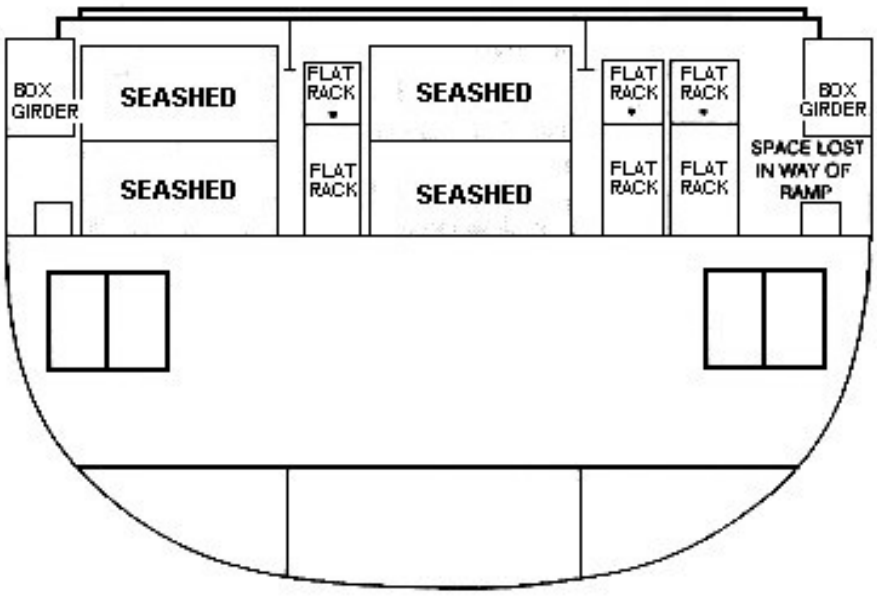


Figure 3-51

Loading the Lower Seashed

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier he/she will be evaluated on securing vehicles or cargo in seasheds.

Performance Measures	**GO**	**NO GO**
1. Operated seasheds system.	_____	_____
2. Secured vehicles or cargo in seasheds.	_____	_____
3. Lowered the work-through floor.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TEA PAM 700-6 Large, Medium Speed, Roll-on/Roll-off Ships Users' Manual	
TEA PAM 700-7 Fast Sealift Ship Users Manual	

551-88H-1421
Perform Standard Hand and Arm Signals for Hagglunds Crane Operations

Conditions: Assigned as a cargo checker/handler with the requirement to perform standard hand and arm signals for Hagglunds crane operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, and a Hagglunds crane with operator.

Standards: Signal Hagglunds crane operator using standard hand signals without injury to personnel or damage to the cargo, vessel, or ship's gear.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler on a cargo vessel equipped with the Hagglunds crane and must signal the operator using the proper hand signals to ensure the safe operation of the Hagglunds crane.

Note: None

Performance Steps

1. Move to designated location for signaling, clearly visible to crane operator.

2. Observe rigging and hookups for safety hazards.

3. Give proper standard hand signals (see Figure 3-52).

4. Stop operation and report to the hatch foreman when a safety hazard is observed.

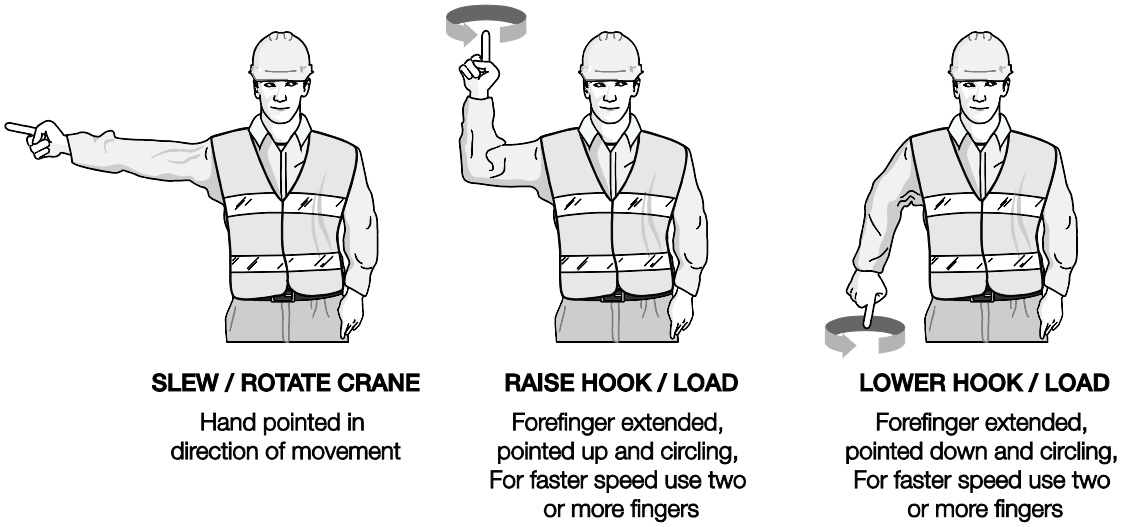


Figure 3-52

Standard Hand Signals

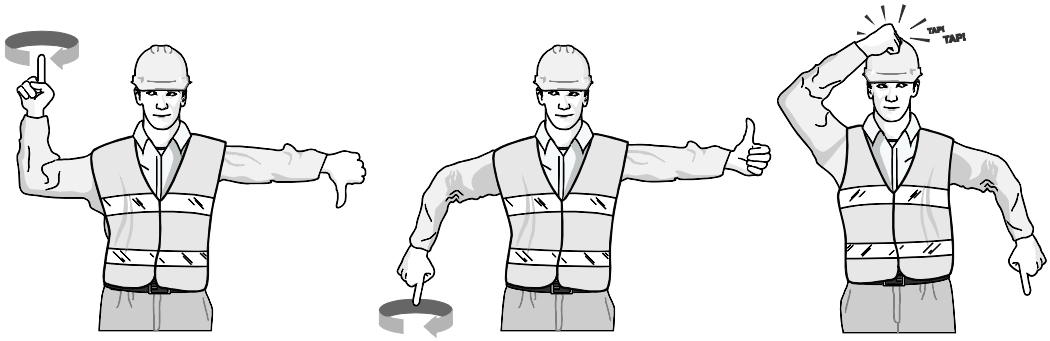
LOWER THE BOOM
LUFF DOWN
Fist Closed, Thumb Extended

RAISE THE BOOM
LUFF UP
Fist Closed, Thumb Extended

STOP BOOM
STOP HOIST
Hands Raised, Fist Closed

Figure 3-52

Standard Hand Signals (continued)



RAISE HOOK
LOWER THE BOOM
Right Hand Signals
To Raise The Load,
Left Hand Signals
To Lower Boom

LOWER THE HOOK
RAISE THE BOOM
Right Hand Signals
to Lower The Hook
Left Hand Signals
To Raise Boom

USE RIDER BLOCK-BRING
UP OR DOWN
Right Hand Taps
Helmet With Fist
Left Hand Points
Up or Down

Figure 3-52

Standard Hand Signals (continued)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on signaling the Hagglunds crane operator with the proper hand signals.

Performance Measures	**GO**	**NO GO**
1. Moved to the designated location for signaling, clearly visible to crane operator.	_____	_____
2. Observed rigging and hookups for safety hazards.	_____	_____
3. Gave proper signals.	_____	_____

Performance Measures	**GO**	**NO GO**
4. Stopped operation and reported to the hatch foreman when a safety hazard was observed.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 5: 4,000-lb Rough Terrain Forklift Operations

551-88H-1533
Operate the 4,000-lb Rough Terrain Forklift

DANGER

Before starting engine, check that the steering bypass valve is closed (fully clockwise) and that the shipping lock pin has been removed. Failure to do so will cause loss of steering control which may result in death or permanent injury and damage to equipment.

WARNING

All personnel will wear a hearing protection device when operating this vehicle.

Be sure your seat belt is fastened before starting engine.

Starter fluid is toxic and highly flammable. Do not discharge starter fluid in confined areas or near open flame.

CAUTION

Do not operate starter motor for more than 30 seconds. Wait at least 3 minutes before cranking to allow batteries to recuperate and starter motor to cool.

If there is no oil pressure indication on oil press gage within 10 to 15 seconds and if oil pressure lamp is lit, turn engine off and check for a cause. If the alternator indicator is lit, turn engine off and check for a cause.

Conditions: Assigned as a forklift operator with the requirement to operate the 4,000-lb rough terrain forklift in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, hearing protection, a 4,000-lb rough terrain forklift (Army Model MHE 237), and cargo.

Standards: Operate 4,000-lb rough terrain forklift without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a forklift operator tasked to operate a 4,000-lb rough terrain forklift.

Note: When operating on soft sand at slow speed not exceeding 10 MPH, tire inflation pressure may be decreased to 30 pounds per square inch (PSI) for improved traction. When operating in excess of 10 MPH or on hard surface terrain or roads, standard tire inflation pressure of 45 PSI should be maintained.

Performance Steps

1. Start the engine.

a. Remove shipping lock pin and shipping lock pin from chassis, install KLIK lock pin and store shipping lock pin under operator's seat.

b. Mount forklift truck and sit in operator's seat.

c. If necessary, adjust seat by moving lever to rear to release seat for adjustment and move seat forward or backward and fasten seat belt.

d. Pull parking brake lever towards you to activate parking brake.

e. Place transmission direction selector in neutral (N) position.

f. Insert key into ignition switch; turn key to first position clockwise (on position).

g. Depress accelerator pedal 1/3 to 1/2 from normal position.

h. Depress start push-button switch.

i. If temperature is below 40 degrees F, using a quick start aid, remove clip and engage starter while pressing quick start lever and hold lever for one or two seconds.

j. When engine starts, release start push-button switch immediately, reinstall clip in quick start aid, and check oil press gage for proper indication.

k. Check control panel indicators and operate engine at 1/3 throttle to allow proper engine and hydraulic fluid warm up.

2. Operate the forklift.

a. Operate lift control lever and raise forks no less than 12 inches from ground.

b. Place main switch lever on vehicle lights switch in stop light position.

c. Depress brake pedal and release parking brake lever.

d. Move transmission direction selector to desired position.

e. Move transmission speed selector to desired speed range.

f. Release brake pedal and depress accelerator pedal as required to move forklift truck and accelerate to desired speed.

3. Operate the forklift to pickup and deposit a load.

a. Adjust forks by lifting end of fork to disengage locking lug from notch in support.

b. Slide fork to desired position and then lower fork until lug is engaged in desired notch.

c. Pick up the load by operating the tilt control lever to position mast in a vertical position.

d. Operate lift control lever to position forks to desired height.

e. Center forklift truck on load and move truck forward slowly to move forks under load.

f. Pull lift control lever towards you until load is raised to desired height.

g. Use rotate control lever to level forks with angle of load.

h. Use shift control lever to center forks on load.

i. Pull tilt control lever slowly towards you and tilt load towards truck to avoid load possibly slipping forward off the forks.

j. When load reaches a safe degree of tilt, release the tilt control lever.

k. Transport load a minimum of 12 inches from the ground and tilted back slightly.

l. Operate at a safe speed for type of load and terrain.

m. Deposit load.

(1) Push tilt control lever away from you to move mast to a vertical position.

(2) Move lift control lever away from you to lower load until load rests on ground.

(3) Back forklift truck away from load; back-up alarm will sound when transmission direction selector is placed in reverse (R) position.

(4) If load is to be deposited at a higher level than transport level or for stacking, move mast into vertical position and raise load to necessary height before moving load into position for lowering.

4. Stop the forklift.

a. Depress brake pedal to stop forklift.

b. Place transmission direction selector in neutral (N) position.

c. Set parking brake by pulling parking brake lever towards you.

d. Lower forks to ground by operating lift control lever.

e. Before stopping engine, allow engine to run at idle speed with no load for four or five minutes.

f. Turn key in ignition switch to OFF position to shut off engine.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the 4,000-lb rough terrain forklift.

Performance Measures	**GO**	**NO GO**
1. Started the engine.	_____	_____
2. Operated the forklift.	_____	_____

Performance Measures	GO	NO GO
3. Operated the forklift to pickup and deposit a load.	_____	_____
4. Stopped the forklift.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 10-3930-638-10 Operator's Manual for Truck, Forklift, DED, Pneumatic Tire, Articulated Frame Steer, 4,0000 lb Capacity Rough Terrain, Army Model MHE 237 (J.I. Case Model M4K) (NSN 3930-01-076-4237)	

Subject Area 6: 10,000-lb All Terrain Lifter Army System (ATLAS)

551-88H-1537
Operate ATLAS Rough Terrain Forklift Without a Load

DANGER

Adhere to all DANGER statements listed in this task. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in this task. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in this task. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a forklift operator with the requirement to operate an all terrain lifter, army system (ATLAS) rough terrain forklift in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, hearing protection, and an ATLAS rough terrain forklift.

Standards: Operate the ATLAS rough terrain forklift without a load without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a forklift operator tasked with operating the ATLAS rough terrain forklift without a load.

Note: None

Performance Steps

1. Start the engine (see Figure 3-53).

NOTE: Prior to this task, all PMCS and safety checks will have been performed.

a. Adjust operator's seat to your comfort and ensure seat belt is fastened before starting engine.

b. Unlock the steering wheel and allow the cable to slowly retract.

c. Engage the parking brake.

d. Ensure transmission travel lever is in neutral (N) position.

e. Ensure that the emergency steer switch is in the on position.

f. Ensure that the auxiliary fuel shut-off switch is in the off position,

g. Depress accelerator pedal to 1/2 speed.

h. Turn ignition switch to the on position and slowly turn the switch to the start position.

CAUTION

Do not operate starter motor for more than 30 seconds. Wait 2 minutes for batteries to recuperate and starter motor to cool to avoid overheating and damage to starter motor.

i. Release the start switch when engine starts and decrease engine speed to idle, allowing warming of engine oil and hydraulic fluid.

CAUTION

If any warning indicators are lit or instrumentation gages have incorrect reading, stop engine immediately and investigate cause.

j. Check all instrumentation gages for normal readings and lack of warning indicators.

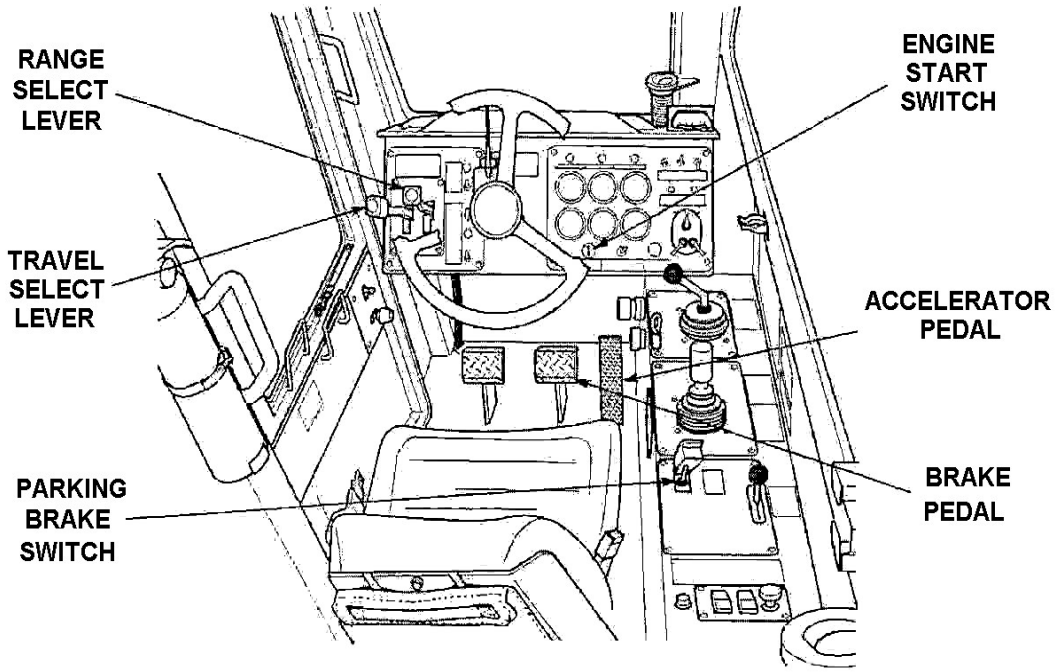


Figure 3-53

Starting Engine

2. Move the forklift truck.

a. Depress the service brake and inching pedal to apply the service brakes.

b. Ensure the forks are in normal carry position at least 24 inches above the ground for maximum stability.

WARNING

Do not travel with the automatic fork level switch in the on position. This could cause a load to be dropped.

c. Place the travel and range select lever to the desired direction and gear ratio combination.

DANGER

Do not operate with the emergency steer switch off. If engine power is lost, there will be a loss of emergency steering capacity. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

e. Place the park brake switch to off to release the parking brake.

f. Move the travel select lever to the forward (F) position for forward travel, or down to the reverse (R) position for reverse travel.

CAUTION

Sound vehicle horn to alert personnel of impending movement. Use care when backing up and use a ground guide if your vision is limited. Observe vehicle clearances around and above the vehicle.

g. Release service brake and slowly depress accelerator for forward travel in desired direction.

3. Steer the forklift.

a. Select desired steering mode:

(1) 4-wheel steer. Move the steer select control switch to the right position. Front wheels will steer in the direction that the steering wheel is turned; while rear wheels will steer in the opposite direction.

(2) 2-wheel steer. Move the steer select control switch to the center position. Front wheels will steer in the direction that the steering wheel is turned; while rear wheels will remain in the fixed forward position.

WARNING

Turn slowly or vehicle could tip or lose the load. This is particularly a concern when in 4-wheel steering mode. Always turn in a lower gear or slower speed.

CAUTION

Before changing steering modes, synchronize steering to avoid mistracking and tire damage. Be aware of fork extension beyond the end of the carriage and check clearances.

(3) Crab steer. Move the steer select control switch to the left position. All wheels will steer in the same direction.

b. Follow steering system synchronization procedures to align the front and rear wheels if wheels are not set in the same direction after you change steering modes.

(1) Use steering wheel to put rear wheels in straight ahead position.

(2) Move the steer select control switch into the two wheel position.

(3) Use steering wheel to adjust front wheels to a straight ahead position.

(4) Move steer select control switch to desired mode to continue operation.

4. Stop the forklift.

a. Release the accelerator pedal.

b. Depress service brake and inching pedal to apply brakes.

c. Bring forklift to a complete stop.

d. Move travel and range select lever to N position.

e. Engage park brake switch to on position.

f. Move the hydraulic joystick left to retract the boom and extend the cylinder (see Figure 3-54).

g. Push the hydraulic joystick forward to lower the boom until the forks are resting on the ground.

5. Stop the engine.

a. Turn all lights and accessories off.

b. Allow engine to idle for three to five minutes.

c. Turn the ignition switch to the off position.

d. Perform after operations PMCS.

e. Lock the steering wheel with the steering wheel locking cable and lock.

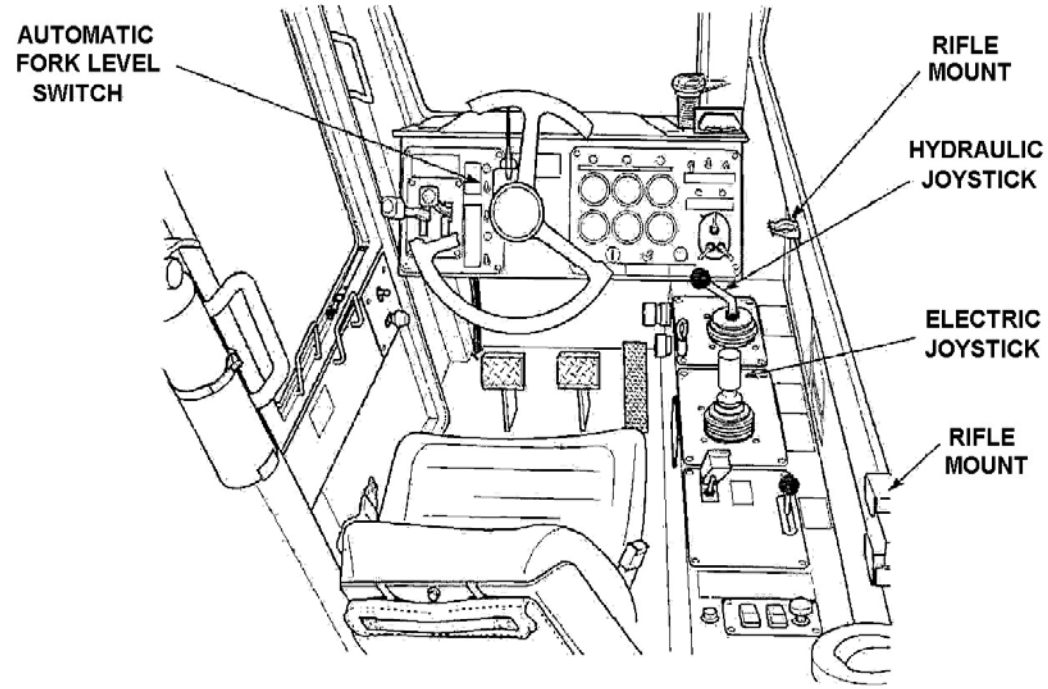


Figure 3-54

Moving Hydraulic Joystick

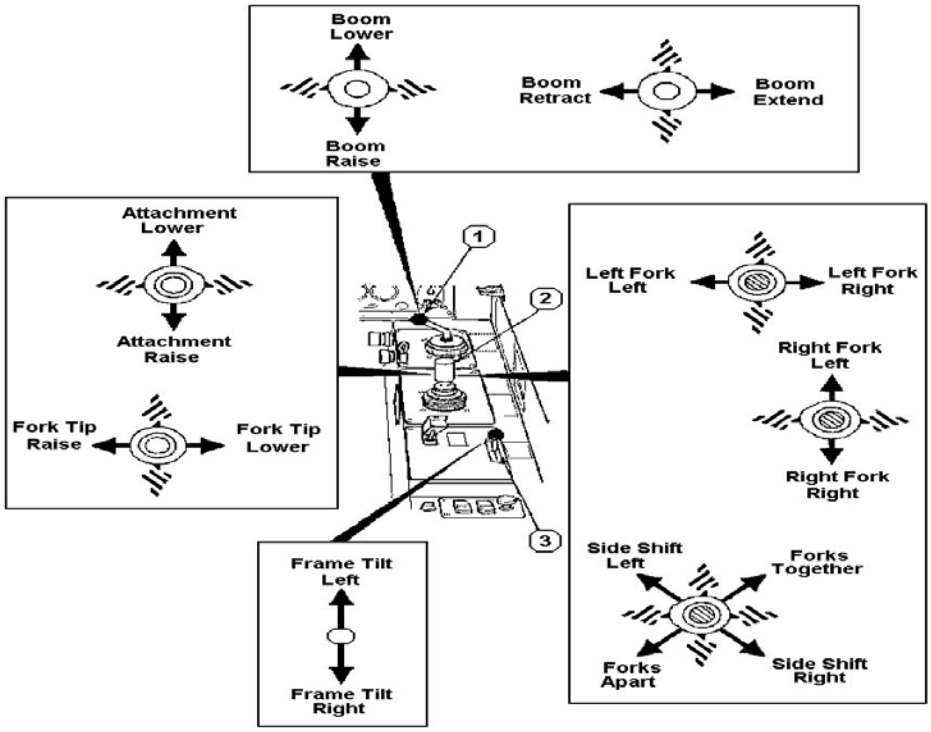


Figure 3-54

Moving Hydraulic Joystick (continued)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the ATLAS rough terrain forklift without a load.

Performance Measures	**GO**	**NO GO**
1. Started the engine.	_____	_____
2. Moved the forklift truck.	_____	_____
3. Steered the forklift.	_____	_____
4. Stopped the forklift.	_____	_____
5. Stopped the engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	
TM 10-3930-673-10 Operator's Manual for All Terrain Lifter, Army System (ATLAS) 10,000 lb Capacity, NSN 3930-01-471-2886	

551-88H-1538
Operate ATLAS Rough Terrain Forklift With a Load

DANGER

Adhere to all DANGER statements listed in this task. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in this task. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in this task. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a forklift operator with the requirement to operate the all terrain lifter, army system (ATLAS) rough terrain forklift with a load in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, hearing protection, an ATLAS rough terrain forklift, and cargo.

Standards: Operate the ATLAS rough terrain forklift with a load without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a forklift operator given a requirement to operate the ATLAS rough terrain forklift with a load.

Note: None

Performance Steps

1. Start the engine (see Figure 3-55).

NOTE: Prior to this task, all PMCS and safety checks will have been performed.

a. Adjust operator's seat to your comfort and ensure seat belt is fastened before starting engine.

b. Engage the parking brake.

c. Unlock the steering wheel and allow the cable to slowly retract.

d. Ensure transmission travel lever is in neutral (N) position.

e. Depress the accelerator pedal to 1/2 speed.

f. Turn ignition switch to the on position and slowly turn the switch to the start position.

CAUTION

Do not operate starter motor for more than 30 seconds. Wait 2 minutes for batteries to recuperate and starter motor to cool to avoid overheating and damage to starter motor.

g. Release the start switch when the engine starts and decrease engine speed to idle, allowing warming of engine oil and hydraulic fluid.

h. Ensure that the auxiliary fuel shut-off switch is in the on position.

i. Ensure that the emergency steer switch is in the on position.

CAUTION

If any warning indicators are lit or instrumentation gages have incorrect reading, stop engine immediately and investigate cause.

j. Check all instrumentation gages for normal readings and lack of warning indicators.

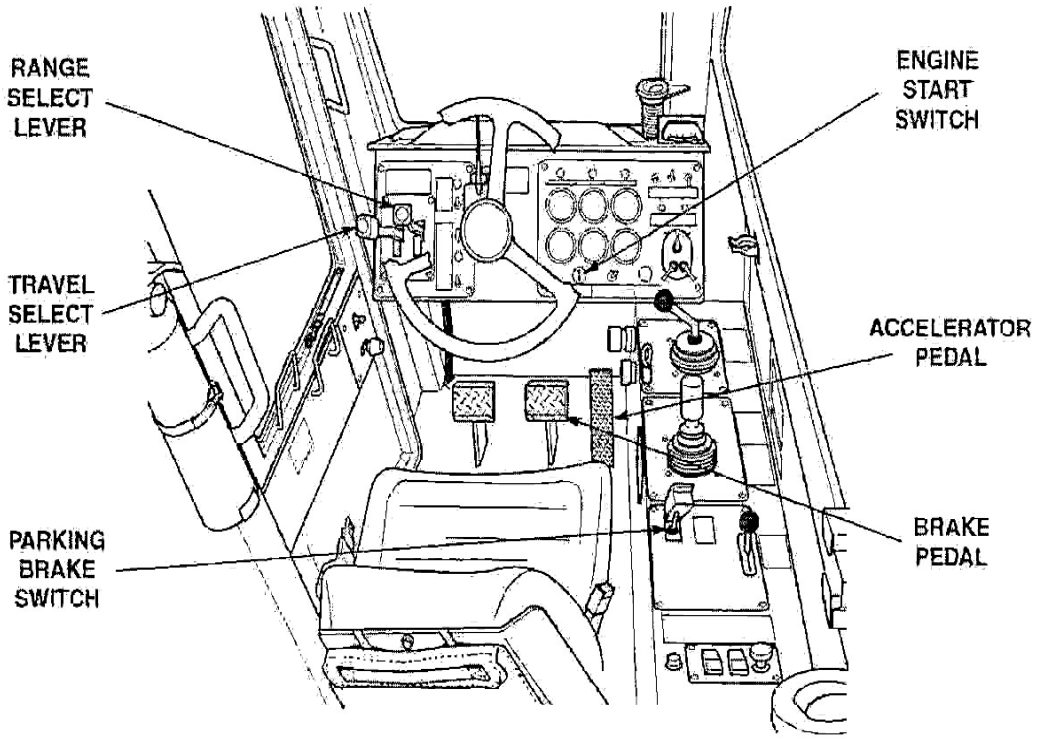


Figure 3-55

Starting the Engine

2. Move the forklift truck.

a. Depress the service brake and inching pedal to apply the service brakes.

b. Ensure the forks are in normal carry position at least 24 inches above the ground for maximum stability.

WARNING

Do not travel with the automatic fork level switch in the on position. This could cause a load to be dropped.

c. Place the travel and range select lever to the desired direction and gear ratio combination.

DANGER

Do not operate with the emergency steer switch off. If engine power is lost, there will be a loss of emergency steering capacity. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

d. Ensure that the emergency steering switch is on.

e. Place the park brake switch to off to release the parking brake.

f. Move the travel select lever to the forward (F) position for forward travel, or down to the reverse (R) position for reverse travel.

CAUTION

Sound vehicle horn to alert personnel of impending movement. Use care when backing up and use a ground guide if your vision is limited. Observe vehicle clearances around and above the vehicle.

g. Release the parking brake and slowly depress the accelerator for movement in desired direction.

3. Steer the forklift.

a. Select desired steering mode:

(1) 4-wheel steer. Move the steer select control switch to the right position. Front wheels will steer in the direction that the steering wheel is turned; while rear wheels will steer in the opposite direction.

(2) 2-wheel steer. Move the steer select control switch to the center position. Front wheels will steer in the direction that the steering wheel is turned; while rear wheels will remain in the fixed forward position.

WARNING

Turn slowly or vehicle could tip or lose the load. This is particularly a concern when in 4-wheel steering mode. Always turn in a lower gear or slower speed.

CAUTION

Before changing steering modes, synchronize steering to avoid mistracking and tire damage. Be aware of fork extension beyond the end of the carriage and check clearances.

(3) Crab steer. Move the steer select control switch to the left position. All wheels will steer in the same direction.

b. Follow steering system synchronization procedures to align the front and rear wheels if wheels are not set in the same direction after you change steering modes.

(1) Use steering wheel to put rear wheels in straight ahead direction.

(2) Move the steer select control switch into the two wheel position.

(3) Use steering wheel to adjust front wheels to a straight ahead position.

(4) Move steer select control switch to desired mode to continue operation.

4. Operate forklift with a load (see Figure 3-56).

DANGER

Do not lift more than one pallet with forks. Pallets may topple and result in death or injury to personnel and damage to load or equipment.

a. Move vehicle to the pallet.

b. Use the hydraulic joystick to position forks at the bottom of the uppermost pallet. Either manually or using the automatic fork level (auto fork level switch in on position), level the forks and align the forks with the slots in the pallet.

c. Move vehicle or extend the boom to engage the bottom of the pallet with forks.

DANGER

Always retract the boom before lowering or transporting a load. Failure to do so may cause vehicle instability and result in death or injury to personnel and damage to equipment.

d. Use the hydraulic joystick to raise the boom and lift the pallet slowly.

DANGER

Do not travel with the automatic fork level switch in the on position. It is possible to drop a load which may result in death or injury to personnel and damage to load or equipment.

e. Use the hydraulic joystick to retract the boom and then lower the pallet to a travel position (approximately two feet above ground level).

f. Move the automatic fork level switch to the off position before traveling.

g. Use the electric joystick to raise the fork tips and enable the load to be supported by the carriage. Use care when traveling with a load.

h. Move vehicle to unloading area and in line with unloading area.

i. Move the automatic fork level switch to the on position. Use the hydraulic and electric joysticks to set load down.

j. Move the automatic fork level switch to the off position and use the hydraulic and electric joysticks to remove the weight from forks. Move vehicle slowly away from the pallet.

k. Use the electric joystick to move forks to a carrying position.

l. Repeat steps a through k for continued operation.

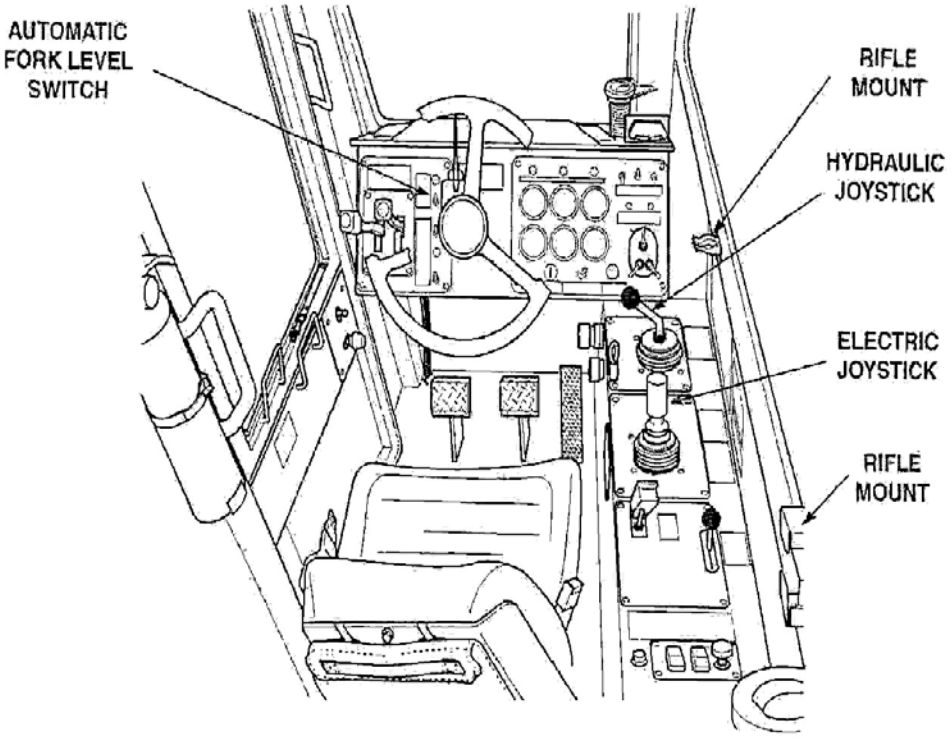


Figure 3-56

Operating Forklift

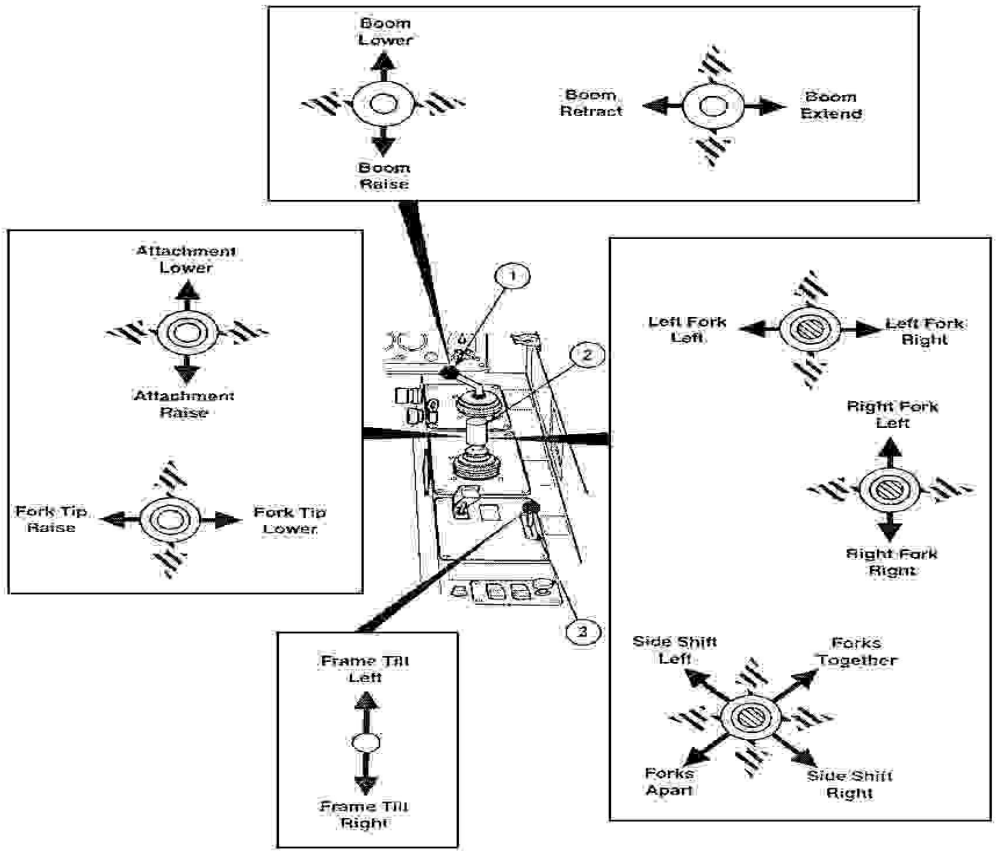


Figure 3-56

Operating Forklift (continued)

5. Stop the forklift.

   a. Release the accelerator pedal.

   b. Depress service brake and inching pedal to apply brakes.

   c. Bring forklift to a complete stop.

   d. Move travel and range select lever to N position.

   e. Engage park brake switch to on position.

   f. Move the hydraulic joystick left to retract the boom and extend the cylinder.

   g. Push the hydraulic joystick forward to lower the boom until the forks are resting on the ground.

6. Stop the engine.

   a. Turn all lights and accessories off.

   b. Allow engine to idle for three to five minutes.

   c. Turn the ignition switch to the off position.

d. Turn the auxiliary fuel shut-off switch to the off position.

e. Perform after-operations PMCS.

f. Lock the steering wheel with the steering wheel locking cable and lock.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the ATLAS rough terrain forklift with a load.

Performance Measures	**GO**	**NO GO**
1. Started the engine.	_____	_____
2. Moved the forklift truck.	_____	_____
3. Steered the forklift.	_____	_____
4. Operated forklift with a load.	_____	_____
5. Stopped the forklift.	_____	_____
6. Stopped the engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	
TM 10-3930-673-10 Operator's Manual for All Terrain Lifter, Army System (ATLAS) 10,000 lb Capacity, NSN 3930-01-471-2886	

Subject Area 7: 5K Light Capability Rough Terrain Forklift

551-88H-1530
Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) With a Load

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

If this is the first time starting the vehicle, perform PMCS before interval checks. Failure to comply may result in injury to personnel or damage to equipment.

Your hearing can be permanently damaged if exposed to constant high noise levels of 85 dB or greater. Hearing loss occurs gradually, but becomes permanent overtime. Vehicle operators and maintenance personnel require at least single hearing protection while operating vehicle with the engine running.

Conditions: Assigned as a forklift operator with the requirement to operate a 5K light capacity rough terrain forklift (LCRTF) with a load in an operational environment, during the day or night, in normal weather conditions, given a 5K LCRTF, cargo, a completed risk assessment, safety briefing, safety clothing, and hearing protection.

Standards: Operate the 5K light capacity rough terrain forklift (LCRTF) with a load without causing injury to personnel or damage to the equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a rough terrain forklift operator tasked with operating a 5K LCRTF to load cargo into a container.

Note: None

Performance Steps

1. Start the engine.

NOTE: Prior to this task, all PMCS and safety checks will have been performed.

a. Move battery disconnect switch to on position (see Figure 3-57, Item 1).

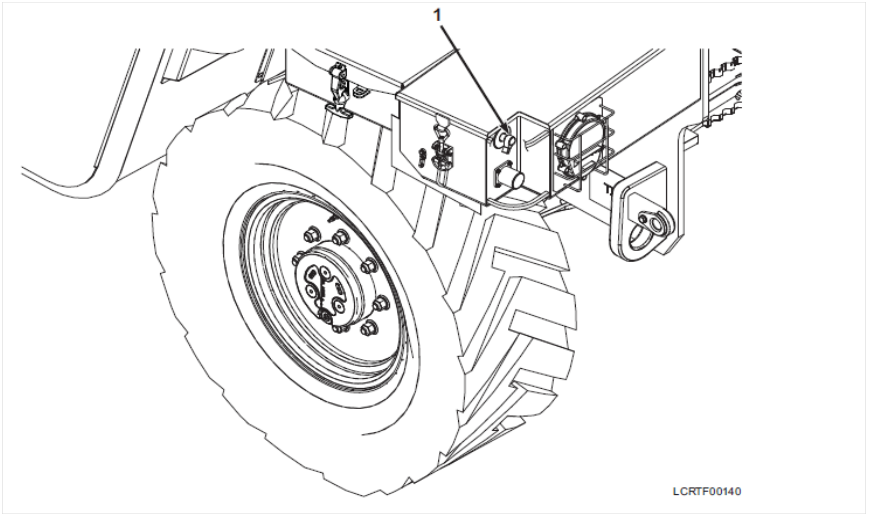


Figure 3-57

Battery Disconnect Switch

b. Fasten seat belt (see Figure 3-58, Item 1).

c. Adjust operator seat so that when seat belt is buckled, foot pedals can still be operated (see Figure 3-58, Item 2).

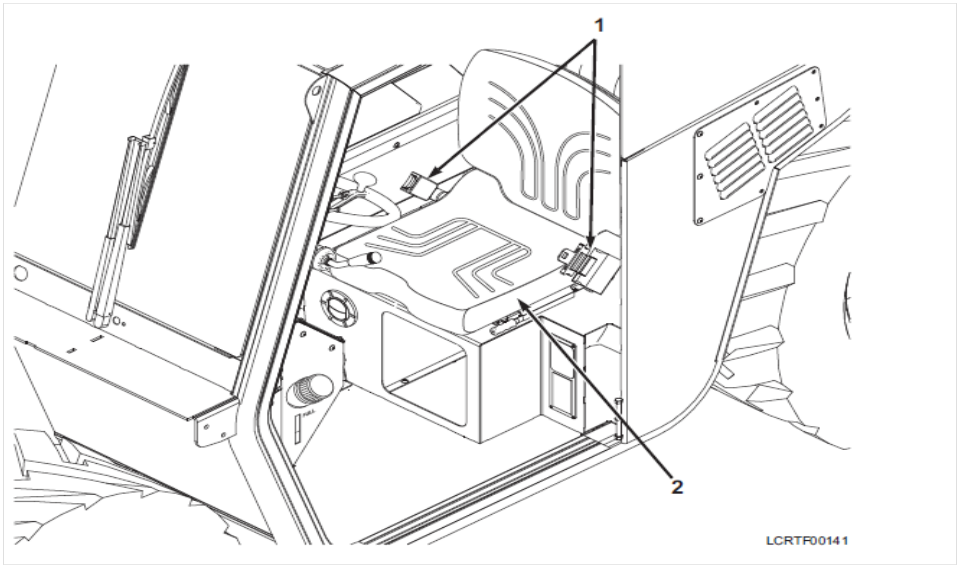


Figure 3-58

Fasten Seat Belt

CAUTION

Do not crank engine continuously for more than 30 seconds. Allow the starter to cool for two minutes before cranking the engine again. Failure to comply may result in damage to equipment.

d. Turn the ignition switch clockwise to the ign/start position (see Figure 3-59, Item 5) . Release the switch as soon as the engine starts. If the engine fails to start on the first try, wait until engine and starter have come to a complete stop. Then, return the switch to the off position before attempting to start engine again.

e. After engine starts, return accelerator pedal to idle position for approximately 3 minutes. Ensure that readings on gauges (see Figure 3-59, Item 6 and 7) are within normal operating ranges and warning lights (see Figure 3-59, Items 1, 2, 3, and 4) are not illuminated before moving vehicle.

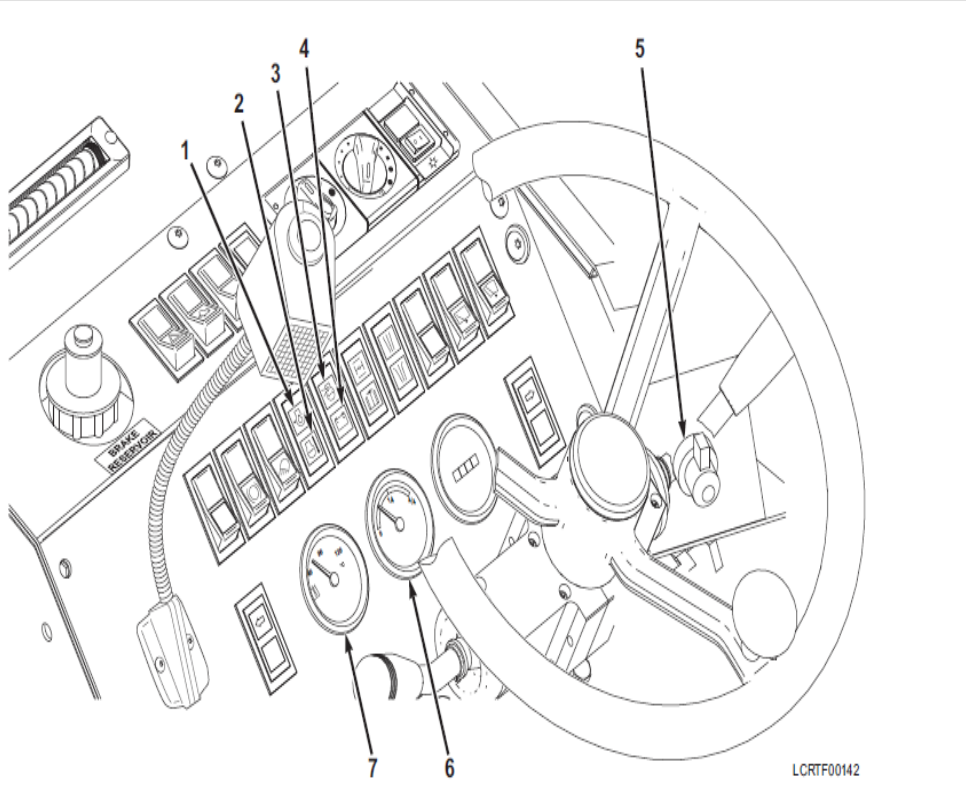


Figure 3-59

Start Engine

DANGER

Do not exceed 10 MPH (16 KPH) when traveling on unimproved surfaces. Failure to comply may result in death or injury to personnel and damage to equipment.

2. Move forklift in two-wheel steer mode.

DANGER

Vehicle is less stable when traveling with load in a raised position. If you must move vehicle with load raised above carry position (bottom of load at 24 in. [610 mm] above ground), the following practices should be observed: • Fully retract boom. • Forks slightly tilted back (3-5 degrees). • Avoid sharp turns and sudden starts/stops. • Operate all controls smoothly. • Move very slowly. • Keep vehicle level. • Use a ground guide. Failure to comply may result in death or injury to personnel and damage to equipment.

a. Perform complete walk around to ensure wheel chocks have been removed and stored, and that there are no obstacles near vehicle.

b. Raise forks so load is approximately 24 in. (610 mm) off ground.

WARNING

Do not travel with the automatic fork level switch in the on position. This could cause a load to be dropped.

c. Align rear wheels.

DANGER

Do not operate with the emwegency steer switch off. If engine power is lost, there will be a loss of emergency steering capacity. Failure to follow this procedure could result in death or injury to personnel.

d. Set steer mode switch (see Figure 3-60, Item 1) to two-wheel steer mode (down) position. Two-wheel steer mode indicator (see Figure 3-60, Item 2) will illuminate.

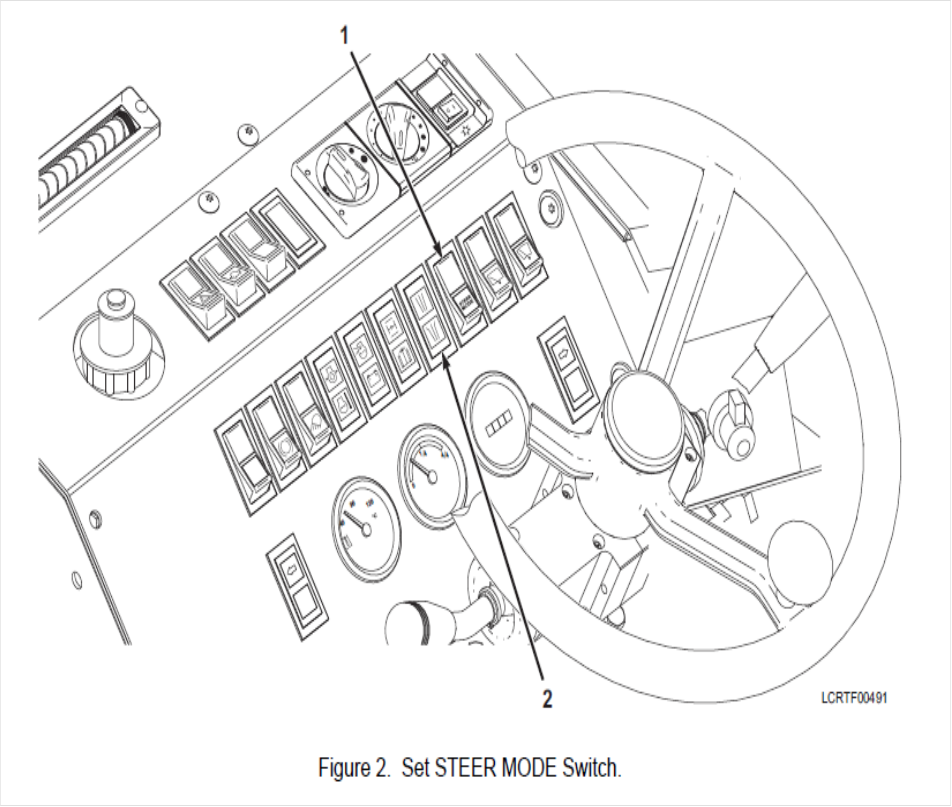


Figure 2. Set STEER MODE Switch.

Figure 3-60

Set Steer Mode Switch

e. Press and hold brake pedal (see Figure 3-61, Item 4).

f. Press parking brake switch up to release parking brake (see Figure 3-61, Item 1).

DANGER

Prior to moving vehicle or operating boom, ensure boom has at least 10 ft (3 m) of clearance from overhead wires, power lines, and structures. If lines are near your operating area, notify your supervisor prior to operating boom. Failure to comply may result in death or injury to personnel and damage to equipment.

Keep personnel clear of vehicle when traveling. Failure to comply may result in death or injury to personnel.

CAUTION

Prior to moving vehicle, ensure operator's door window is fully closed or locked in open position. An unsecured door or window can swing causing glass to break. Failure to comply may result in injury to personnel or damage to equipment.

g. Press drive/work switch to drive mode (up) position (see Figure 3-61, Item 2).

CAUTION

When traveling over rough terrain, reduce travel speed to avoid damage to vehicle and load. Failure to comply may result in damage to equipment.

h. Place gear selector lever (see Figure 3-61, Item 5) in up position to move vehicle forward (see Figure 3-61, Item 6).

i. Release brake pedal (see Figure 3-61, Item 4) and slowly press accelerator pedal to obtain desired speed (see Figure 3-61, Item 3).

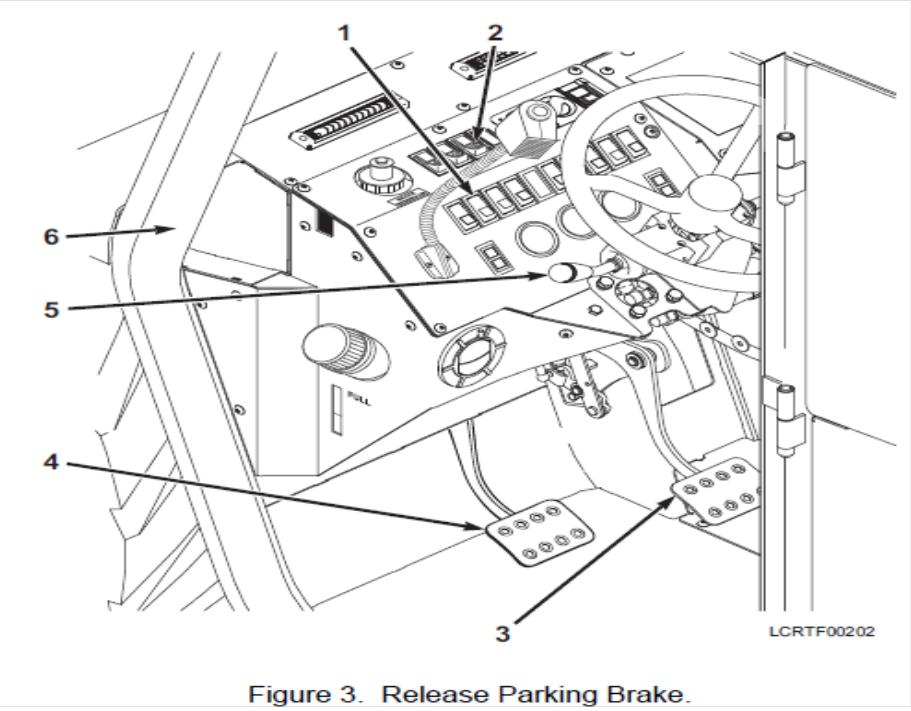


Figure 3. Release Parking Brake.

Figure 3-61

Release Parking Brake

CAUTION

Ensure carriage backrest is removed prior to loading or unloading stacked items in container when loading containers. Failure to comply may result in damage to equipment.

3. Operate forklift to unload/load pallets.

a. When loading/unloading containers, remove carriage backrest weldment.

b. Raise forks (see Figure 3-62, Item 2) enough to clear opening of container (see Figure 3-62, Item 1).

NOTE: Ensure forks are in the center position prior to entering container.

c. Slowly move vehicle into container (see Figure 3-62, Item 1).

d. After entering container, shift forks (see Figure 3-62, Item 2) left or right and pick up load.

e. Raise forks (see Figure 3-62, Item 2) so load will not drag floor and will clear opening as vehicle exits container.

f. Slowly exit container.

g. Place load in designated area.

h. When loading/unloading containers, install carriage backrest weldment.

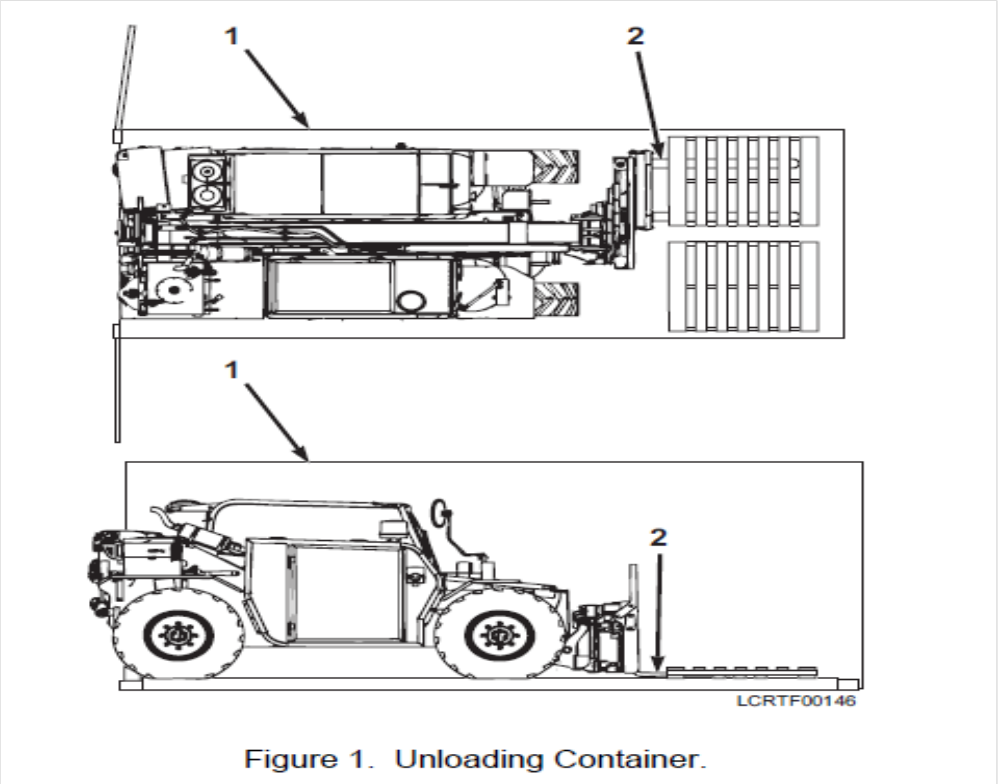


Figure 3-62

Unloading Container

4. Operate forklift in reverse.

NOTE: Reversing direction in vehicle is obtained the same way whether in two-wheel steer mode, four-wheel steer mode, or crab steer mode. Two-wheel steer mode shown below.

a. Release accelerator pedal (see Figure 3-63, Item 1) and slowly apply brake pedal (see Figure 3-63, Item 2) until vehicle comes to a complete stop (see Figure 3-63, Item 4).

b. Move gear selector lever (see Figure 3-63, Item 3) to reverse (down) position.

c. Release brake pedal (see Figure 3-63, Item 2) and slowly press accelerator pedal (see Figure 3-63, Item 1) to obtain desired speed.

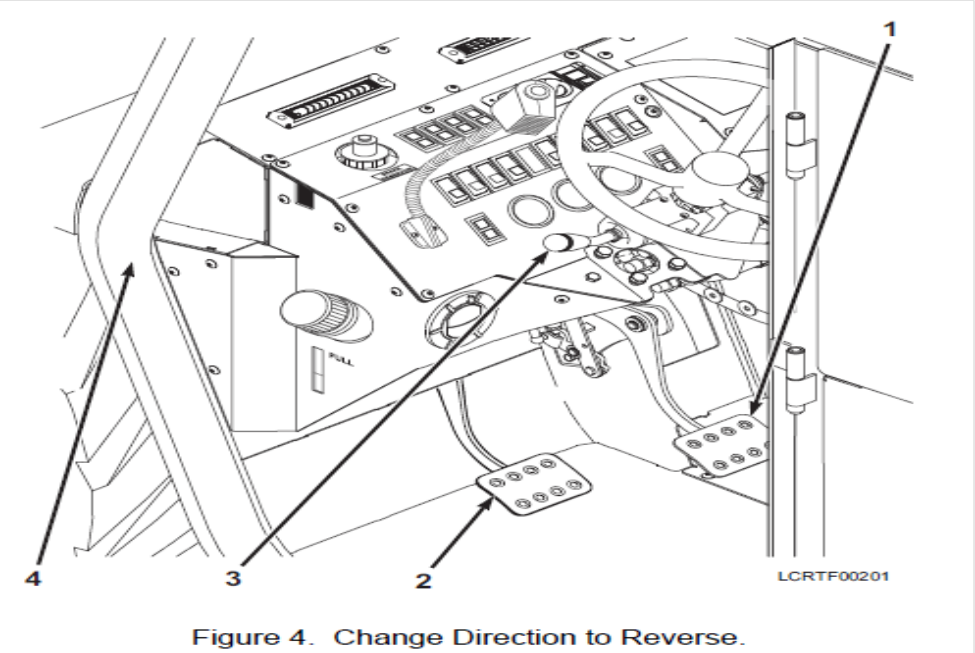


Figure 4. Change Direction to Reverse.

Figure 3-63

Change Direction to Reverse

5. Stop forklift.

a. Slowly release pressure on accelerator pedal (see Figure 3-64, Item 3).

b. Slowly apply brake pedal (see Figure 3-64, Item 4) until vehicle comes to a complete stop (see Figure 3-64, Item 6).

c. Move gear selector lever (see Figure 3-64, Item 5) to neutral (middle) position.

d. Press parking brake switch (see Figure 3-64, Item 1) down to apply parking brake.

e. Press drive/work switch (see Figure 3-64, Item 2) to work mode (down) position.

f. Lower forks flat to ground.

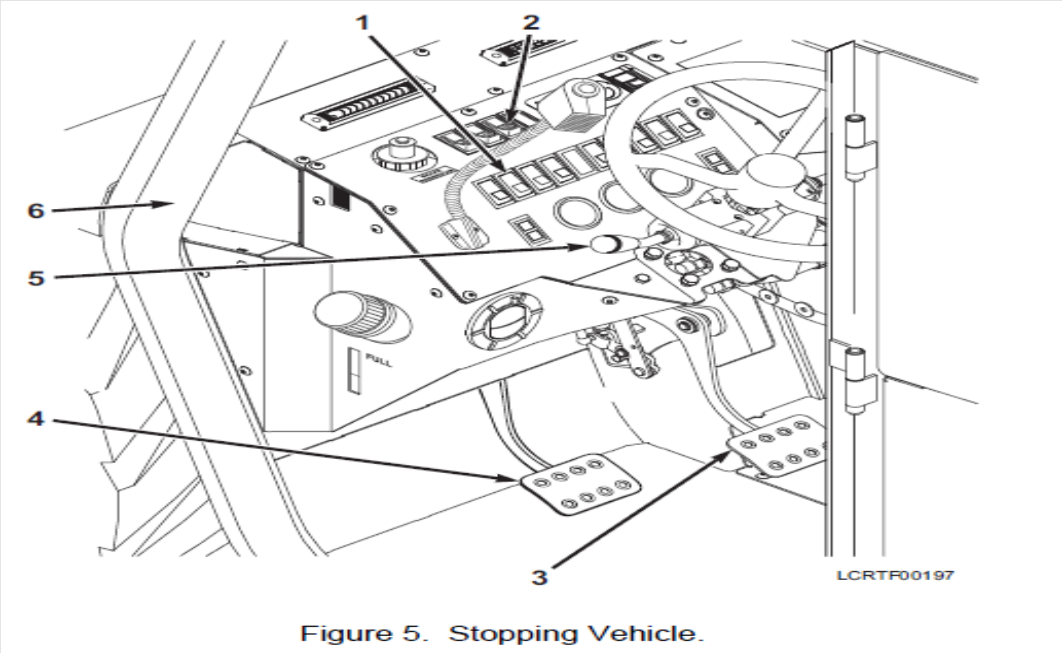


Figure 5. Stopping Vehicle.

Figure 3-64

Stopping Vehicle

6. Stop the engine.

   a. Turn all lights and accessories off.

   b. Allow engine to idle for three to five minutes.

   c. Turn the ignition switch to the off position.

   d. Turn the auxiliary fuel shut-off switch to the off position.

   e. Perform after-operations PMCS.

   f. Lock the steering wheel with the steering wheel locking cable and lock.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating a LCRTF with a load.

Performance Measures	**GO**	**NO GO**
1. Started the engine.	_____	_____
2. Moved forklift in two-wheel steer mode.	_____	_____
3. Operated forklift to unload/load pallets.	_____	_____
4. Operated forklift in reverse.	_____	_____
5. Stopped forklift.	_____	_____

Performance Measures	**GO**	**NO GO**
6. Stopped the engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	
TM 10-3930-680-10 Operator's Manual for Light Capability Rough Terrain Forklift (LCRTF) 5K NSN 3930-01-599-9978 (EIC: ALL)	

551-88H-1532
Operate 5K Light Capacity Rough Terrain Forklift (LCRTF) Without a Load

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

If this is the first time starting the vehicle, perform PMCS before interval checks. Failure to comply may result in injury to personnel or damage to equipment.

Your hearing can be permanently damaged if exposed to constant high noise levels of 85 dB or greater. Hearing loss occurs gradually, but becomes permanent overtime. Vehicle operators and maintenance personnel require at least single hearing protection while operating vehicle with the engine running.

Conditions: Assigned as a rough terrain forklift operator with the requirement to operate a 5K light capacity rough terrain forklift (LCRTF) without a load in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, hearing protection, and a 5K LCRFT.

Standards: Operate the 5K LCRFT without a load without causing injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are a rough terrain forklift operator tasked with operating a 5K LCRTF without a load.

Note: None

Performance Steps

1. Start the engine.

NOTE: Prior to this task, all PMCS and safety checks will have been performed.

a. Move battery disconnect switch to on position (see Figure 3-65, Item 1).

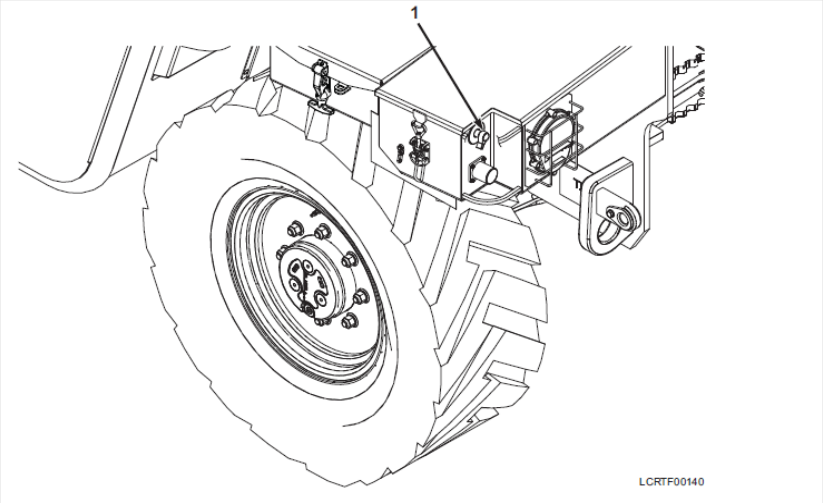


Figure 3-65

Battery Disconnect Switch

b. Fasten seat belt (see Figure 3-66, Item 1).

c. Adjust operator seat so that when seat belt is buckled, foot pedals can still be operated (see Figure 3-66, Item 2).

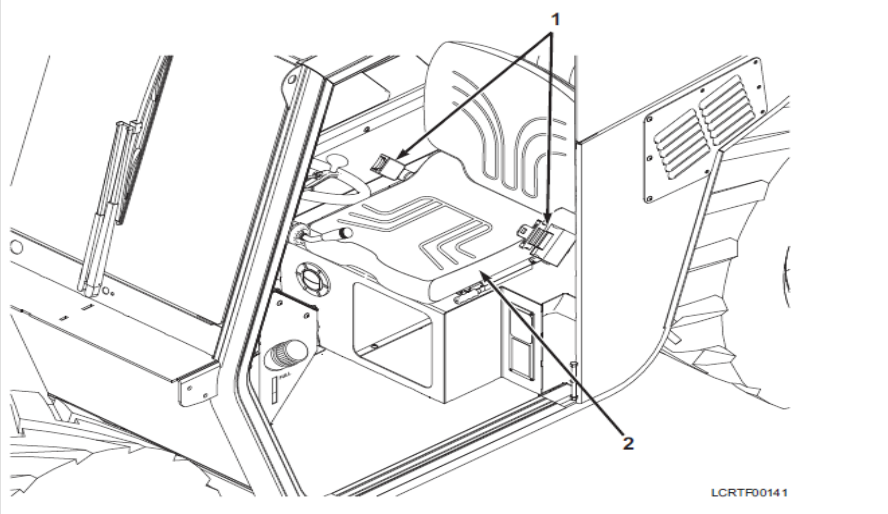


Figure 3-66

Fasten Seat Belt

CAUTION

Do not crank engine continuously for more than 30 seconds. Allow the starter to cool for two minutes before cranking the engine again. Failure to comply may result in damage to equipment.

d. Turn the ignition switch clockwise to the ign/start position (see Figure 3-67, Item 5). Release the switch as soon as the engine starts. If the engine fails to start on the first try, wait until engine and starter

have come to a complete stop. Then, return the switch to the off position before attempting to start engine again.

e. After engine starts, return accelerator pedal to idle position for approximately 3 minutes. Ensure that readings on gauges (see Figure 3-67, Item 6 and 7) are within normal operating ranges and warning lights (see Figure 3-67, Items 1, 2, 3, and 4) are not illuminated before moving vehicle.

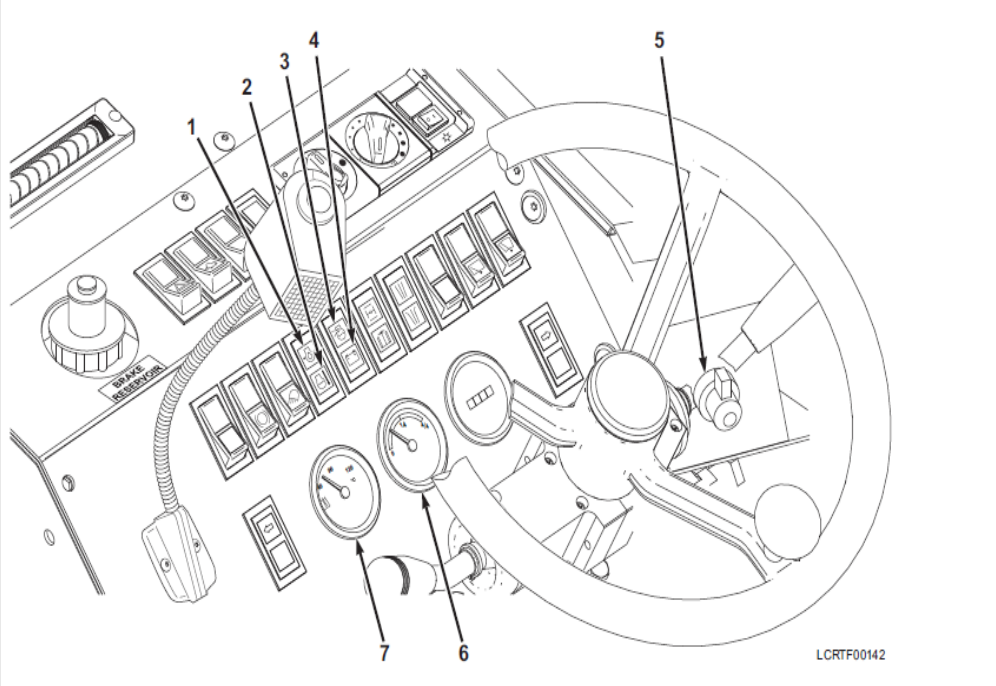


Figure 3-67

Start Engine

DANGER

Do not exceed 10 MPH (16 KPH) when traveling on unimproved surfaces. Failure to comply may result in death or injury to personnel and damage to equipment.

2. Move forklift in two-wheel steer mode.

DANGER

Vehicle is less stable when traveling with load in a raised position. If you must move vehicle with load raised above carry position (bottom of load at 24 in. [610 mm] above ground), the following practices should be observed: • Fully retract boom. • Forks slightly tilted back (3-5 degrees). • Avoid sharp turns and sudden starts/stops. • Operate all controls smoothly. • Move very slowly. • Keep vehicle level. • Use a ground guide. Failure to comply may result in death or injury to personnel and damage to equipment.

a. Perform complete walk around to ensure wheel chocks have been removed and stored, and that there are no obstacles near vehicle.

b. Raise forks so load is approximately 24 in. (610 mm) off ground.

WARNING

Do not travel with the automatic fork level switch in the on position. This could cause a load to be dropped.

c. Align rear wheels.

DANGER

Do not operate with the emergency steer switch off. If engine power is lost, there will be a loss of emergency steering capacity. Failure to follow this procedure could result in death or injury to personnel.

d. Set steer mode switch (see Figure 3-68, Item 1) to two-wheel steer mode (down) position. Two-wheel steer mode indicator (see Figure 3-68, Item 2) will illuminate.

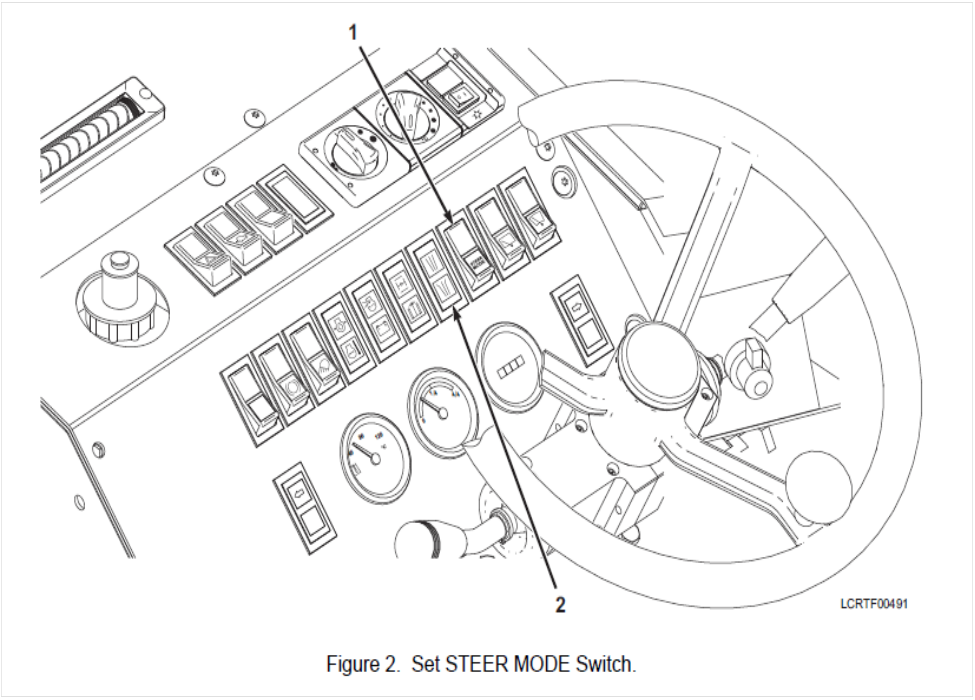


Figure 2. Set STEER MODE Switch.

Figure 3-68

Set Steer Mode Switch

e. Press and hold brake pedal (see Figure 3-69, Item 4).

f. Press parking brake switch up to release parking brake (see Figure 3-69, Item 1).

DANGER

Prior to moving vehicle or operating boom, ensure boom has at least 10 ft (3 m) of clearance from overhead wires, power lines, and structures. If lines are near your operating area, notify your supervisor prior to operating boom. Failure to comply may result in death or injury to personnel and damage to equipment.

Keep personnel clear of vehicle when traveling. Failure to comply may result in death or injury to personnel.

CAUTION

Prior to moving vehicle, ensure operator's door window is fully closed or locked in open position. An unsecured door or window can swing causing glass to break. Failure to comply may result in injury to personnel or damage to equipment.

g. Press drive/work switch to drive mode (up) position (see Figure 3-69, Item 2).

CAUTION

When traveling over rough terrain, reduce travel speed to avoid damage to vehicle or load. Failure to comply may result in damage to equipment.

h. Place gear selector lever (see Figure 3-69, Item 5) in up position to move vehicle forward (see Figure 3-69, Item 6).

i. Release brake pedal (see Figure 3-69, Item 4) and slowly press accelerator pedal to obtain desired speed (see Figure 3-69, Item 3).

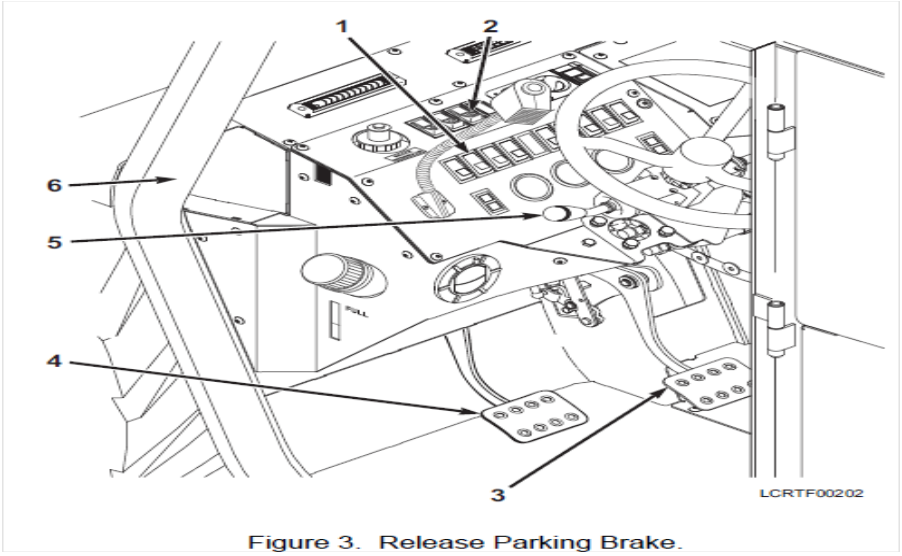


Figure 3. Release Parking Brake.

Figure 3-69

Release Parking Brake

3. Operate forklift in reverse.

NOTE: Reversing direction in vehicle is obtained the same way whether in two-wheel steer mode, four-wheel steer mode, or crab steer mode. Two-wheel steer mode shown below.

a. Release accelerator pedal (see Figure 3-70, Item 1) and slowly apply brake pedal (see Figure 3-70, Item 2) until vehicle comes to a complete stop (see Figure 3-70, Item 4).

b. Move gear selector lever (see Figure 3-70, Item 3) to reverse (down) position.

c. Release brake pedal (see Figure 3-70, Item 2) and slowly press accelerator pedal to obtain desired speed (see Figure 3-70, Item 1).

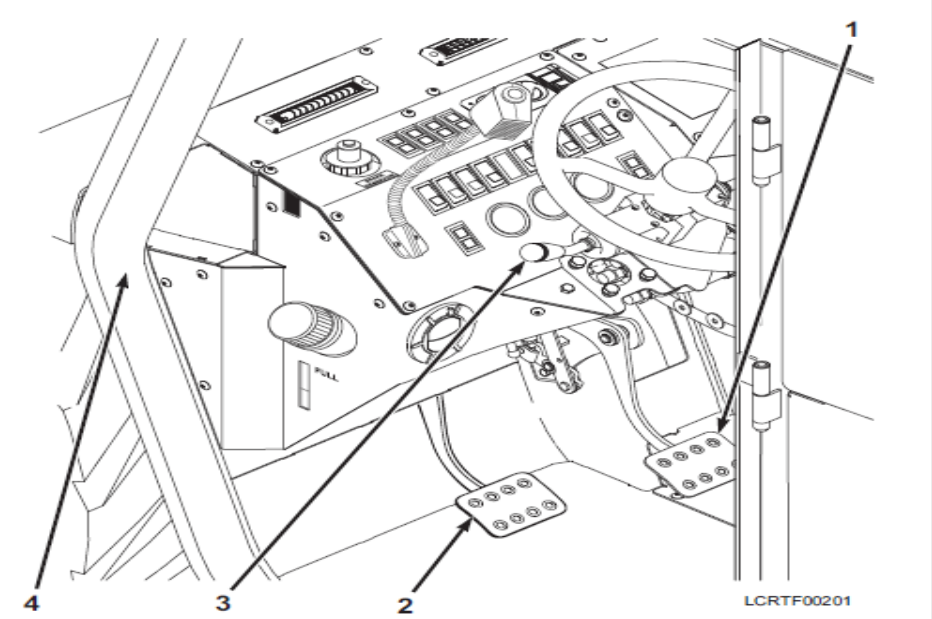


Figure 3-70

Change Direction to Reverse

4. Stop forklift.

a. Slowly release pressure on accelerator pedal (see Figure 3-71, Item 3).

b. Slowly apply brake pedal (see Figure 3-71, Item 4) until vehicle comes to a complete stop (see Figure 3-71, Item 6).

c. Move gear selector lever (see Figure 3-71, Item 5) to neutral (middle) position.

d. Press parking brake switch (see Figure 3-71, Item 1) down to apply parking brake.

e. Press drive/work switch (see Figure 3-71, Item 2) to work mode (down) position.

f. Lower forks flat to ground.

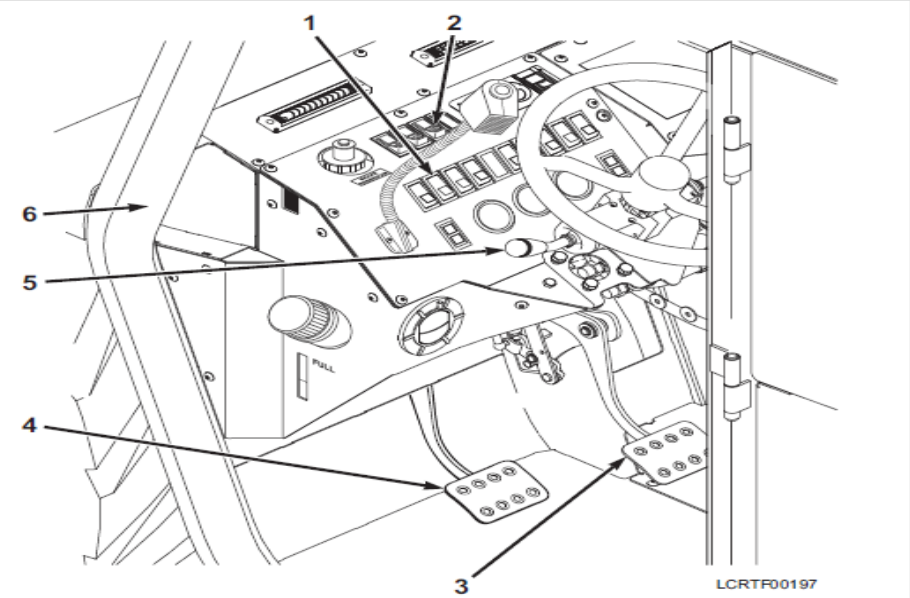


Figure 5. Stopping Vehicle.

Figure 3-71

Stopping Vehicle

5. Stop the engine.

   a. Turn all lights and accessories off.

   b. Allow engine to idle for three to five minutes.

   c. Turn the ignition switch to the off position.

   d. Turn the auxiliary fuel shut-off switch to the off position.

   e. Perform after-operations PMCS.

   f. Lock the steering wheel with the steering wheel locking cable and lock.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating a 5K LCRTF without a load.

Performance Measures	**GO**	**NO GO**
1. Started the engine.	_____	_____
2. Moved forklift in two-wheel steer mode.	_____	_____
3. Operated forklift in reverse.	_____	_____
4. Stopped forklift.	_____	_____
5. Stopped the engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	
TM 10-3930-680-10 Operator's Manual for Light Capability Rough Terrain Forklift (LCRTF) 5K NSN 3930-01-599-9978 (EIC: ALL)	

551-88H-1529
Prepare the 5K Light Capacity Rough Terrain Forklift (LCRTF) for Operation

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

If this is the first time starting the vehicle, perform PMCS before interval checks. Failure to comply may result in injury to personnel or damage to equipment.

Your hearing can be permanently damaged if exposed to constant high noise levels of 85 dB or greater. Hearing loss occurs gradually, but becomes permanent overtime. Vehicle operators and maintenance personnel require at least single hearing protection while operating vehicle with the engine running.

Conditions: Assigned as a forklift operator with the requirement to prepare the 5K light capacity rough terrain forklift (LCRTF) for operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, and a 5K LCRTF.

Standards: Prepare a 5K LCRTF for operations without causing injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a rough terrain forklift operator tasked with preparing the 5K LCRTF for operation.

Note: Use the Safety Annex 60 Rules of Safety for Operating Materials Handling Equipment (MHE) to conduct safety briefing before operations begin each morning and maintain direct supervision throughout the day.

Performance Steps

DANGER

Perform a complete walk-around of the vehicle prior to starting the engine. Ensure sufficient

clearance from personnel and equipment for safe operation of the vehicle. Failure to comply may result in death or injury to personnel.

1. Perform pre-operational checks on the 5K LCRTF per TM 10-3930-680-10.

2. Move battery disconnect switch (Figure 3-72, Item 1) to on position.

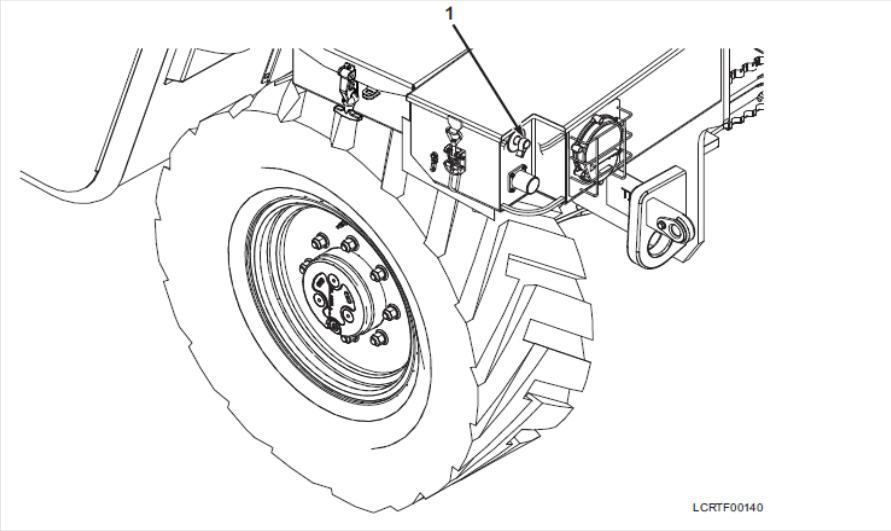


Figure 3-72

Battery Disconnect Switch

3. Fasten seat belt (Figure 3-73, Item 1).

CAUTION

Do not crank engine continuously for more than 30 seconds. Allow the starter to cool for two minutes before cranking the engine again. Failure to comply may result in damage to equipment.

4. Adjust operator seat (Figure 3-73, Item 2) so that when your seat belt is buckled, you can still press the foot pedals.

NOTE: Parking brake switch must be in the engaged position (down) to start vehicle. Gear selector lever must be in neutral (middle) position to start vehicle. If engine fails to start on first attempt, wait two minutes before attempting to start again. Outside air temperature range for normal starting is 32°F (0°C) to 140°F (60°C). If outside air temperature is between 32°F (0°C) and -25°F (-32°C), see Starting the Engine 32°F (0°C) and -25°F (-32°C). (WP 0017)

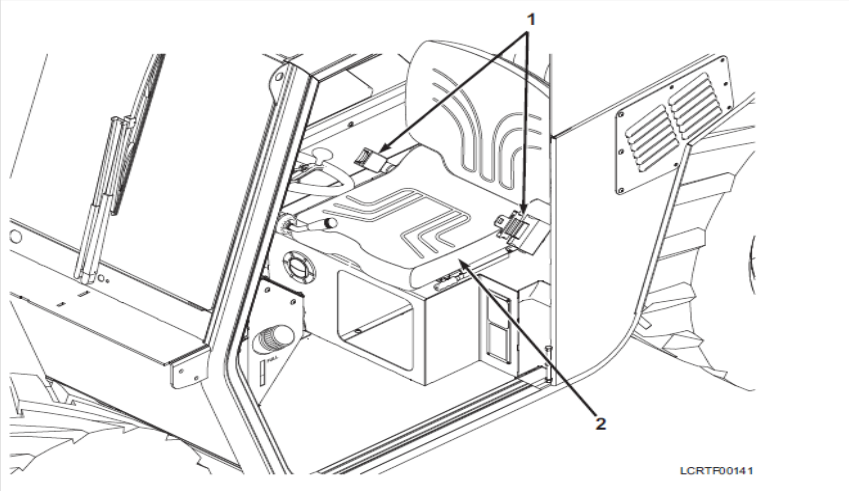


Figure 3-73

Fasten Seat Belt

5. Turn the ignition switch (Figure 3-74, Item 5) clockwise to the ign/start position. Release the switch as soon as the engine starts. If the engine fails to start on the first try, wait until engine and starter have come to a complete stop. Then, return the switch to the off position before attempting to start engine again.

6. After engine starts, return accelerator pedal to idle position for approximately 3 minutes. Ensure that readings on gauges (Figure 3-74, Item 6 and 7) are within normal operating ranges and warning lights (Figure 3-74, Items 1, 2, 3, and 4) are not illuminated before moving vehicle.

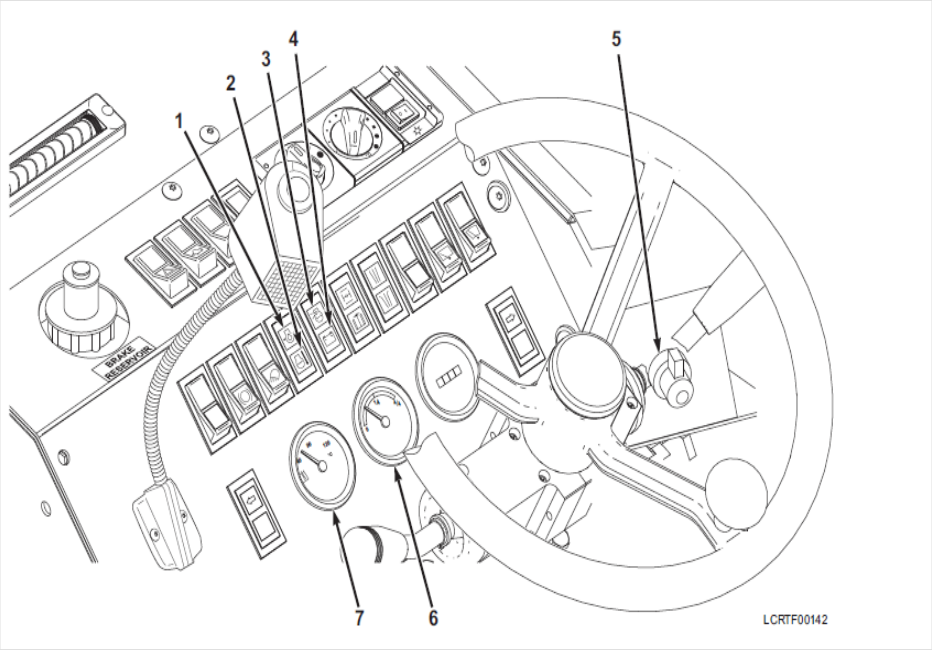


Figure 3-74

Start Engine

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on preparing the 5K LCRTF for operation.

Performance Measures	**GO**	**NO GO**
1. Performed pre-operational checks on the 5K LCRTF.	_____	_____
2. Moved battery disconnect switch to on position.	_____	_____
3. Fastened seat belt.	_____	_____
4. Adjusted operator seat.	_____	_____
5. Turned the ignition switch clockwise to the ign/start position and released the switch as soon as the engine started.	_____	_____
6. Returned accelerator pedal to idle position for approximately 3 minutes and ensured readings on gauges were within normal operating ranges and warning lights were not illuminated before moving vehicle.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DA FORM 5988-E Equipment Inspection Maintenance Worksheet	
TM 10-3930-680-10 Operator's Manual for Light Capability Rough Terrain Forklift (LCRTF) 5K NSN 3930-01-599-9978 (EIC: ALL)	

Subject Area 8: 40-ton Rough Terrain Container Crane Operations

551-88H-1606
Operate RT875 Rough Terrain Container Crane Without a Load

DANGER

Adhere to all DANGER statements listed in the vehicle technical manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a crane operator with the requirement to operate the RT875 rough terrain container crane without a load in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, and a 40-ton rough terrain container crane.

Standards: Operate a 40-ton rough terrain container crane without a load without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked with operating the RT875 rough terrain container crane without a load.

Note: None

Performance Steps

1. Ensure crane is in traveling mode.

NOTE: Auxiliary hoist cable must be disconnected from the overhaul ball, with the overhaul ball stored in its storage rack. This will prevent damage to the storage rack.

a. Fully retract boom.

WARNING

(1) Do not drive the crane with the boom off center. Automatic oscillation lockout will occur, making the crane subject to tipping on uneven surfaces.
(2) Do not drive the crane with the lift cylinders bottomed. Position the boom to horizontal.

b. Swing the boom over the front. Lower boom to horizontal.

2. Ensure swing lock control handle is engaged (handle is pushed down).

3. Ensure swing brake control selector is engaged (selector pushed).

4. Ensure transmission is placed in neutral (N).

CAUTION

If the engine does not start within 30 seconds, allow the starter to cool for one or two minutes and repeat procedure.

5. Start the crane engine.

CAUTION

(1) Keep lights on when traveling. (2) Under normal operating conditions, operate the crane at 2,500 revolutions per minute (RPM).

6. Ensure crane's engine is warmed up.

7. Sound the horn to warn nearby personnel that crane is being placed in motion and check all clearances around crane.

CAUTION

Before shifting from two-wheel drive to four-wheel drive (or from four-wheel drive back to two-wheel drive) the crane must be at a standstill.

8. Position the drive axle selector switch to either two-wheel drive high (2WD HI) or four-wheel drive low (4WD LO).

NOTE: Do not attempt to move the crane until the brake system air pressure is at normal operating level approximately 75 PSI.

9. Position the transmission shift lever to the first gear position while holding your foot on the brake pedal.

10. Shift transmission directional control lever from neutral (N) to forward (F) position and release parking brake.

11. Depress the accelerator pedal until the maximum gear speed is attained.

12. Shift the transmission lever to second gear position and accelerate until the maximum gear speed is attained.

CAUTION

Do not downshift to a lower gear if the crane is traveling at a greater road speed than the maximum speed of the lower gear.

13. Shift to the third gear position and accelerate to desired travel speed.

14. Move the crane in reverse.

a. Apply the service brakes and bring the crane to a complete stop before shifting the transmission.

b. Move the directional control lever to reverse (R).

15. Perform parking procedures.

a. Stop the crane with the service brakes.

b. Move the transmission shift lever to N.

c. Set parking brakes.

d. If parked on a hill, chock the wheels.

e. Perform after-operations preventive maintenance checks and services (PMCS).

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the RT875 rough terrain container crane without a load.

Performance Measures	**GO**	**NO GO**
1. Ensured crane was in traveling mode.	_____	_____
2. Ensured swing lock control handle was engaged (handle was pushed down).	_____	_____
3. Ensured swing brake control selector was engaged (selector pushed).	_____	_____
4. Ensured transmission was placed in N.	_____	_____
5. Started the crane engine.	_____	_____
6. Ensured crane's engine was warmed up.	_____	_____
7. Sounded the horn to warn nearby personnel that crane was being placed in	_____	_____

Performance Measures	GO	NO GO
motion and checked all clearances around crane.		
8. Positioned the drive axle selector switch to either 2WD HI or 4WD LO.	_____	_____
9. Positioned the transmission shift lever to the first gear position while holding foot on the brake pedal.	_____	_____
10. Shifted transmission directional control lever from N to F position and released parking brake.	_____	_____
11. Depressed the accelerator pedal until the maximum gear speed was attained.	_____	_____
12. Shifted the transmission lever to second gear position and accelerated until the maximum gear speed was attained.	_____	_____
13. Shifted to the third gear position and accelerated to desired travel speed.	_____	_____
14. Moved the crane in reverse.	_____	_____
15. Performed parking procedures.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	
TM 5-3810-306-10 Operator's Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC NSN 3810-01-205-2716 and Rough Terrain, Model RT875CCS NSN 3810-01-497-1001	

551-88H-1602
Prepare RT875 Rough Terrain Container Crane for Operations

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment

Conditions: Assigned as a crane operator with the requirement to prepare a RT875 rough terrain container crane for operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, and a 40-ton rough terrain container crane.

Standards: Prepare RT875 rough terrain container crane for operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator tasked with preparing a rough terrain container crane for operations.

Note: None

Performance Steps

1. Start the rough terrain container crane.

    a. Follow normal MHE starting procedures when starting crane.

    b. Ensure parking brake is applied before starting equipment.

    c. Ensure swing lock is engaged before starting equipment.

d. Perform pre-operation checks.

(1) Check engine instrument for proper indications.

(2) Check air pressure for operating pressure of 105 to 120 pounds per square inch (PSI) before operating crane.

(3) Allow engine and hydraulic oil to warm up at least five minutes before applying load.

NOTE: Before starting the operation, set engine speed to full governed revolutions per minute (RPM) (2,500 RPM).

(4) Allow brake system air pressure to reach normal operating level (approximately 75 PSI) before attempting to move the crane.

2. Program load movement indicator (LMI) for normal operation.

a. Set the hoist configuration.

(1) Use the (F1) Select (SEL) button to operate main hoist front.

(2) Use the (F2) SEL button to operate auxiliary hoist rear.

b. Set the outrigger configuration.

(1) Select button for on rubber.

(a) Use on rubber SEL button (F1) for static.

(b) Use (F2) SEL button for pick and carry.

(2) Use the SEL button (F2) for outrigger position 100 percent (fully extended).

c. Set the reeving configuration.

(1) Use the (F2) SEL button for increasing reeving.

(2) Use (F3) SEL button for decreasing reeving.

(3) Use (F4) SEL button for confirming reeving.

d. Confirm the setup values.

(1) When prompted, confirm the LMI setup and press F4 (OK).

(2) When LMI configuration is complete, system is ready for operation.

3. Employ LMI operation screen.

a. Use bar to indicate percentage of maximum allowable load being lifted.

b. Use manufacturer's load chart to verify the correct operating code.

(1) Enter code for boom tip height.

(2) Enter code for boom angle.

(3) Enter code for boom radius.

4. Perform rough terrain container crane main functions.

a. Perform raising and lowering the boom.

b. Perform extending and retracting the boom.

c. Perform raising and lowering hoist.

d. Perform swinging the boom.

e. Perform extending and retracting the outrigger beams and stabilizers.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on preparing the RT875 rough terrain container crane for operations.

Performance Measures	**GO**	**NO GO**
1. Started the rough terrain container crane.	_____	_____
2. Programmed LMI for normal operation.	_____	_____
3. Employed LMI operation screen.	_____	_____
4. Performed rough terrain container crane main functions.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TM 5-3810-306-10 Operator’s Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC NSN 3810-01-205-2716 and Rough Terrain, Model RT875CCS NSN 3810-01-497-1001	

551-88H-1424
Perform Emergency Boom Operating Procedures on the RT875 Rough Terrain Container Crane

DANGER

Adhere to all DANGER statements listed in this task. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

Follow emergency stowage procedures properly. Failure to comply may result in death or permanent injury to personnel.

WARNING

Adhere to all WARNING statements listed in this task. Failure to comply may result in serious injury to personnel or damage to equipment.

Hearing protection is required when operating the crane.

CAUTION

Adhere to all CAUTION statements listed in this task. Failure to comply may result in injury to personnel or damage to equipment.

Operate engine at or near the governed RPM during performance of all crane functions.

Conditions: Assigned as a crane operator with the requirement to perform emergency boom operating procedures on the RT875 rough terrain container crane (RTCC) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, a RTCC with a simulated lift cylinder hydraulic equalizer line failure, a signalman, slings, four tag lines, four tag line holders, and a load to control.

Standards: Operate boom to lower load close to the ground and lower boom to its lowest position without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a crane operator who has experienced lift cylinder hydraulic line failure and must perform emergency boom operating procedures.

Note: None

Performance Steps

1. Maintain operator position. All functions can be accomplished from this position.

NOTE: 1. The operator must have read all safety warnings and precautions listed in the operator's technical manual. 2. The signalman will ensure that there are no obstructions and provide signals throughout the entire task to ensure a safe operation.

CAUTION

Operator must watch the signalman and/or the load while it is moving. If the operator cannot see the signalman, stop the operation immediately.

2. Maintain engine at normal operation speed (2,500 RPM).

3. Maintain the desired boom angle. Pull back on the boom control lever, as necessary (simulate this action since you do not have a real system failure).

NOTE: 1. If this were a real hydraulic equalizer line failure, the leaking oil from the hydraulic system would cause the boom angle to drop unless you were able to react. 2. The desired boom angle must be maintained while performing the next step.

4. Lower the boom.

NOTE: Sub-steps a, b, and c must be conducted simultaneously while maintaining the desired boom angle.

a. Operate swing (as necessary).

b. Retract the boom (as necessary).

c. Operate the hoist(s) (as necessary) and lower to the ground.

d. Lower the boom to the lowest extent possible.

e. Notify Supervisor.

NOTE: Hydraulic oil spill should be controlled and cleaned up immediately.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing emergency boom operating procedures on the RT875 RTCC.

Performance Measures	**GO**	**NO GO**
1. Maintained operator position.	_____	_____
2. Maintained engine speed at normal operation speed.	_____	_____
3. Maintained the desired boom angle.	_____	_____
4. Lowered the boom.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TM 5-3810-306-10 Operator's Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC NSN 3810-01-205-2716 and Rough Terrain, Model RT875CCS NSN 3810-01-497-1001

Primary

551-88H-1425
Perform Emergency Load Lowering Procedures on the RT875 Rough Terrain Container Crane

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a crane operator with the requirement to perform emergency load lowering procedures on the RT875 rough terrain container crane (RTCC) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a RTCC, an assistant operator, a signalman, slings, four tag lines, four tag line holders, a load to control, safety clothing, a towing vehicle, a towing cable or chain, and all basic issue items (BII).

Standards: Perform emergency load lowering procedures on the RTCC without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are a crane operator operating a RTCC and you must execute the emergency load lowering procedures.

Note: None

Performance Steps

1. Shut down RTCC.

    a. Stop operations.

    b. Alert all personnel of mechanical failure to ensure their safety.

    c. Shut down the crane.

d. Control fluid leaks (if applicable).

NOTE: 1. Operator must have read all safety warnings and precautions listed in the operator's technical manual. 2. Soldiers will wear safety boots, hard hat, hearing protection and work gloves. 3. The operator and signalman will not wear gloves while conducting lifting operations.

2. Install pump handle and hoses.

a. Remove pump handle and three (3) hoses (one each at 12 feet, 18 feet, and 38 feet long) from the toolbox.

NOTE: A hand pump is permanently installed behind the sheet metal on the right hand side of the crane, forward of the hydraulic reservoir.

b. Install pump handle onto pump.

c. Connect 38-foot long hose (with couplings on both ends) to quick coupler on hand pump. This is the hand pump pressure hose.

3. Lower the load.

a. Check to ensure load can be lowered without contacting extended outrigger or crane carrier. If necessary, retract boom (step 4), or rotate boom (step 6) enough to ensure safe load lowering.

b. Remove hand pump pressure out from hydraulic tank cover.

c. Place loose end up onto superstructure to hoist (main or auxiliary as applicable).

d. Disconnect hoist brake release quick coupler of hoist supporting load.

e. Install loose end of hand pump pressure hose to half of quick coupler leading to hoist brake.

f. Apply hydraulic pressure to the hoist brake by pumping the hand pump lever. This releases the brake and slowly lowers the load.

g. Disconnect hand pump pressure line and reconnect hoist brake release quick coupler after load has been lowered to ground.

4. Retract the boom.

NOTE: Retracting the boom is a two-person operation. Use assistant operator to assist.

a. Place loose end of hand pump pressure line onto superstructure.

b. Open cover on control valve compartment (behind cab).

c. Locate tele-rear steer-lift valve tank located in center of control valve compartment.

d. Remove dust cover on male coupler installed on inlet section of valve tank.

e. Connect hand pump pressure hose at coupler.

f. Order assistant operator to pull back on tele control lever inside cab and hold lever in this position.

g. Apply hydraulic pressure to the telescope cylinder control valve by pumping the hand pump lever. This causes the boom telescope section to retract.

h. Order assistant operator to return control lever to neutral position after boom has been retracted.

i. Disconnect hand pump pressure hose at control valve tank and install dust cap on male coupling.

5. Lower the boom.

NOTE: If transporting crane, do not lower boom beyond horizontal position.

a. Place bleed-down hose (12-foot hose with only one coupling) onto superstructure.

b. Ensure that bleed-down valve is in off position.

c. Remove dust cover on male coupler on bleed-down valve.

d. Connect female coupler on bleed-down hose to male coupler on valve.

CAUTION

When inserting bleed-down hose in the hydraulic reservoir, use care to avoid damaging the inlet strainer.

e. Remove breather/fill cap on hydraulic tank by turning it one quarter turn counterclockwise.

f. Insert cut off end of bleed-down hose into the hydraulic reservoir opening.

g. Open bleed-down valve slowly to lower boom.

h. Close bleed-down valve when boom has lowered to the horizontal position.

i. Disconnect bleed-down hose at bleed-down valve and reinstall dust cap on male coupler.

j. Remove bleed-down hose from reservoir opening.

k. Replace breather/fill cap on hydraulic reservoir.

6. Rotate boom over the front.

NOTE: 1. This procedure requires a towing vehicle and pull cable or chain of sufficient capacity and length to pull the superstructure around to the front with a swing brake released. 2. Rotating the boom is a two-person operation. Use assistant operator to assist.

a. Connect 38-foot long pump pressure hose to hand pump.

b. Remove hand pump pressure hose from under hydraulic tank cover.

c. Place free end of hose up onto crane superstructure.

d. Remove dust cap on male quick coupler located on the swing brake.

e. Connect free end of hand pump pressure line to swing brake coupler.

CAUTION

Do not pull on boom. Applying a side load to boom could cause non-repairable damage.

f. Connect pull chain or cable to counterweight sling lug.

g. Unlock positive swing lock.

h. Release swing brake by pumping hand pump while assistant operator applies a steady pull with towing vehicle. Pull boom around until boom is centered over the front.

i. Engage positive swing lock.

j. Disconnect towing cable or chain.

7. Retract outriggers.

NOTE: Each outrigger jack and beam must be retracted/raised separately.

a. Disconnect 38-foot long hose at hand pump (if installed).

b. Connect 18-foot long hose (shorter hose with two connectors) to quick coupler on hand pump. This is the hand pump pressure hose.

c. Connect female end of hand pump pressure hose to male fitting located on inside surface of left-hand carrier side rail.

d. Close shut-off valve located near connection made in step c. This valve must be closed to manually retract outriggers.

e. Locate front outrigger valve stack on back side of front outrigger box.

f. Locate rear outrigger valve stack located on the inside surface of left-hand carrier side rail just forward of rear outrigger box.

g. Locate four (4) quick couplers located on each outrigger valve stack. The two inside couplers retract jack cylinders while the two outside couplers retract extension cylinders (beams).

h. Connect the 38-foot long hose (with couplers on both ends) to quick coupling on back of hydraulic reservoir. This is the hydraulic return line.

i. Select first jack cylinder to be retracted.

j. Connect free end of hydraulic return line to appropriate quick coupler on front (or rear) outrigger valve stack. Jack cylinders are retracted using the two inside quick couplers on each valve stack.

k. Apply pressure by pumping hand pump until jack cylinder is completely retracted.

NOTE: Repeat steps i and j for each of the other three outrigger extension cylinders.

l. Select first extension cylinder (beam) to be retracted.

m. Connect free end of hydraulic return line to appropriate quick coupler on front (or rear) outrigger valve stack. Extension cylinders are retracted using the two outside quick couplers on each valve stack.

n. Apply pressure by pumping hand pump until extension cylinder is completely retracted.

NOTE: Repeat steps m and n for each of the other three outrigger extension cylinders.

o. Disconnect all hoses and reinstall dust caps where provided.

p. Open shut-off valve that was closed in step d.

q. Remove hand pump pressure out from hydraulic tank cover.

r. Place loose end up onto superstructure to hoist (main or auxiliary as applicable).

s. Disconnect hoist brake release quick coupler of hoist supporting load (see Figure 3-75).

t. Install loose end of hand pump pressure hose to half of quick coupler leading to hoist brake.

u. Apply hydraulic pressure to the hoist brake by pumping the hand pump lever. This releases the brake and slowly lowers the load.

v. Disconnect hand pump pressure line and reconnect hoist brake release quick coupler after load has been lowered to ground.

8. Replace all equipment back into toolbox.

a. Disconnect hand pump pressure line.

b. Cap all quick disconnect couplings.

c. Coil three (3) hoses.

d. Stow them in toolbox.

e. Remove pump handle.

f. Stow it in toolbox.

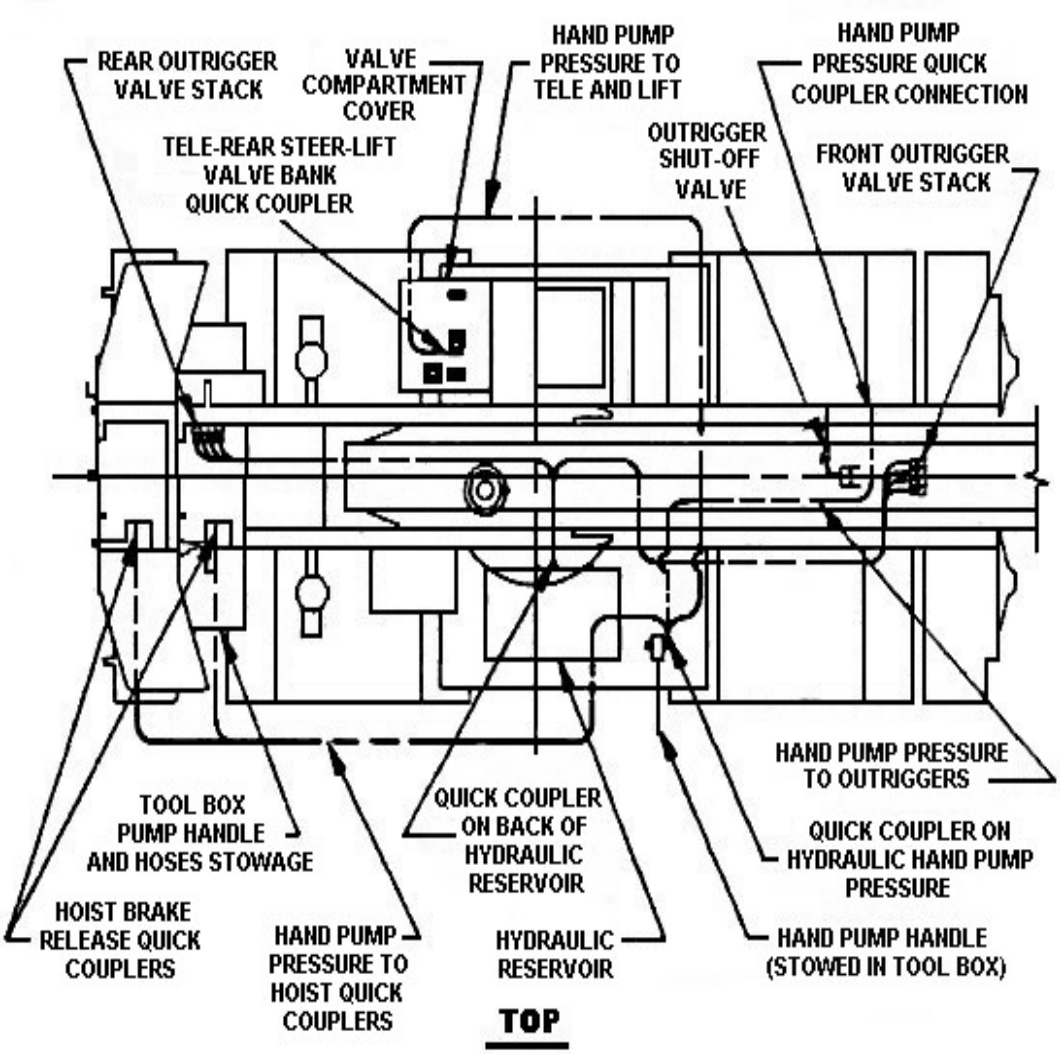


Figure 3-75

Disconnecting Hoist Brake Release Quick Coupler

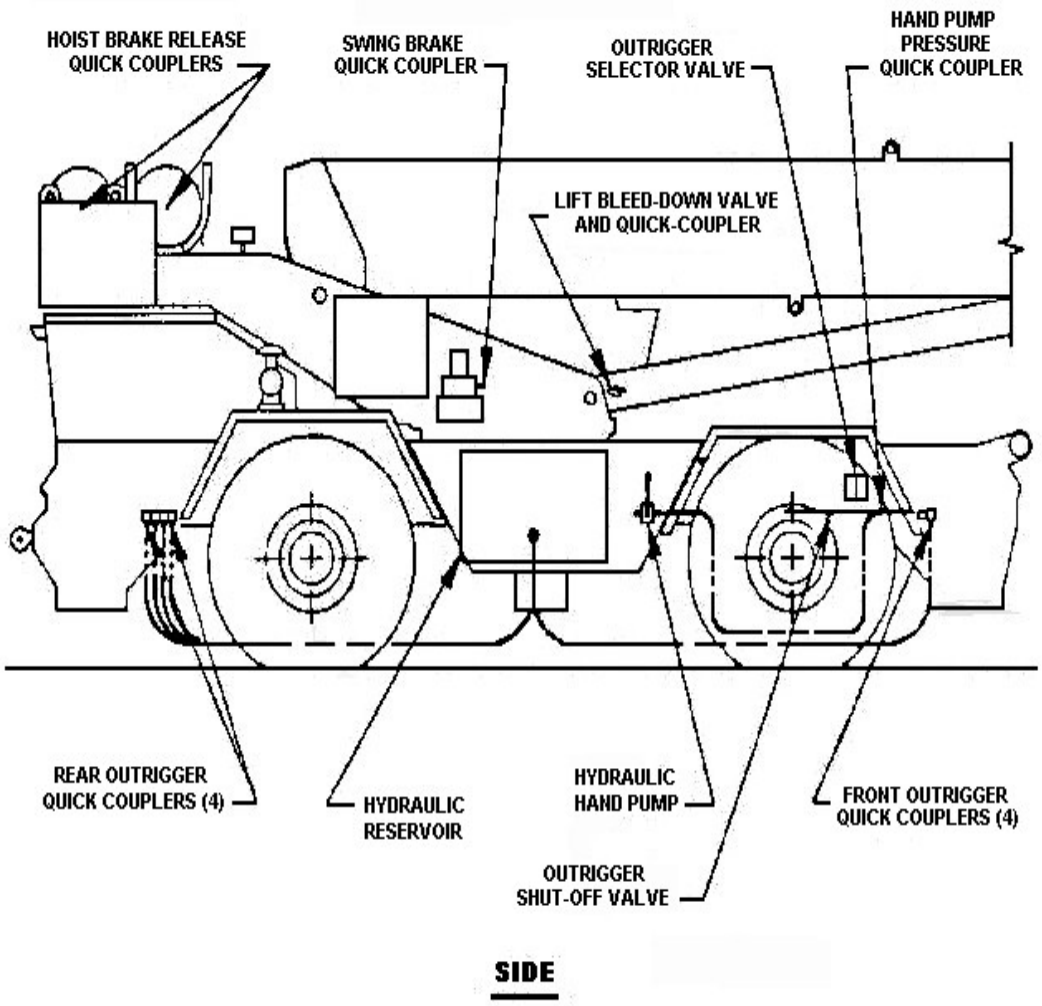


Figure 3-75

Disconnecting Hoist Brake Release Quick Coupler (continued)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing emergency load lowering procedures on the RT875 RTCC.

Performance Measures	**GO**	**NO GO**
1. Shut down RTCC.	_____	_____
2. Installed pump handle and hoses.	_____	_____
3. Lowered the load.	_____	_____
4. Retracted the boom.	_____	_____
5. Lowered the boom.	_____	_____
6. Rotated boom over the front.	_____	_____

Performance Measures	GO	NO GO
7. Retracted outriggers.	_____	_____
8. Replaced all equipment back into toolbox.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 5-3810-306-10 Operator's Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC NSN 3810-01-205-2716 and Rough Terrain, Model RT875CCS NSN 3810-01-497-1001	

Subject Area 9: 53,000-lb Rough Terrain Container Handler Operations (Kalmar)

551-88H-1540
Operate RT240 Rough Terrain Container Handler (RTCH) With a Load

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo handler with the requirement to operate the RT240 rough terrain container handler (RTCH) with a load in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a RT240 RTCH, and container.

Standards: Operate RT240 RTCH with a load without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo specialist tasked with operating the RT240 RTCH to upload or download containers.

Note: None

Performance Steps

1. Perform initial adjustments, daily checks, and self test on the RTCH.

    a. Place the master battery switch to on.

    b. Perform before operation PMCS.

    c. Occupy and adjust the seat.

    d. Close the cab door.

e. Adjust the position of the joysticks.

f. Adjust left and right exterior mirrors and interior mirrors (as required).

g. Adjust steering wheel and columns.

h. Fasten seat belt.

CAUTION

Do not operate the starter motor for more than 30 seconds at a time. After 30 seconds, allow starter motor to cool for at least two minutes before attempting to start engine again. Excessive heating of starter motor may result in damage or early starter failure.

2. Start engine.

NOTE: 1. Refer to operator manual for location and operation of instrument panel indicators and controls. 2. Start the engine with throttle in the idle position. It is not necessary to press the throttle to start a computer-controlled engine.

a. Ensure that parking brake is applied.

b. Place transmission shift control lever to neutral (N).

c. Ensure that all accessory switches and controls are in the OFF position.

d. Turn ignition switch to on position. System warning lights will illuminate briefly and then go out.

e. If ambient temperature is below 32 degrees Fahrenheit (F) or 0 degrees Celsius (C), press the ether injector switch on the instrument panel.

f. Turn ignition switch to start and allow the engine to start and run at idle speed.

g. Increase the engine speed (RPM) slowly to provide adequate lubrication to the bearings and allow the oil pressure to stabilize.

h. Run engine at idle speed for 3 to 5 minutes before operating with a load.

i. Monitor fuel gauge and indicators for any signs of abnormal temperatures or pressures. Shut down engine at first sign of a problem.

DANGER

Never operate the RTCH or move the load near a power line or overhead wires. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

3. Operate RTCH with a load.

a. Start engine and allow it to reach operating temperature.

b. Raise tophandler to drive position.

c. With engine at idle, apply service brakes.

d. Select steering mode of operation by first straightening wheels, then pressing the desired steering selection switch (see Figures 3-76, 3-77, 3-78).

e. Move transmission control lever to desired direction, forward (F) or reverse (R), and select gear range.

f. Release parking brake lever and depress accelerator pedal to control truck speed.

g. Engage oscillation and tilt locks before driving with a load.

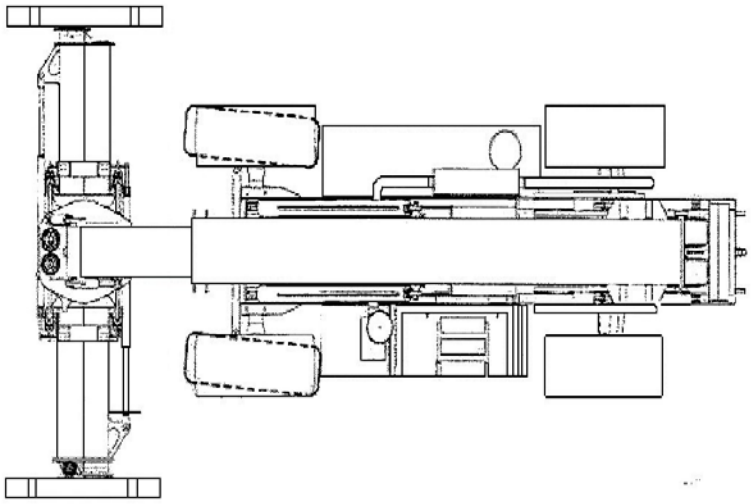


Figure 3-76

Two-Wheel Steering

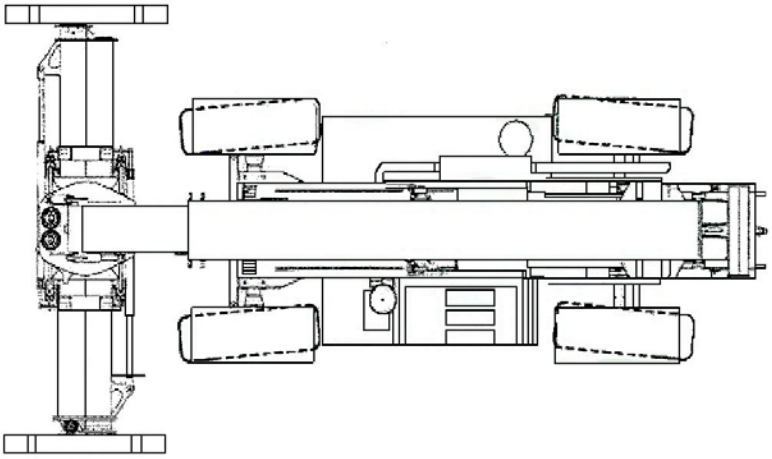


Figure 3-77

Four-Wheel Steering

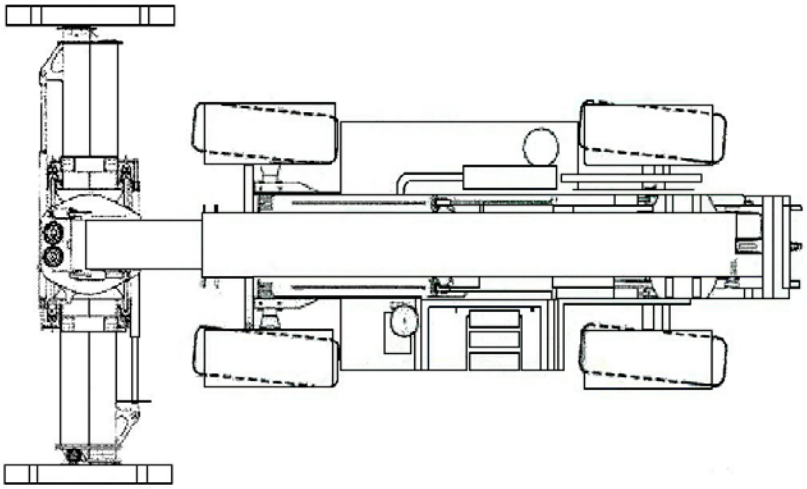


Figure 3-78

Crab Steering

4. Operate lifting boom and tophandler with a load.

NOTE: During lifting operation, do not exceed the maximum lifting capability.

a. Adjust the tophandler spreader width 20 to 40 feet for the container to be lifted (see Figure 3-79).

b. Position the RTCH as close to the container as possible, and adjust the tophandler by rotating, sideshifting, or moving the boom as necessary.

c. Fully lower the tophandler while aligning the twistlocks with the container locking holes.

d. Check that the yellow alignment indicator light is on, and it indicates the twistlocks are engaged in the locking holes of the container.

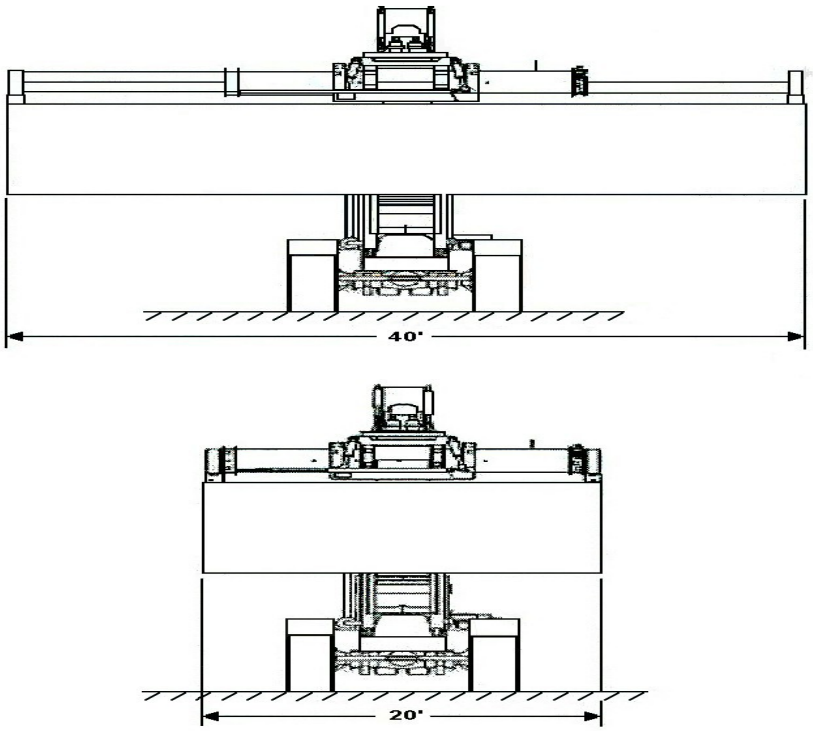


Figure 3-79

Adjusting the Tophandler Spreader

e. Lock the twistlocks and check that the green lock indicator light is on.

NOTE: 1. When twistlocks are locked, the green indicator light on the steering column inside the cab and at the end of the boom will illuminate. Three infrared (IR) lights at the end of the boom also illuminate when operating in blackout mode. 2. When twistlocks are unlocked, the red indicator light on the steering column inside the cab and at the end of the boom will illuminate. A single IR light at the end of the boom also illuminates when operating in blackout mode. 3.Pressing the twistlock lock/unlock button and override switch at the same time will lock out or disable boom lifting and lowering operation; the twistlock indicator light will turn off. To reactivate the boom, momentarily press the twistlock lock/unlock button and override switch at the same time.

f. When load is lifted, the yellow alignment indicator light will go out.

g. Engage oscillation and tilt locks before driving with a load over rough terrain (see Figure 3-80).

(1) Press to engage lock to secure the load position.

(2) Press to release lock to allow the load to float.

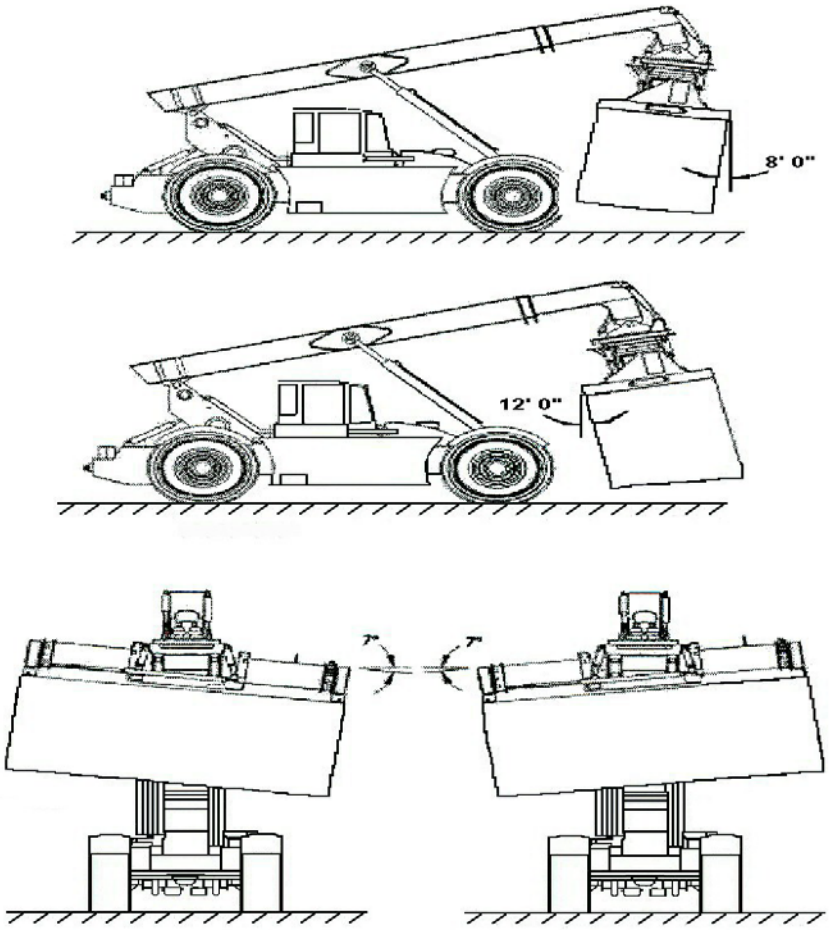


Figure 3-80

Engaging Oscillation and Tilt Locks

5. Shut down engine.

   a. Apply the parking brakes.

   b. Retract and fully lower the boom.

   c. Place the transmission control lever in neutral (N).

CAUTION

Never turn the master battery switch to off when the engine is running. The voltage regulator may become damaged as a result.

   d. Allow the engine to run for ½ to 1 minute.

   e. Stop the engine by turning the ignition switch to off position.

   f. If the forklift will not be used for a long period, place master battery switch to off.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the RT240 RTCH with a load.

Performance Measures	**GO**	**NO GO**
1. Performed initial adjustments, daily checks, and self test on the RTCH.	_____	_____
2. Started engine.	_____	_____
3. Operated RTCH with a load.	_____	_____
4. Operated lifting boom and tophandler with a load.	_____	_____
5. Shut down engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}	

551-88H-1539
Operate RT240 Rough Terrain Container Handler (RTCH) Without a Load

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnl and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a container handler with the requirement to operate the RT240 rough terrain container handler (RTCH) without a load in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, and RT240 RTCH.

Standards: Operate RT240 RTCH without a load without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a container handler tasked with operating the RT240 RTCH without a load.

Note: None

Performance Steps

1. Perform initial adjustments, daily checks, and self test on the RTCH.

   a. Place the master battery switch in on position.

   b. Perform before-operations preventive maintenance checks and services (PMCS).

   c. Occupy and adjust the seat.

   d. Close the cab door.

   e. Adjust the position of the joysticks.

f. Adjust left and right exterior mirrors and interior mirrors (as required).

g. Adjust steering wheel and columns.

h. Fasten seat belt.

CAUTION

Do not operate the starter motor for more than 30 seconds at a time. After 30 seconds, allow starter motor to cool for at least two minutes before attempting to start engine again. Excessive heating of starter motor may result in damage or early starter failure.

2. Start engine.

NOTE: 1. Refer to operator manual for location and operation of instrument panel indicators and controls. 2. Start the engine with throttle in the idle position. It is not necessary to press the throttle to start a computer-controlled engine.

a. Ensure that parking brake is applied.

b. Place transmission shift control lever to neutral (N).

c. Ensure that all accessory switches and controls are in the off position.

d. Turn ignition switch to on position. System warning lights will illuminate briefly and then go out.

e. If ambient temperature is below 32 degrees Fahrenheit (F) or 0 degrees Celsius (C), press the ether injector switch on the instrument panel.

f. Turn ignition switch to start and allow the engine to start and run at idle speed.

g. Increase the engine speed (RPM) slowly to provide adequate lubrication to the bearings and allow the oil pressure to stabilize.

h. Run engine at idle speed for 3 to 5 minutes before operating with a load.

i. Monitor fuel gauge and indicators for any signs of abnormal temperatures or pressures. Shut down engine at first sign of a problem.

CAUTION

When driving without a load, position the tophandler above your field of view.

3. Operate RTCH without a load.

a. Start engine and allow it to reach operating temperature.

b. Raise tophandler to drive position.

c. With engine at idle, apply service brakes.

d. Select steering mode of operation by first straightening wheels, then pressing the desired steering selection switch.

e. Move transmission control lever to desired direction, forward (F) or reverse (R), and select gear range.

f. Release parking brake lever and depress accelerator pedal to control truck speed.

g. Engage oscillation and tilt locks before driving with a load.

4. Operate lifting boom and tophandler.

NOTE: 1. Do not perform container handling procedures while in blackout mode. Blackout mode is to be used only when driving. In blackout mode, oscillation and tilt lock/lockout buttons do not illuminate. However, these buttons will light up in service mode or when IR lights are on. With IR lights on, container handling is permissible with proper night vision equipment. 2. When twist locks are locked, the green indicator lights on the steering column inside the cab and at the end of the boom will illuminate. When twist locks are unlocked, the red indicator lights on the steering column inside the cab and at the end of the boom will illuminate.

a. Use oscillation lock/unlock button.

NOTE: Button illuminates when lock is engaged.

(1) Press oscillation button to engage lock, securing load position.

(2) Press oscillation button to release lock, allowing load to float.

b. Use tilt lock/unlock button.

NOTE: Button illuminates when lock is engaged.

(1) Press to engage lock, securing load position.

(2) Press to release lock, allowing load to float.

c. Use rotation control rocker switch.

(1) Press left side of rocker switch to rotate load clockwise.

(2) Press right side of rocker switch to rotate load counterclockwise.

d. Use tophandler and forklift sides shift button (see Figure 3-81).

(1) Press right button to shift load to the right.

(2) Press left button to shift load to the left.

(3) Press right button and multiple functions trigger button to widen tophandler from 20 to 40 feet or to open forklift tines, if forklift kit is installed.

(4) Press left button and multiple function trigger button to close tophandler from 40 to 20 feet or to close forklift tines, if forklift kit is installed.

e. Use twistlock lock/unlock button.

NOTE: 1. When twistlocks are locked, green indicator light on steering column inside cab and at end of boom will illuminate. Three IR lights at end of boom also illuminate when operating in blackout mode. 2. When twistlocks are unlocked, red indicator light on steering column inside cab and at end of boom will illuminate. Single IR light at end of boom also illuminates when operating in blackout mode. 3. Press twistlock lock/unlock button and override switch at the same time to lock out or disable boom lifting and lowering operation. Twistlock indicator light will turn off. To reactivate boom, press twistlock lock/unlock button and override switch at the same time.

(1) Press button to lock twistlocks, securing load.

(2) Press button to unlock twistlocks, releasing load.

f. Use boom joystick.

(1) Move joystick forward to lower boom.

(2) Move joystick back to raise boom.

(3) Move joystick right to extend boom.

(4) Move joystick left to retract boom.

g. Use tilt control rocker switch.

(1) Press bottom of rocker switch to tilt bottom of load out.

(2) Press top of rocker switch to tilt bottom of load in.

h. Use oscillation control switches.

(1) Press multiple function trigger button and right side of rotation control rocker switch to raise left side of load.

(2) Press multiple function trigger button and left side of rotation control rocker switch to raise right side of load.

i. Use straight lift/lower control by moving joystick forward while pressing multiple function trigger button to raise and lower boom.

CAUTION

Never turn the master battery switch to off when the engine is running. The voltage regulator may become damaged as a result.

5. Shut down engine.

a. Apply the parking brakes.

b. Retract and fully lower the boom.

c. Place the transmission control lever to neutral (N).

d. Allow the engine to run for 1/2 to 1 minute.

e. Stop the engine by turning the ignition switch to off position.

f. If the forklift will not be used for a longer period, place master battery switch to off.

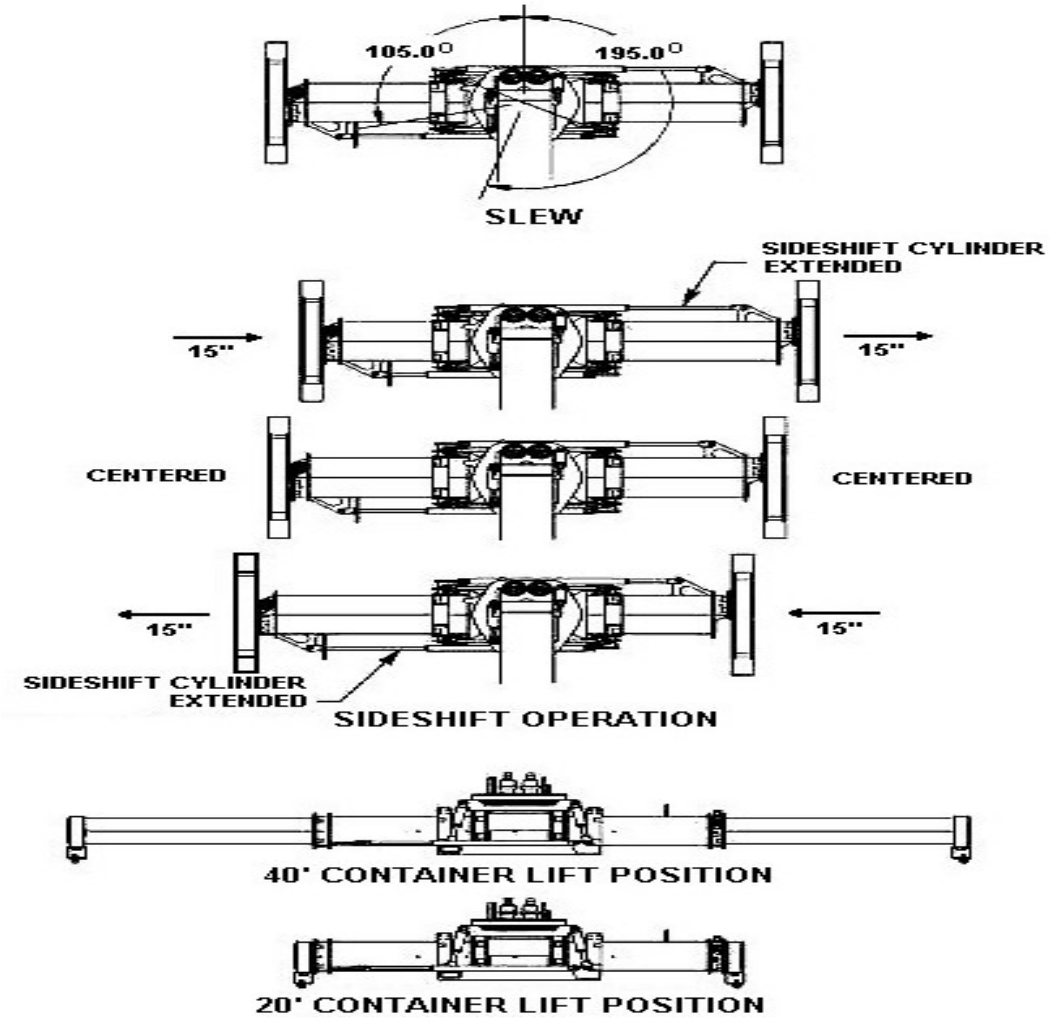


Figure 3-81

Tophandler and Forklift Shift Button

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the RT240 RTCH without a load.

Performance Measures **GO** **NO GO**

Performance Measures	**GO**	**NO GO**
1. Performed initial adjustments, daily checks, and self test on the RTCH.	_____	_____
2. Started engine.	_____	_____
3. Operated RTCH without a load.	_____	_____
4. Operated lifting boom and tophandler.	_____	_____
5. Shut down engine.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}	

551-88H-1541
Operate RT240 Rough Terrain Container Handler (RTCH) Under Unusual Conditions

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a container handler with the requirement to operate the RT240 rough terrain container handler (RTCH) under unusual conditions in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, RT240 RTCH, and 20- and 40-ft containers.

Standards: Operate RT240 RTCH under unusual conditions without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a container handler tasked to operate the RT240 RTCH in unusual conditions such as, snow, ice, mud, and sandy conditions.

Note: None

Performance Steps

1. Perform initial adjustments, daily checks, and self test on RTCH.

   a. Place the master battery switch to on.

   b. Perform before-operations preventive maintenance checks and services (PMCS).

   c. Occupy and adjust the seat.

d. Close the cab door.

e. Adjust the position of the joysticks.

f. Adjust left and right exterior mirrors and interior mirrors (as required).

g. Adjust steering wheel and columns.

h. Fasten seat belt.

DANGER

Do not operate arctic heater in a confined area. Always ensure there is adequate fresh air ventilation. Failure to comply may result in death due to carbon monoxide poisoning.

CAUTION

Touching extremely cold metal surfaces with bare skin or spilling fuel onto skin in extreme cold can cause injury.

2. Operate RTCH forklift in extreme cold.

NOTE: 1. Notify field maintenance to prepare vehicle for arctic operation. 2. Arctic heater is used to provide engine preheating for engine startup in extreme cold, in temperatures below -25F (-32C). When heater is required to preheat engine coolant and engine block before startup, it should be turned on 3/4 hour before engine is started. 3. Operating instructions for the arctic heater will be provided with the arctic heater installation kit.

a. Start the RTCH vehicle.

(1) Start vehicle using cold weather starting procedure and allow engine time to reach operating temperature range.

(2) Check for tires that may be frozen to the ground.

(3) Drive very slowly for about 100 yards and if a problem is noted, notify organizational maintenance as required.

b. Park the RTCH forklift.

(1) When parking the vehicle for a short time, park in a shelter out of the wind. If shelter is not available, park vehicle so the right side where the radiator is located does not face the wind.

(2) Vehicle parked for a long shutdown period should be parked on high ground and planks or brush used to make a raised and relatively dry surface to keep tires out of snow, ice and mud.

(3) Clean snow, ice, and mud from vehicle as soon as possible after shutdown.

(4) When vehicle is parked for long period of time, have organizational maintenance remove and store batteries.

(5) Fill fuel tank to guard against condensation and drain any accumulated water from air reservoirs and fuel filters.

(6) Ensure tires are properly inflated.

3. Operate RTCH forklift in extreme heat.

NOTE: 1. During very hot weather, driving procedures may require altering to prevent vehicle from overheating. 2. Avoid continuous high engine RPM and continuous operation in soft terrain.

a. Drive the RTCH forklift.

(1) Check water temperature display and stop if temperature is unusually high.

(2) Check cooling system, air cleaner, air cleaner restriction indicator, engine oil lever, and radiator fins frequently.

(3) Notify organizational maintenance to shorten differential oil change interval.

b. Park the RTCH forklift.

(1) Park vehicle under shelter or cover if possible or cover with tarpaulin.

(2) Ensure all tires are inflated to proper pressure.

(3) Clean and lubricate vehicle to prevent deterioration.

4. Operate RTCH forklift in mud or soft surface.

a. Before entering mud or other soft surfaces, check conditions and select appropriate transmission gear range and use four-wheel drive as required. Enter soft area at a medium speed for gear range selected. Avoid oversteering.

b. Maintain steady pressure on accelerator pedal to keep vehicle rolling until solid ground is reached. Do not accelerate to point where tires spin.

c. If vehicle gets stuck, shovel a clear path ahead of each tire and try to pull out slowly in a low gear. Place boards, brush, or similar materials under tires to provide traction.

d. Maintain steady, even movement with transmission in lower gears. Use 4-wheel drive as required. Keep moving without straining engine or powertrain.

e. If these efforts fail and it becomes evident that vehicle will not free itself, notify field maintenance to arrange for another vehicle to pull out RTCH.

f. Notify organizational maintenance to clean and inspect propeller shaft for proper lubrication.

5. Operate RTCH forklift in sandy or dusty conditions.

a. Service engine air cleaner and cab filter more frequently as needed.

NOTE: Service engine air cleaner when inlet restriction indicator, at air cleaner, shows red or 22 inches of vacuum.

b. Make sure each tire has a valve cap.

c. Check engine and transmission temperature and oil pressure frequently.

d. If engine overheats stop and find out why.

e. Make sure engine and transmission filler tubes are cleaned before being removed to check fluid levels.

f. Clean spouts of fuel container and areas around filler caps on fuel tanks before adding fuel.

g. Cover window glass to protect against sand blasting.

h. Notify organizational maintenance to clean, inspect, and lubricate propeller shaft more frequently.

6. Operate RTCH forklift on snow and ice.

a. Drive the RTCH forklift.

(1) Accelerate slowly to avoid spinning tires.

(2) Drive at slower speeds.

(3) Give signals sooner.

(4) Apply brakes sooner to give early warning of intention to stop.

(5) Maintain double the normal distance from the vehicle ahead.

(6) Keep windshields, windows, mirrors, and lights clean and free from snow and ice.

(7) If a difficult stretch of road approaches, stop and inspect it carefully before driving on it. Select transmission gear range that best suits road condition. Use 4-wheel drive as required.

b. Stop the RTCH forklift.

(1) Ease up on accelerator, leaving vehicle in gear.

(2) Apply service brakes lightly and even. Do not pump service brake pedal.

(3) Always avoid sudden braking.

c. Park the RTCH in snow and ice.

(1) Place boards, brush, or other materials under tires if parking on icy, slushy, wet, or muddy surfaces.

(2) This will provide traction underneath tires and guard against tires freezing to the ground or becoming pocketed in the ice.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating the RT240 RTCH under unusual conditions.

Performance Measures	GO	NO GO
1. Performed initial adjustments, daily checks, and self test on RTCH.	_____	_____
2. Operated RTCH forklift in extreme cold.	_____	_____
3. Operated RTCH forklift in extreme heat.	_____	_____
4. Operated RTCH forklift in mud or soft surface.	_____	_____
5. Operated RTCH forklift in sandy or dusty conditions.	_____	_____
6. Operated RTCH forklift on snow and ice.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}	

Subject Area 10: Initial Shipboard Fire Fighting/Damage Control

551-88H-1801
Perform Fire Fighting Techniques

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment

Conditions: Assigned as a cargo checker/handler with the requirement to perform fire fighting techniques in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, fire extinguishers using various extinguishing agents, foam nozzle, can of foam with pickup tube, protective clothing, fire hose with all-purpose nozzle, a fog applicator, two additional personnel to assist, a backup fire extinguisher, and a life jacket.

Standards: Perform fire fighting techniques without causing injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with performing fire fighting techniques.

Note: None

Performance Steps

1. Fight fire using a mechanical foam nozzle.

NOTE: Report to the station in proper protective clothing.

a. Remove the all-purpose nozzle from the fire hose.

b. Attach the mechanical foam nozzle onto the hose.

c. Attach the pickup tube onto butt of mechanical foam nozzle.

d. Remove lid from foam can.

e. Insert metal end of pickup tube into foam can.

f. Move into position to fight the fire.

g. Aim nozzle to hit off the bulkhead or other object, creating a foam blanket over the area of the fire.

h. Set reflash watch (duty).

2. Fight fire using a CO2 fire extinguisher.

a. Obtain a CO2 fire extinguisher.

b. Move to location of fire.

c. Remove the locking pin from the valve handle.

CAUTION

The horn must be held by the insulated handle due to the extremely low temperature of CO2 which can cause skin to stick to the horn.

d. Remove discharge horn and point toward base of fire.

e. Squeeze the trigger.

f. Move forward slowly, directing discharge at base of fire in a slow sweeping motion (Class B fire).

3. Fight fire with dry chemical fire extinguisher.

NOTE: You must identify the class of fire before using a dry chemical, as it is good for Class B or C fires only.

a. Obtain a dry chemical fire extinguisher.

NOTE: You must identify the extinguisher as cartridge or pressure operated.

b. Move to location of the fire.

c. Remove the locking pin from the seal cutter assembly or valve handle if pressure operated.

d. If cartridge operated, sharply strike the puncture lever to puncture the gas cartridge seal.

e. Aim the discharge nozzle at the base of the flames and sweep it rapidly from side to side, discharging the dry chemical in short bursts.

WARNING

Dry chemical extinguishing agents are considered nontoxic; however, they may have irritating effects when inhaled. For this reason, a warning signal, similar to the one used in carbon dioxide systems should be installed in any space that might be totally flooded with the dry chemical. In addition, breathing apparatus and lifelines must be available in case personnel must enter the space before it is entirely ventilated.

f. If cartridge operated, invert the extinguisher while squeezing the discharge nozzle to release the remaining CO2 from the cartridge.

4. Fight fire with water.

NOTE: If the water pressure is reduced at any time during the performance of this task, the entire team will retreat to a safe position.

a. Report to the fire station properly attired.

b. Lay out hoses as directed.

(1) Hose 1 sets up for high-velocity fog or straight stream.

(2) The hose 2 nozzleman will follow closely behind hose 1 nozzleman, providing low-velocity fog cooling for fire team 1.

c. Charge the fire hoses.

d. Place the bail in the fog position.

e. Advance slowly on the fire.

(1) Operate hose 1 with large rotation to cool down the hatch or watertight door to be entered.

(2) The hose 2 nozzleman will follow closely behind hose 1 nozzleman, providing low-velocity fog cooling for fire team 1.

f. Enter the burning compartment.

NOTE: Hoseman may remain outside while nozzleman enters (as directed by the on-scene leader).

g. Direct hose 1 in a sweeping motion from right to left at the base of the fire.

h. Report to scene leader, "fire contained" or "fire under control", as appropriate.

i. Report to scene leader, "fire is out".

j. Perform overhaul of fire using a straight stream, high- or low-velocity fog as directed by scene leader.

k. Set reflash watch (duty) or secure as directed by scene leader.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing fire fighting techniques.

Performance Measures	**GO**	**NO GO**
1. Fought fire with mechanical foam nozzle.	_____	_____
2. Fought fire with CO2 fire extinguisher.	_____	_____
3. Fought fire with dry chemical fire extinguisher.	_____	_____
4. Fought fire with water.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-15.51 Marine Crewman's Handbook	

Subject Area 11: Initial Cargo Operations (Ship and Shore)

551-88H-1422
Perform Standard Hand and Arm Signals for Winch Operations

CAUTION

Ensure that proper hand and arm signals are given with a clear view between operator and soldier signaling.

Conditions: Assigned as a cargo checker/handler with the requirement to perform standard hand and arm signals for winch operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, ship's gear, a winch, and a winch operator.

Standards: Perform hand signals ensuring they are clearly visible to the winch operator at all times without injury to personnel or damage to cargo, the vessel, or the ship's gear.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with performing hand and arm signals for a winch operator.

Note: None

Performance Steps

1. Identify duties and responsibilities of the signalman.

NOTE: The winch operator cannot see the draft at all times; therefore, he depends on the signalman's instructions. The safety and smoothness of the operator depends on the judgment of the signalman and the skill of the winch operator; a team effort is essential.

a. Each member of the hatch team must know the signals used in cargo handling.

b. The signalman must know the safe methods of slinging cargo and that the draft is slung properly before giving the winch operator a signal to move it.

c. The signalman must be able to judge the few seconds that elapse (delay) between the time the signal is given and the actual stopping of the winch.

NOTE: If allowance is not made for this, accidents may occur.

d. The signalman and the winch operator must clearly understand the signals in order to prevent accidents, confusion, and damage to cargo, cargo gear, and personnel.

e. The signalman must place himself in a position where he can be seen at all times by the winch operator.

NOTE: Both the signalman and winch operator must continually observe the rigging by paying particular attention to slack guys, chaffing runners, loose pins in shackles, strainers, hooks, and bridle which could be unsafe. Stop operations and report any deficiency to the hatch foreman.

2. Perform proper hand signals for one-winch operations.

NOTE: Only one hand is used to signal one-winch operation.

a. Hoist: The right arm and hand are extended with the palm and fingers up (see Figure 3-82).

HOIST
Extended Palm Up and
Fingers Upward

Figure 3-82

Hoist Hand Signal for One-winch Operations

b. Lower: The right arm and hand are extended with the palm and fingers down (see Figure 3-83).

LOWER
Extended Palm Down and
Fingers Downward

Figure 3-83

Lower Hand Signal for One-winch Operations

c. Rack: The right arm is extended outward from the body in a sweeping motion, pointing in the direction in which the draft is to be moved (see Figure 3-84). This signal indicates the winch operator should move the load at his/her discretion and is given only when the draft is in full view of the winch operator.

RACK

sweeping motion of the arm
from an inward to outward

Figure 3-84

Rack Hand Signal for One-winch Operations

d. Stop: The right arm is extended forward with palm facing the winch operator and the fingers are extended upward (see Figure 3-85).

STOP

palm facing winch
operator and fingers upward

Figure 3-85

Stop Hand Signal for One-winch Operations

3. Perform proper hand signals for two-winch operations.

NOTE: Both hands are used for two-winch operations.

a. Hoist/Lower: Both arms are extended with the right palm and fingers facing upward and the left palm and fingers facing downward (see Figure 3-86).

Figure 3-86

Hoist and Lower Hand Signals for Two-winch Operations

b. Stop: Both arms are extended forward with the palms facing the winch operator and the fingers extended upward (see Figure 3-87).

Figure 3-87

Stop Hand Signal for Two-winch Operations

c. Emergency Stop: The arms are extended forward and moved away from the body rapidly and emphatically with the palms facing the winch operator.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing standard hand and arm signals for winch operations.

Performance Measures	**GO**	**NO GO**
1. Identified the duties and responsibilities of the signalman.	_____	_____
2. Performed proper hand signals for one-winch operations.	_____	_____
3. Performed proper hand signals for two-winch operations.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 21-60 Visual Signals	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1503
Operate Electric Winches to Load or Discharge Cargo

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to operate electric winches to load or discharge cargo in an operational environment, during the day or night, in normal weather conditions, given electric winches, a completed risk assessment, safety briefing, safety clothing, and cargo booms.

Standards: Operate electric winches to load or discharge cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to load or discharge cargo.

Note: None

Performance Steps

1. Ensure the cargo runner is wound correctly over the top of each drum and free of foreign objects such as, dunnage, paper, rags, and trash.

2. Open ventilator covers on each winch.

3. Turn winch controls to on.

4. Ensure cargo hook is released from the pad eye.

5. Test the winch controls by raising each control lever to the rear; push forward to lower control lever.

6. Plumb the draft before hoisting the cargo.

7. Hoist the draft.

8. Rack the draft to position over the hatch or pier.

9. Lower the draft into the hold or onto the pier.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on operating electric winches to load and discharge cargo.

Performance Measures	**GO**	**NO GO**
1. Ensured that cargo runner was wound correctly on each drum.	_____	_____
2. Opened ventilator covers on each winch.	_____	_____
3. Turned winch controls to on.	_____	_____
4. Ensured cargo hook was released from the pad eye.	_____	_____
5. Tested winch control by raising each control lever to the rear; pushed forward to lower the control lever.	_____	_____
6. Plumbed the draft before hoisting the cargo.	_____	_____
7. Hoisted the draft.	_____	_____
8. Racked the draft to position over the hatch or pier.	_____	_____
9. Lowered the draft into the hold or onto the pier.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1512
Load Cargo into Containers

Conditions: Assigned as a cargo checker/handler with the requirement to load cargo into containers in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, a completed DD Form 1384 (Transportation Control and Movement Document), a low mast forklift, dunnage, hammer, nails, and under section chief supervision at a terminal, transshipment point, or outport.

Standards: Inspect containers for proper size, clearance, and damages to prepare for loading cargo, record any damages of cargo or containers on DD Form 1384, and load cargo into containers without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with the loading of cargo into a container.

Note: None

Performance Steps

1. Select container by checking interior for cleanliness and inspecting for damage.

2. Check the cargo load plan. Items to be stuffed in a container must be laid out in a logical sequence considering:

    a. Weight

    b. Proper space utilization

    c. What items will be needed first

3. Load cargo into container.

    a. Use a low-mast forklift.

    b. Package contents to the appropriate level (not over packaged).

    c. Unitize cargo when feasible to load the container.

    d. Load only compatible cargo in any one container.

4. Install blocking and bracing (as required).

5. Close container door.

    a. Ensure that a packing list is attached to the inside and outside of the container.

NOTE: The packing list must be put in a weatherproof envelope and affixed to the interior and exterior of the door.

b. Ensure that hazardous material (HAZMAT) warning labels (DD Form 1387-2 [Special Handling Data/Certification]) are attached (if required) (see Figure 3-88).

NOTE: Do not include classified and sensitive material on the packing list.

6. Ensure that container seals are installed and annotated on the DD Form 1384.

SPECIAL HANDLING DATA/CERTIFICATION

1. ITEM NOMENCLATURE	2. NET QUANTITY PER PACKAGE	3. TRANSPORTATION CONTROL NO.
MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	12 gallons	WK888740730001XXX
	4. CONSIGNMENT GROSS WEIGHT 3,600 pounds	5. DESTINATION Fort Carson, CO

6. SUPPLEMENTAL INFORMATION
Fuel in tank--gasoline w/truck
Battery, wet, filled with acid, corrosive material, 2 quarts

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and in proper condition for transportation according to the applicable regulations of the Dept of Transportation. THIS IS A U.S. DEPARTMENT OF DEFENSE SHIPMENT! *(Complete applicable blocks below)*

7. DTR REFERENCE

8. HANDLING INSTRUCTIONS

SAMPLE

9. ADDRESS OF SHIPPER	10. TYPED NAME, SIGNATURE AND DATE
Charleston AFB, South Carolina	SFC J. J. Bond, 23 June 2007 J. J. Bond

DD FORM 1387-2, NOV 2004 PREVIOUS EDITION IS OBSOLETE. *Form Approved/OMB No. 0704-0188*
Adobe Professional 7.0

Figure 3-88

DD Form 1387-2

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the Ssldier that he/she will be evaluated on loading cargo into containers.

Performance Measures	**GO**	**NO GO**
1. Selected container by checking interior for cleanliness and inspecting for damage.	_____	_____
2. Checked the cargo load plan.	_____	_____
3. Loaded cargo into container.	_____	_____
4. Installed blocking and bracing (as required).	_____	_____

Performance Measures	GO	NO GO
5. Closed container door.	_____	_____
6. Ensured that container seals were installed and annotated on the DD Form 1384.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-12 Army Container Operations	
DD FORM 1384 Transportation Control and Movement Document	
DD FORM 1387-2 Special Handling Data/Certification	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 12: Initial Cargo Operations (Rail)

551-88H-1302
Load Vehicles on Flatcar

CAUTION

When using the ramp, drivers should avoid braking suddenly to prevent skidding.

During the loading/unloading of heavy tracked vehicles, a locomotive must be coupled to the train with all brakes applied. For light vehicles, it will suffice to block the wheels of the wagons with the ordinary stop blocks used by the railways.

Conditions: Assigned as a cargo checker/handler with the requirement to load vehicles on a flatcar in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, vehicles, flatcar, tools, spanners, restraining materials, and means of communication.

Standards: Load vehicles on a flatcar without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are a cargo checker/handler assigned with loading vehicles onto a flatcar.

Note: None

Performance Steps

1. Place spanners securely in place to bridge the distance between flatcars (see Figure 3-89).

2. Drive vehicles to ramp for loading.

3. Follow the ground guide's direction on the ramp and on each railcar.

NOTE: Before loading vehicles on flatcars ground guides must be positioned, one per flatcar and one on either side of the flatcar. Personnel will not walk backwards on flatcars.

4. Load all vehicles from the rearmost car and position them forward to the assigned position (see Figure 3-89).

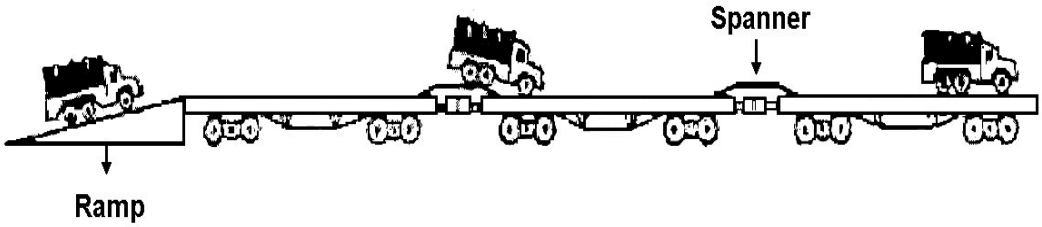


Figure 3-89

Circus Method Loading Vehicles

5. Set handbrake on all wheeled vehicles, wire and block levers in the disengage position on all tracked vehicles.

6. Disconnect trailers from vehicles if directed.

NOTE: If trailers are disconnected, lower the landing legs on semi-trailers and lower support wheels on small trailers.

7. Apply lashing materials to vehicles.

NOTE: Lashings are not tightened completely until all blocks and chalks are nailed in place (see Figures 3-90 and 3-91).

8. Report activities to supervisor.

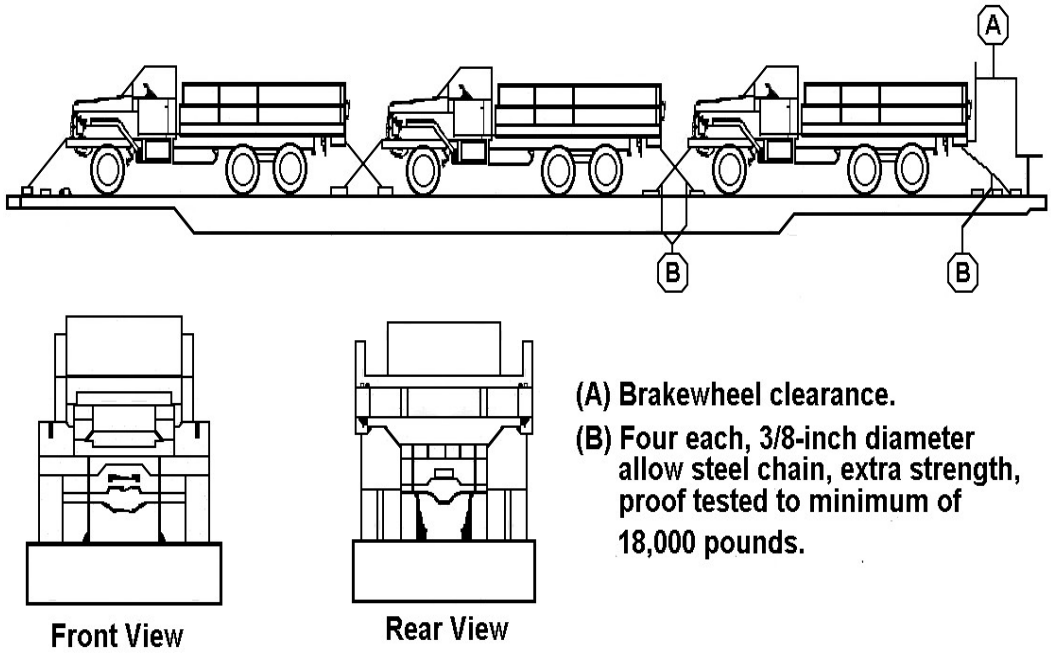


Figure 3-90

Chain Securement of Three-axle Vehicles

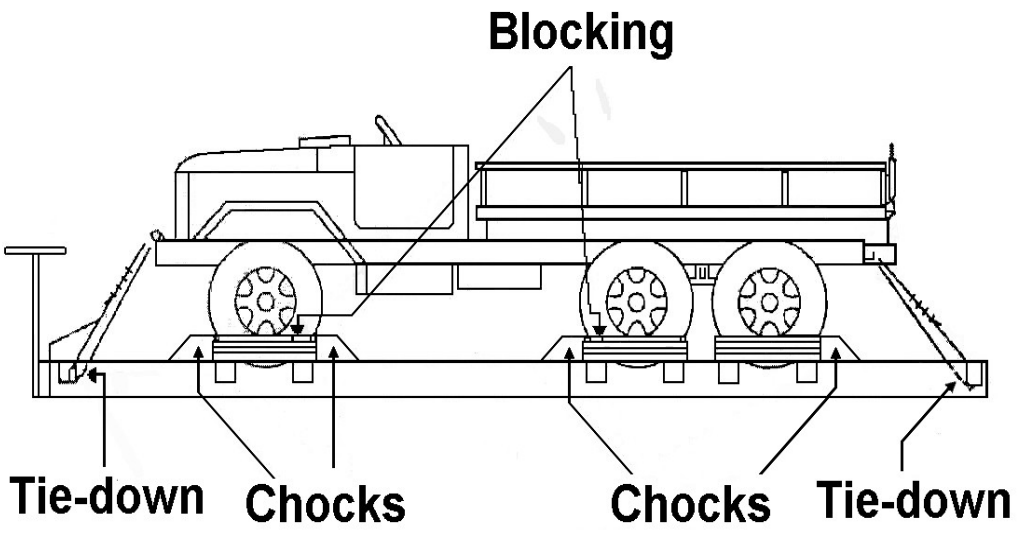


Figure 3-91

Blocking and Bracing of Three-axle Vehicles

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on loading vehicles on a flatcar.

Performance Measures	**GO**	**NO GO**
1. Placed spanners securely in place to bridge the distance between flatcars.	_____	_____
2. Drove vehicles to ramp.	_____	_____
3. Followed the ground guide's direction on the ramp and on each flatcar.	_____	_____
4. Loaded all vehicles from the rearmost car and moved them forward to the assigned position.	_____	_____
5. Set handbrake on wheeled vehicles, wired and blocked levers on tracked vehicles.	_____	_____
6. Disconnected trailer if directed.	_____	_____
7. Applied securing materials to vehicles.	_____	_____
8. Reported activities to supervisor.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the Soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

Required	Primary
TEA PAM 55-19 Tiedown Handbook for Rail Movements	
TM 55-2200-001-12 Transportability Guidance for Application of Blocking, Bracing and Tiedown Materials for Rail Transport (includes Changes 1 through 4)	

551-88H-1305
Identify Dangerous Cargo for Rail Transport

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to identify dangerous cargo for rail transport in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, hazardous packages, marking tools, and equipment.

Standards: Identify and mark dangerous cargo for rail transport.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to identify dangerous cargo for rail transport.

Note: None

Performance Steps

1. Identify packages containing hazardous material for transportation with proper shipping name.

2. Ensure marking is durable, written in English, and printed on (or affixed to) the surface of a package or on a label, tag, or sign.

3. Display marking on a background of sharply contrasting color.

4. Place marking where it is unobscured by labels or attachments.

5. Place marking away from any other markings (such as advertisements) that could substantially reduce its effectiveness.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on identifying dangerous cargo for rail transport.

Performance Measures	**GO**	**NO GO**
1. Identified packages containing hazardous material for transportation with proper shipping name.	_____	_____
2. Ensured marking was durable, written in English, and printed on (or affixed to) the surface of a package or on a label, tag, or sign.	_____	_____
3. Displayed marking on a background of sharply contrasting color.	_____	_____
4. Placed marking where it was unobscured by labels or attachments.	_____	_____
5. Placed marking away from any other markings (such as advertisements) that could substantially reduce its effectiveness.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
AAR TARIFF NO. BOE-6000 Hazardous Materials Regulations of the Department of Transportation	
CFR Title 49 Transportation	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 13: Initial Cargo Operations (Ship)

551-88H-1417
Load Wheeled and Tracked Vehicles Aboard Cargo Vessel

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to load wheeled and tracked vehicles aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, ship's gear, a heavy lift cargo set, a coopering and shoring cargo set, dunnage, tag lines, lashing equipment, wheeled and tracked vehicles, and a copy of the prestowage plan.

Standards: Load wheeled and tracked vehicles aboard a cargo vessel without injury to personnel or damage to vessel and equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to stow wheeled and tracked vehicles on a cargo vessel.

Note: None

Performance Steps

1. Load wheeled vehicle(s) aboard a cargo vessel (see Figure 3-92).

    a. Land each vehicle in the hold so that it is headed in the direction of stowage.

b. As a member of a hatch gang, release the brake and steer while the rest of the gang pushes or uses a drag line to spot the vehicle(s).

c. Load vehicle(s) in a fore-and-aft direction and set vehicle handbrake, unless the foreman specifies an athwartship direction.

d. Block sides, the front, and the backs of vehicle(s).

e. Brace the vehicle(s) to the bulkhead, stanchions, or other blocked vehicles.

f. Use blocking to shore up the bumper or chassis to relieve tension from vehicle(s).

g. Restrain each vehicle using lashing equipment (see Figure 3-93).

NOTE: Lashing materials used will depend on the vehicles weight.

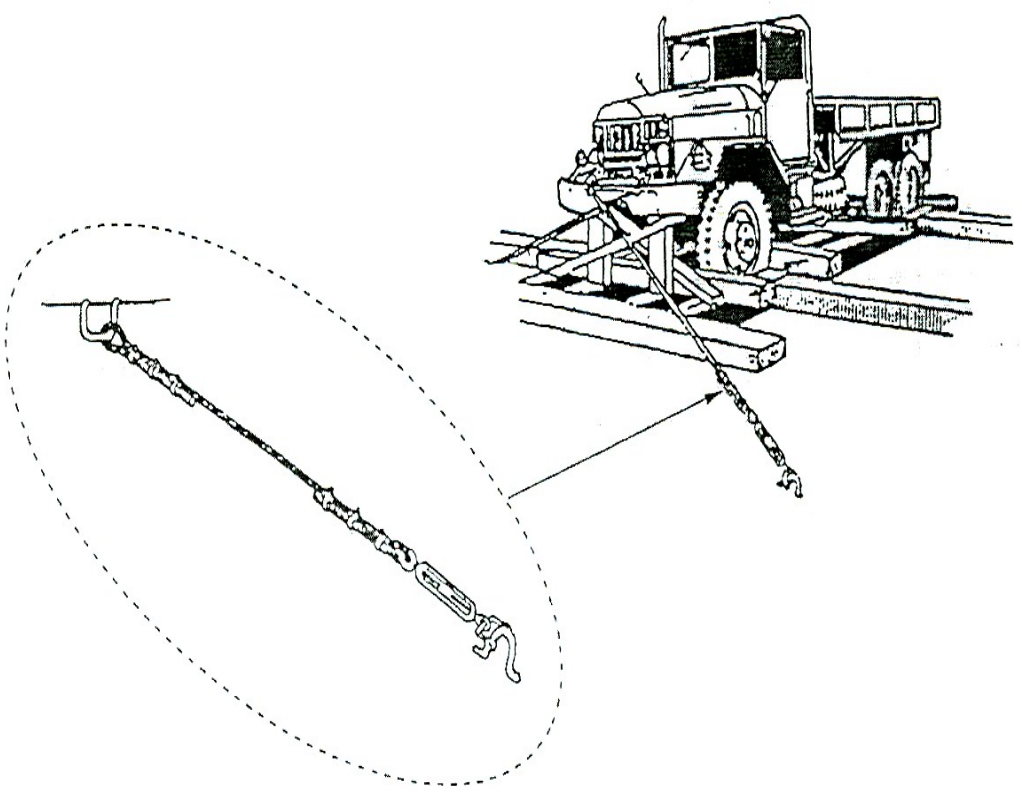


Figure 3-92

Loading Wheeled Vehicle

For Other Ships Only

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 5,260 lb	5,000 lb	4
Up to 10,530 lb	10,000 lb	4
Up to 14,850 lb	14,100 lb	4
Up to 17,900 lb	17,000 lb	4
Up to 36,860 lb	35,000 lb	4
Up to 73,720 lb	70,000 lb	4
Up to 147,450 lb	70,000 lb	8

For Other Ships Only "Metric"

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 2,390 kg	2,250 kg	4
Up to 4,780 kg	4,550 kg	4
Up to 6,740 kg	6,400 kg	4
Up to 8,120 kg	7,700 kg	4
Up to 16,720 kg	15,900 kg	4
Up to 33,440 kg	31,750 kg	4
Up to 66,880 kg	31,750 kg	8

Note: "Other" ships are all ships except fast sealift ships.

Figure 3-93

Lashing Equipment

2. Load tracked vehicles aboard a cargo vessel (see Figure 3-94).

a. Place a solid floor or planking not less than 2 inches thick.

b. As a member of a hatch gang, land each vehicle in the hold so that it is headed in the direction of stowage.

c. Move the vehicle(s) from the square of the hatch to it's stow location. If vehicle(s) is inoperable, use a dragline.

d. Load vehicle(s) in a fore-and-aft direction, controlling the direction of vehicle(s) by breaking or releasing the tracks.

e. Secure vehicle(s) by placing gear lever in neutral (N) (multifuel) and engaging the handbrake.

NOTE: For gasoline driven vehicles, leave the vehicle(s) in gear with handbrake set.

f. Lock or lash movable turrets.

g. Secure vehicle(s) weighing less than 18 tons with at least 4- x 6-inch lumber. Secure vehicle(s) weighing 18 tons or more with at least 6- x 8-inch lumber.

h. Lash vehicle(s) with at least four wire turnbuckles or with a quick-release chain lashing.

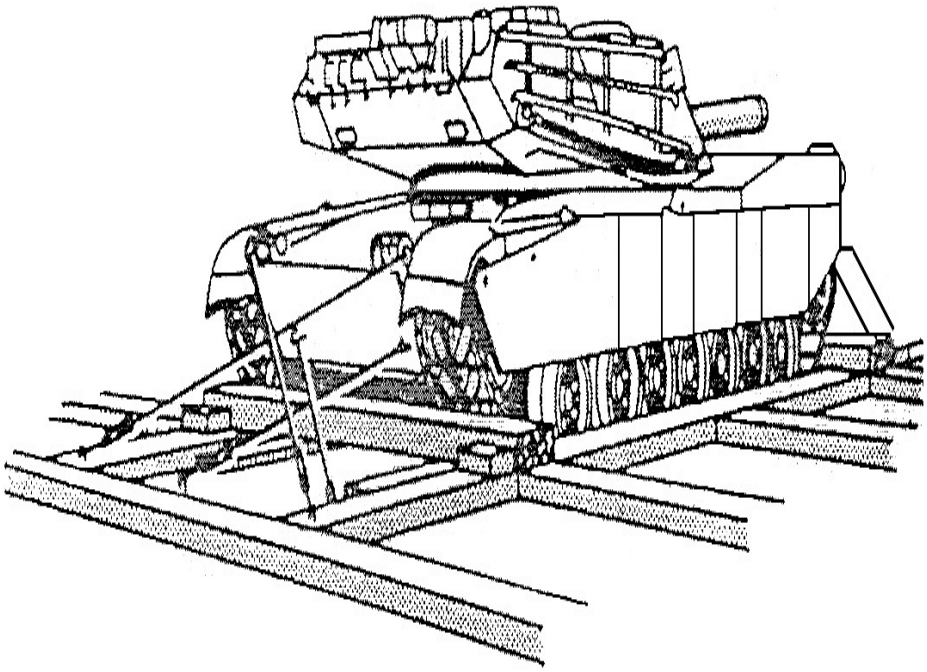


Figure 3-94

Loading Tracked Vehicles

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on loading wheeled and tracked vehicles aboard a cargo vessel.

Performance Measures	**GO**	**NO GO**
1. Loaded wheeled vehicles aboard a cargo vessel.	_____	_____
2. Loaded tracked vehicles aboard a cargo vessel.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1525
Stow Wheeled and Tracked Vehicles on RO/RO Deck

DANGER

Adhere to all DANGER statements listed in the vehicle or technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle or technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle or technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment

Conditions: Assigned as a cargo checker/handler with the requirement to stow wheeled and tracked vehicles on roll-on/roll-off (RO/RO) deck in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety gear, RO/RO ship, wheeled vehicles, tracked vehicles, prestowage plan, and coopering and shoring cargo set.

Standards: Stow wheeled and tracked vehicles on RO/RO deck to prevent movement without injury to personnel or damage to the equipment or vessel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler on a RO/RO vessel and tasked to stow wheeled and tracked vehicles on the deck.

Note: None

Performance Steps

1. Stow wheeled vehicles on RO/RO deck (see Figure 3-95).

    a. Place each vehicle with the engine facing forward whenever possible.

    b. Lash each vehicle with at least four lashings.

NOTE: 1.The vessel master may require additional lashings (see Figure 3-96). They must be crossed with the cable forming an "X" or led outboard from the vehicles with the mechanical quick-release devices

attached as an option. 2. When directed to stow tracked vehicles athwartship, the cargo handler must set the brakes on the vehicle, and block both sides and both ends.

c. Shore up the chassis to take the pressure off oversized balloon tires.

d. Block both sides and both ends of the vehicle and brace all wheel chocks.

e. Correct securing deficiencies as soon as they are found.

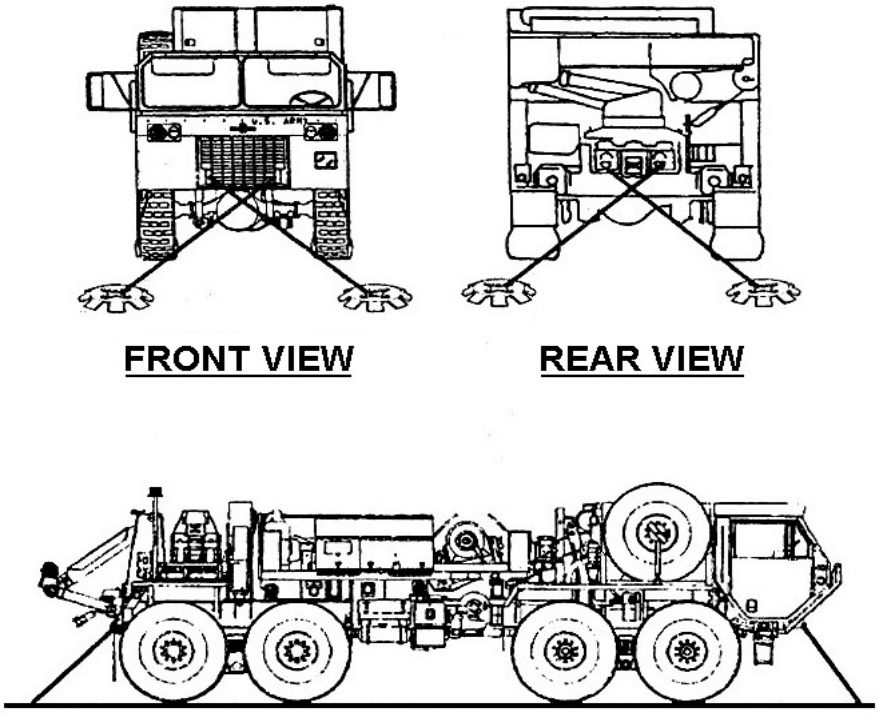


Figure 3-95

Stowing Wheeled Vehicles

Fast Sealift Ships		
Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 8,930 lb	5,000 lb	4
Up to 17,860 lb	10,000 lb	4
Up to 25,180 lb	14,100 lb	4
Up to 30,360 lb	17,000 lb	4
Up to 62,510 lb	35,000 lb	4
Up to 125,020 lb	70,000 lb	4
Up to 250,040 lb	70,000 lb	8
Other Ships		
Up to 5,260 lb	5,000 lb	4
Up to 10,530 lb	10,000 lb	4
Up to 14,850 lb	14,100 lb	4
Up to 17,900 lb	17,000 lb	4
Up to 36,860 lb	35,000 lb	4
Up to 73,720 lb	70,000 lb	4
Up to 147,450 lb	70,000 lb	8

Figure 3-96

Lashing

2. Stow tracked vehicles on RO/RO deck (see Figure 3-97).

a. Construct solid floor or planking, not less than 2 inches thick.

b. Stow vehicles in a fore and aft position unless told by the supervisor or ship's master to stow in an athwartship position.

c. Leave multi-fuel vehicles in neutral gear with the brake engaged.

d. Leave gasoline vehicles in gear with the brake engaged.

e. Lock or lash moving turrets in position on tanks.

f. Secure tracked vehicles weighing more than 18 tons with wire rope or chain and 6- x 8-inch lumber.

g. Secure tracked vehicles weighing less than 18 tons with wire rope or chain and 4- x 6-inch lumber.

h. Rig a dragline for moving tracked vehicles in the stowed position (if required).

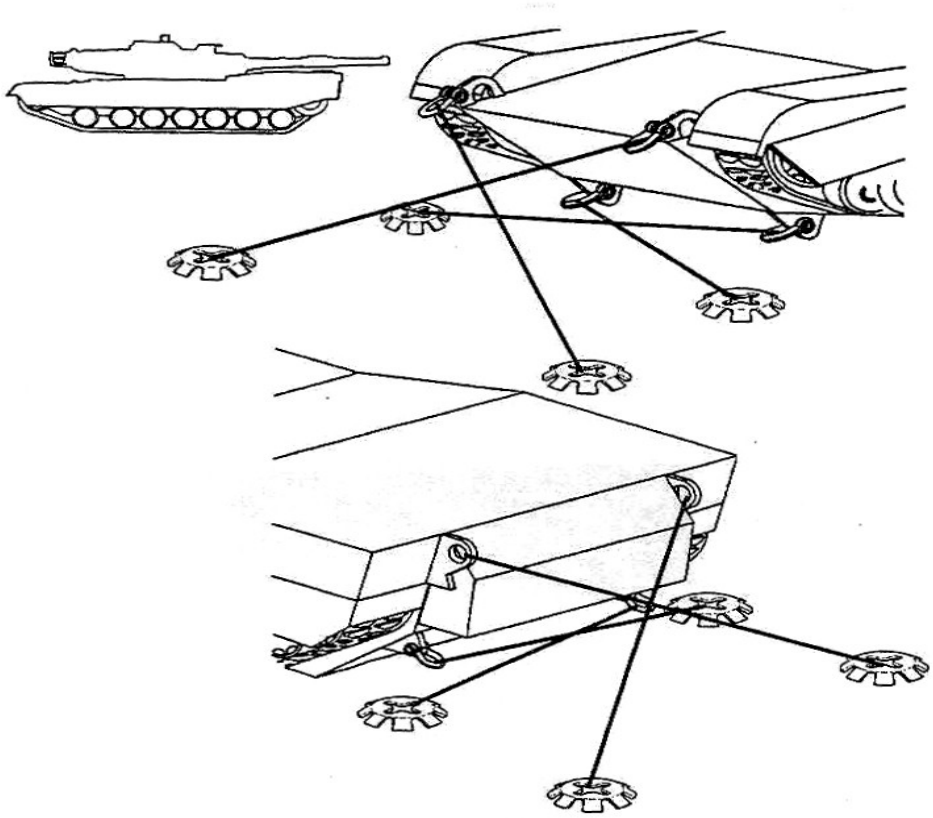


Figure 3-97

Stowing Tracked Vehicles

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on stowing wheeled and tracked vehicles on the RO/RO deck.

Performance Measures	**GO**	**NO GO**
1. Stowed wheeled vehicles on RO/RO deck.	_____	_____
2. Stowed tracked vehicles on RO/RO deck.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-1524
Perform Vehicle Guide Duties During RO/RO Operations

WARNING

Do not walk backwards while performing ground guide duties.

CAUTION

Ensure that ground guides are trained in using hand and arm signals.

Conditions: Assigned as a cargo checker/handler with the requirement to perform vehicle guide duties during RO/RO operations in an operational environment, day or night, in normal weather conditions, given a completed risk assessment, safety briefing, hearing protection, roll-on/roll-off (RO/RO) vessel, and vehicles with operators.

Standards: Perform vehicle guide duties without injury to personnel or damage to vehicles and vessel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked to perform ground guide duties during RO/RO operations.

Note: None

Performance Steps

1. Ensure you receive instructions from vehicle director for location assignment and area of responsibility.

NOTE: For safe and efficient operation, ensure that experienced personnel are used to man traffic control points throughout the ship. Ensure that each ground guide or traffic control person is trained in using hand and arm signals.

2. While performing vehicle guide duties, ensure you stay clear of space between moving vehicles, fixed objects, and bulkheads.

a. Ensure vehicle's path is clear.

b. Never run or walk backwards.

c. Vehicle guides must stand 10 yards from the vehicle in the driver's line of sight, but out of the path of the vehicle.

3. Ensure vehicles are being operated with lights on.

4. Position yourself at the call forward areas, ramps, and watertight doors to clear area of unnecessary personnel.

5. Position yourself either to the rear of a vehicle or to the side when vehicle is backing up.

a. An assistant ground guide is required when backing vehicles in an operational or non-congested area.

b. In congested areas and while parking a vehicle aboard a vessel there should be three ground guides.

c. Ensure that the drivers sound their horn to warn others when backing.

6. Position yourself to warn personnel of oncoming vehicles when moving vehicles through various levels and holds of the ship.

7. Ensure only one vehicle transits a ramp at a time and stand clear of vehicle ramps while vehicles are traversing them.

8. Ensure operators do not leave vehicles with engines running.

9. Ensure vehicle operators do not exceed 5 miles per hour while moving about the ship.

10. Ensure vehicles are operated in low range only and, when possible, in maximum wheel drive mode.

11. Ensure you position yourself to stay clear of vehicle exhaust.

12. Maintain a clean environment within the RO/RO area as trash or loose papers could block a ventilation system or airflow and allow buildup of noxious gases.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing vehicle guide duties during RO/RO operations.

Performance Measures		**GO**	**NO GO**
1.	Received instructions from vehicle director for location assignment and area of responsibility.	_____	_____
2.	Stayed clear of space between moving vehicles and other vehicles, fixed objects, and bulkheads while performing vehicle guide duties.	_____	_____
3.	Ensured vehicles were operated with lights on.	_____	_____
4.	Positioned self at the call forward areas, ramps, and watertight doors to clear area of unnecessary personnel.	_____	_____
5.	Positioned self either to the rear of a vehicle or to the side when vehicle was backing up.	_____	_____
6.	Positioned self to warn personnel of oncoming vehicles when moving vehicles through various levels and holds of the ship.	_____	_____
7.	Ensured only one vehicle transited a ramp at a time and stood clear of vehicle	_____	_____

Performance Measures	GO	NO GO
ramps while vehicles were traversing them.		
8. Ensured operators did not leave vehicles with engines running.	_____	_____
9. Ensured vehicle operators did not exceed 5 miles per hour while moving vehicles about the ship.	_____	_____
10. Ensured vehicles were operated in low range only and, when possible, in maximum wheel drive mode.	_____	_____
11. Positioned self to stay clear of vehicle exhaust.	_____	_____
12. Maintained a clean environment within the RO/RO area.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	

Subject Area 14: Initial Seamanship Maintenance

551-88H-1703
Tie Basic Seamanship Knots

Conditions: Assigned as a cargo checker/handler with the requirement to tie basic seamanship knots in an operational environment, during the day or night, in normal weather conditions, given safety clothing, and a length of rope for tying basic seamanship knots.

Standards: Tie basic seamanship knots for cargo handling operations without injury to personnel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are a cargo checke/handler tasked with tying seamanship knots for cargo handling operations.

Note: None

Performance Steps

1. Tie a bowline knot (see Figure 3-98).

   a. Lay the standing part of the rope over the left hand away from you.

   b. Make an overhand loop with the opposite end away from you.

   c. Insert the bitter end (running end) from below up through the overhand loop.

   d. Bring the bitter end under the standing part.

   e. Pull the bitter end and right side of the eye to pull taut.

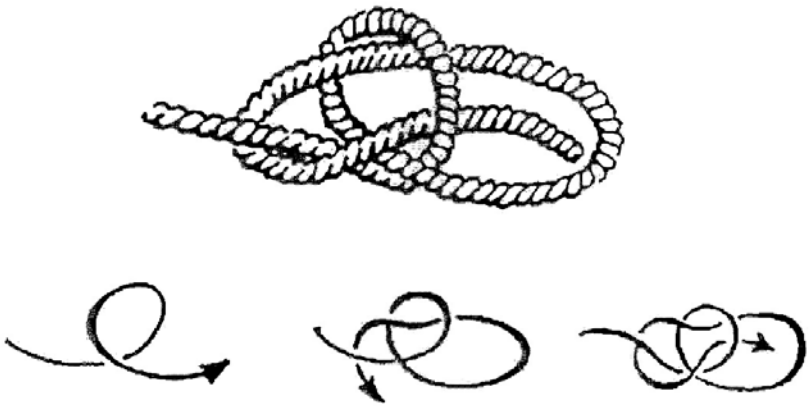


Figure 3-98

Bowline Knot

2. Tie a figure eight knot (see Figure 3-99).

   a. Grasp the standing part of the rope in the left hand.

   b. With the right hand, make a loop with the running end.

   c. Bring the running end under the standing part and make another loop.

   d. Insert the running end through the first loop.

   e. Pull the running end tight, forming a figure eight knot.

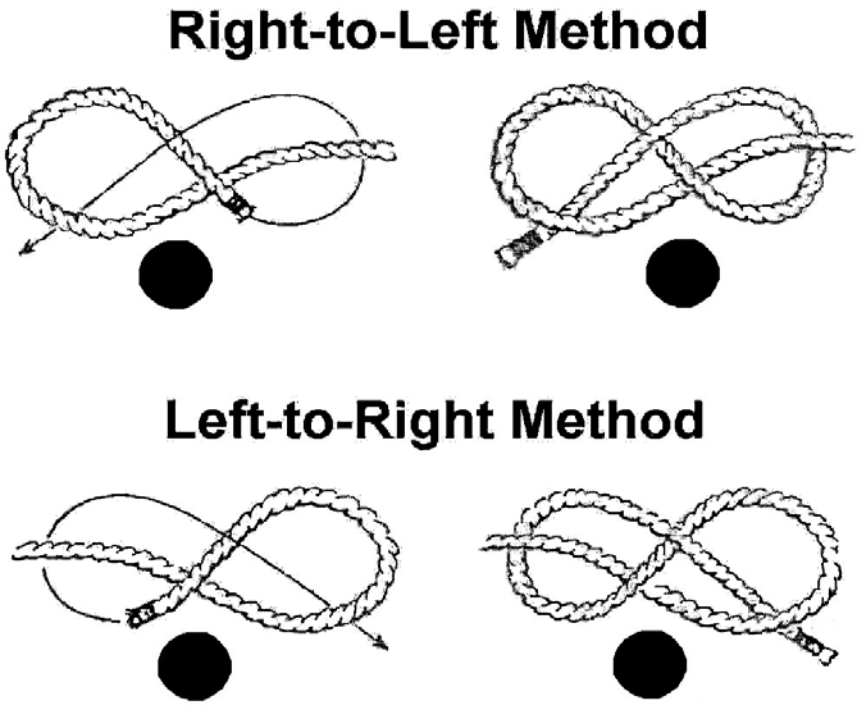


Figure 3-99

Figure Eight Knot

3. Tie a square knot (see Figure 3-100).

   a. Take the two running ends of the rope and cross one under the other.

   b. Bring the two running ends up.

   c. Cross the two running ends opposite the first crossing.

   d. Pull the two running ends tight.

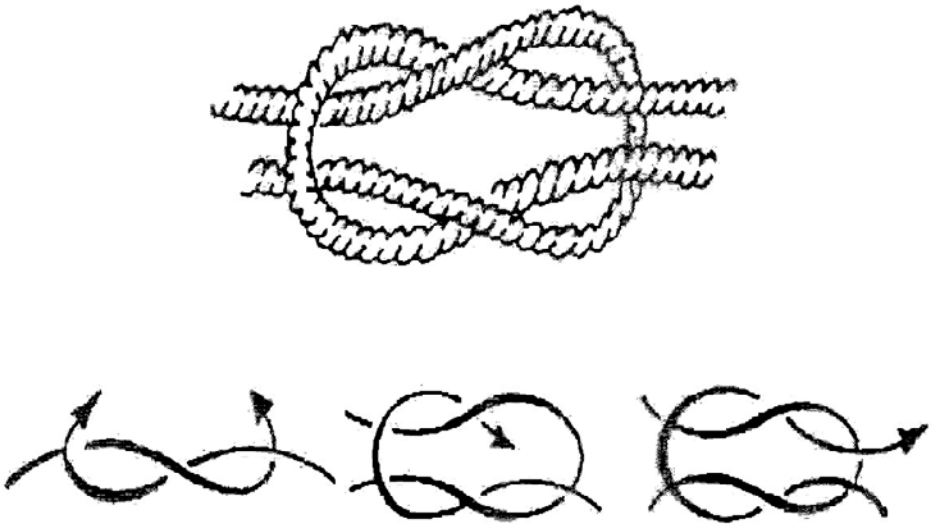


Figure 3-100

Square Knot

4. Tie an overhand knot (see Figure 3-101).

   a. Grasp the standing part of the rope in the left hand.

   b. With the right hand, take the running end and make a loop.

   c. Bring the running end over and under the standing part and pull it through the loop.

   d. Pull the running end tight to form a knot.

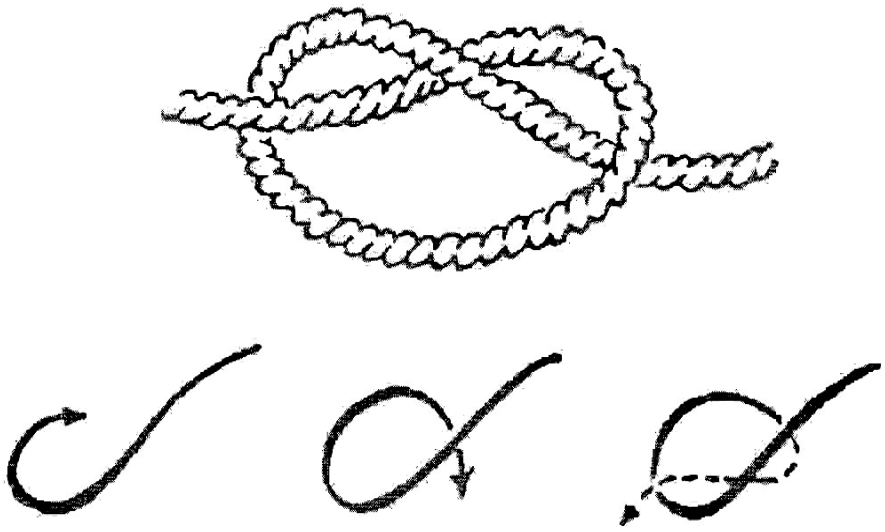


Figure 3-101

Overhand Knot

5. Tie a half hitch (see Figure 3-102).

a. Take the running end of the rope and make two round turns around a pole or spar.

b. Bring the running end around the standing part and bring it back under the turn to form a half hitch

c. Pull the running end tight, forming a half hitch.

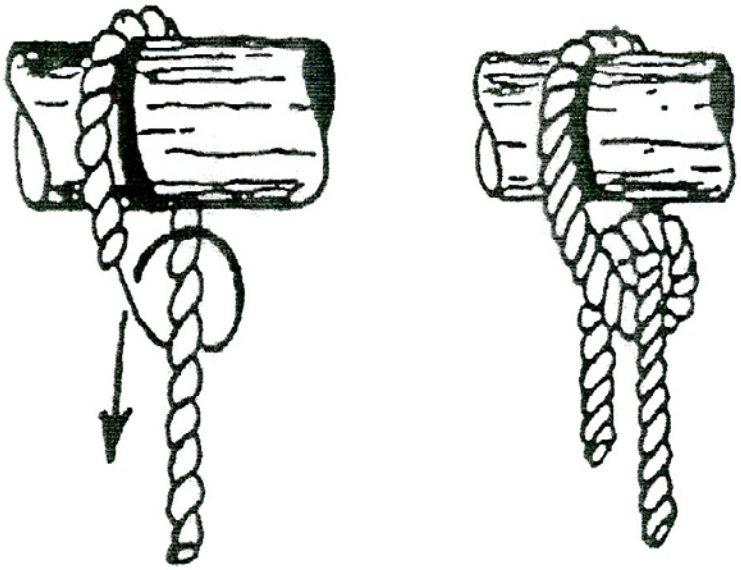


Figure 3-102

Half Hitch

6. Tie a rolling hitch (see Figure 3-103).

a. Take a turn around the line and bring the running end back to the standing part.

b. Take the running end and make another turn across the first turn. This completes the hitch itself.

c. Pull taught.

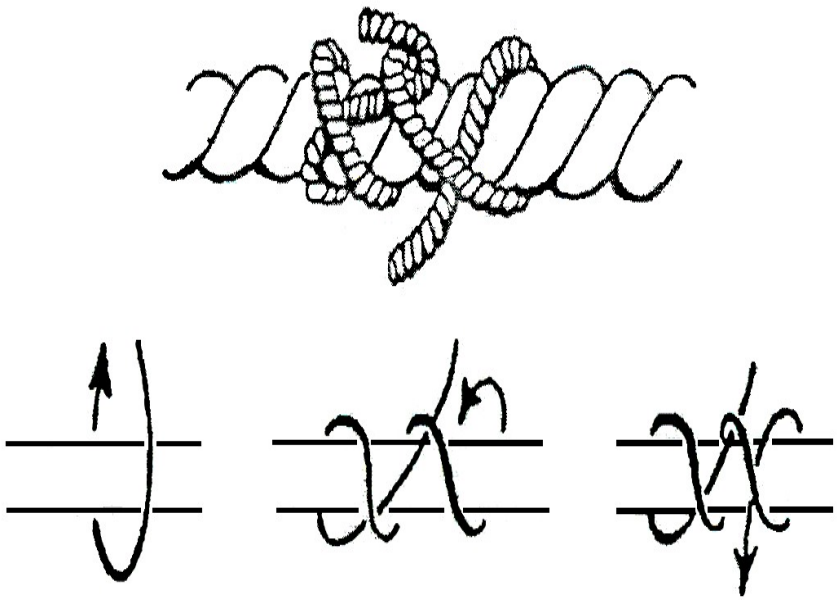


Figure 3-103

Rolling Hitch

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on tying seamanship knots for cargo handling operations.

Performance Measures	**GO**	**NO GO**
1. Tied a bowline knot.	_____	_____
2. Tied a figure eight knot.	_____	_____
3. Tied a square knot.	_____	_____
4. Tied an overhand knot.	_____	_____
5. Tied a half hitch.	_____	_____
6. Tied a rolling hitch.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TC 4-15.51 Marine Crewman’s Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

Subject Area 15: Initial Drill and Survival Measures

551-88H-1701
Perform Water Survival Techniques

DANGER

Adhere to all DANGER statements during this exercise. Loss of life or permanent personal injury may result if the dangers are not carefully followed.

Visually inspect water prior to entry.

WARNING

Adhere to all WARNING statements during this exercise. Serious personal injury may result if the warnings are not carefully followed.

CAUTION

Maintain communication with crew before, during and after entering the water. Be cautious of debris while entering the water.

Conditions: Assigned as a cargo handler with the requirement to perform water survival techniques in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, water source, vessel, life ring or flotation device, work vest, and life jacket.

Standards: Don a crew work vest. Don a life jacket within 2 minutes. Enter water and perform travel stroke, hanging float and man overboard procedures without injury to personnel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo handler tasked with performing water survival techniques.

Note: None

Performance Steps

WARNING

The work-type personal flotation device (PFD) is buoyant enough to keep the wearer afloat in calm conditions. It has no self-righting capability and will not keep an unconscious wearer's head out of the water while awaiting rescue. This PFD is to be worn when the water temperature exceeds 60º F.

1. Don a crew work vest.

a. Don the work vest as you would any vest or shirt.

b. Secure the adjustable encircling body belts and chest straps.

c. Ensure the reflective tape is visible.

2. Don a life jacket.

a. Place the white tag located on the lower back of the life jacket to the inside next to the body.

b. Put arms through arm holes.

c. Put the neck straps through the D-ring on each side of the life jacket.

d. Tie the straps in a bow knot.

e. Snap the belly strap.

f. Adjust the belly strap as required.

g. Pull the leg strap up between the legs.

h. Thread the end of the leg strap through the double D-rings and pull snug.

i. Repeat steps g and h for the other leg strap.

NOTE: The life jacket must fit snugly against the body and be donned within 2 minutes.

3. Enter water with a life jacket on.

a. Don a life jacket.

b. Check the water for debris.

c. Hold nose and cover mouth with the inside hand next to the body.

d. Cross the free hand over the other hand and grasp the collar of the life jacket.

e. Tuck the elbows in as close to the body as possible.

f. Keep head and eyes straight ahead. Do not look down.

g. Take one step out with either foot.

h. Bring the trailing leg up behind the leading leg.

i. Rapidly move a safe distance away from the sinking vessel.

j. Slowly proceed to the rescue vessel.

4. Perform travel stroke.

a. Enter water.

b. Assume the set position (face down).

c. Prepare to breathe.

d. Kick and inhale.

e. Stroke and inhale.

f. Kick and level.

g. Stroke and glide.

h. Remain in this position until feet drop under the body or another breath of air is required.

i. Repeat steps c through h.

5. Perform hanging float.

a. Enter water.

b. Assume the rest position (face down).

c. Prepare to breathe.

d. Kick and exhale.

e. Stroke and inhale.

f. Repeat steps c through e.

WARNING

Personnel who fall into the water from a great height may be initially stunned or injured.

6. Perform rescue procedures for man overboard.

a. Hail the bridge.

b. State "man overboard."

c. State which side, port or starboard.

d. Throw the nearest life ring or flotation device to the person overboard.

e. Keep the individual in sight until rescued.

f. Retrieve the individual from the water.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing water survival techniques.

Performance Measures	**GO**	**NO GO**
1. Donned a crew work vest.	_____	_____
2. Donned a life jacket.	_____	_____
3. Entered water with a life jacket on.	_____	_____
4. Performed travel stroke.	_____	_____
5. Performed hanging float.	_____	_____
6. Performed rescue procedures for man overboard.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 4-01.502 Army Watercraft Safety	

Subject Area 16: Initial Cargo Operations (Materials Handling Equipment)

551-88H-1401
Perform Preventive Maintenance Checks and Services on Materials Handling Equipment

DANGER

Adhere to all DANGER statements listed on the equipment or in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed on the equipment or in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed on the equipment or in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker/handler with the requirement to perform preventive maintenance checks and services (PMCS) on materials handling equipment (MHE) in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, MHE requiring PMCS, basic issue items (BII), DA Pam 750-8, DA Form 5988-E (Equipment Inspection Maintenance Worksheet), rags, lubricants, level ground, the appropriate -10 technical manual (TM) for the vehicle, DA Form 5987-E (Motor Equipment Dispatch), and hearing protection.

Standards: Read the applicable TM. Inspect the MHE per the PMCS table of the appropriate TM. Adhere to all Danger, Warning, Caution, and Note statements concerning the items you are checking. Distinguish between before, during, and after operation maintenance checks. Correct all faults, when possible, within your level of maintenance. Record all uncorrectable faults on DA Form 5988-E completely, accurately, and legibly. Troubleshoot all faults as necessary according to the appropriate TM. Once all maintenance checks are completed, turn in the form to unit maintenance or your direct supervisor. When MHE requires dispatch, make all operator entries on DA Form 5987-E legibly and accurately. Complete all PMCS without injury to personnel or damage to MHE or equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with conducting PMCS on MHE to ensure that equipment is operational.

Note: Use the Safety Annex 60 Rules of Safety for Operating Materials Handling Equipment (MHE) to conduct safety briefing before operations begin each morning and maintain direct supervision throughout the day.

Performance Steps

WARNING

Remove all watches, rings, and other jewelry prior to start of inspection to avoid injury from snagging or inadvertent electrical grounding.

1. Prepare for inspection by gathering the following items needed for the inspection.

a. Oil and lubricants per TM as needed.

b. BII, rags, and other tools as required (authorized for operator level maintenance only).

c. DA Form 5988-E.

d. Flashlight, work gloves, and hearing protection as needed.

e. Applicable -10 TM for the MHE to be inspected.

2. Perform before operation inspection per appropriate equipment operator's manual (-10 series TM).

a. Isolate all malfunctions by applying step-by-step troubleshooting procedures.

b. Determine classification on any fluid seepage/leakage by the following criteria:

(1) Class I - Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to from drops but not enough to cause drops to drip from item being inspected.

(3) Class III - Leakage of fluid great enough to cause drops to drip from item being checked.

c. Correct all deficiencies (faults) within the operator's level of maintenance.

d. Record all equipment deficiencies corrected by replacing parts under corrective action of DA Form 5988-E.

e. Record all uncorrectable deficiencies under fault description of DA Form 5988-E.

f. When a deficiency or shortcoming is found using DA Form 5988-E, the operator or supervisor signs and enters the rank.

3. After performing before operation inspection and equipment has no non-mission capable (NMC) faults, the equipment may be dispatched for a mission.

NOTE: Make operator entries on DA Form 5987-E.

a. Operator and supervisor review service due date on DA Form 5987-E and take appropriate action.

b. Operator and dispatcher review entries on DA Form 5987-E for accuracy. Dispatcher signs the DA Form 5987-E.

c. Operator signs DA Form 5987-E in the operator's block.

4. Perform during operation inspection per the appropriate equipment operator's manual (-10 series TM).

a. If no deficiencies are noted, make no entries.

b. If deficiencies are noted, follow step two above.

5. Perform after operation inspection per the appropriate equipment operator's manual (-10 series TM).

a. If no deficiencies noted, make no entries.

b. If deficiencies are noted, follow step two above.

6. Turn in DA Form 5988-E to the maintenance supervisor if faults are recorded during inspection.

7. Retain DA Form 5988-E in equipment records folder if no faults are recorded.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing PMCS on MHE.

Performance Measures	**GO**	**NO GO**
1. Prepared for inspection by gathering needed items.	_____	_____
2. Performed before operation inspection per appropriate equipment operator's manual (-10 series TM).	_____	_____
3. Completed operator entries on DA Form 5987-E for equipment dispatch.	_____	_____
4. Performed during operation inspection per appropriate equipment operator's manual (-10 series TM).	_____	_____
5. Performed after operation inspection per appropriate equipment operator's manual (-10 series TM).	_____	_____
6. Turned in DA Form 5988-E to the maintenance supervisor if faults were recorded during inspection.	_____	_____
7. Retained DA Form 5988-E in equipment folder if no faults were recorded.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

DA FORM 5987-E Motor Equipment Dispatch (EGA)

DA FORM 5988-E Equipment Inspection Maintenance Worksheet

TM 5-3810-306-10 Operator's Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC, NSN 3810-01-205-2716 and Rough Terrain, Model RT875CCS, NSN 3810-01-497-1001

TM 10-3930-673-10 Operators Manual for All Terrain Lifter, Army System (ATLAS) 10,000 lb Capacity, NSN 3930-01-471-2886

TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}

TM 10-3930-680-10 Operator's Manual for Light Capability Rough Terrain Forklift (LCRTF) 5K NSN 3930-01-599-9978 (EIC: ALL)

Primary

551-88H-1527
Communicate with Hand and Arm Signals During MHE Operations

DANGER

Do not allow personnel to stand or walk under a suspended load. Do not allow anyone to stand or walk between moving loads and sides of vehicle where they could become pinned. Failure to comply, should the load fall, may result in death or permanent injury to personnel.

Ground guides need to keep ten yards between themselves and the vehicles front, rear, and corners. They should never be directly in front of or behind the vehicle. Ground guides will not position themselves between the vehicle being guided and another object where an inadvertent engine surge or momentary loss of vehicle control could cause death or injury. Vehicle operations will immediately stop their vehicles if they lose sight of ground guides or notice that the guide is dangerously positioned between the vehicle and another object. Vehicle operators in such cases will secure their vehicle, dismount, and make an on-the-spot correction before continuing operations.

Conditions: Assigned as a cargo checker/handler with the requirement to communicate with hand and arm signals during materials handling equipment (MHE) operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, RT240 rough terrain container handler (RTCH), all terrain lifter, army system (ATLAS) rough terrain forklift, 5K light capacity rough terrain forklift (LCRTF), and an operator.

Standards: Communicate with the RT240 RTCH, ATLAS and 5K LCRFT forklift operator using hand and arm signals without error, injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker/handler tasked with performing ground guide signals during an MHE operation.

Note: None

Performance Steps

1. Perform this signal to indicate Ready (see Figure 3-104).

NOTE: Hand and arm signals should be given without gloves and hands must be away from the body.

Figure 3-104

Ready: Both Palms Open, Hands on Head

2. Perform this signal to indicate Move Load Slowly (see Figure 3-105).

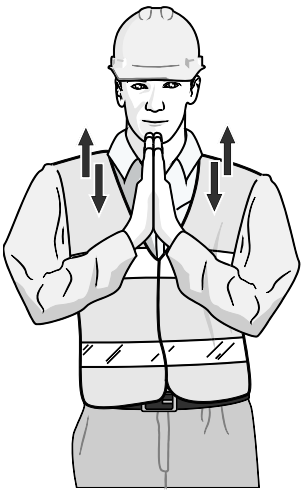


Figure 3-105

Move Load Slowly: Palms Facing Up, Rub Palms Together

3. Perform this signal to indicate Stop All Movement (see Figure 3-106).

NOTE: Obey a signal to Stop from anyone.

Figure 3-106

Stop All Movement: Both Fists Closed, Facing Forward and Raised Above Shoulders

4. Perform this signal to indicate Boom Up (see Figure 3-107).

Figure 3-107

Boom Up: Left Fist Closed, Thumb Extended and Pointing Up

5. Perform this signal to indicate Boom Down (see Figure 3-108).

Figure 3-108

Boom Down: Left Fist Closed, Thumb Extended and Pointing Down

6. Perform this signal to indicate Boom Out (see Figure 3-109).

Figure 3-109

Boom Out: Fists Closed, Thumbs Extended and Pointed Out

7. Perform this signal to indicate Boom In (see Figure 3-110).

Figure 3-110

Boom In: Fists Closed, Thumbs Extended and Pointing Inward

8. Perform this signal to indicate Turn Left or Crab Left (see Figure 3-111).

Figure 3-111

Turn Left or Crab Left: Left Hand Open, Palm Facing Forward and Pointing in Direction of Movement

9. Perform this signal to indicate Turn Right or Crab Right (see Figure 3-112).

Figure 3-112

Turn Right or Crab Right: Right Hand Open, Palm Facing Forward and Pointing in Direction of Movement

10. Perform this signal to indicate Forks, Hook, Load, or Tophandler Up (see Figure 3-113).

Figure 3-113

Forks, Hook, Load or Tophandler Up: Right Forefinger Extended and Pointed Up

11. Perform this signal to indicate Forks, Hook, Load, or Tophandler Down (see Figure 3-114).

Figure 3-114

Forks, Hook, Load, or Tophandler Down: Right Forefinger Extended and Pointed Down

12. Perform this signal to indicate Move Both Forks In or Tophandler Into 20' Position (see Figure 3-115).

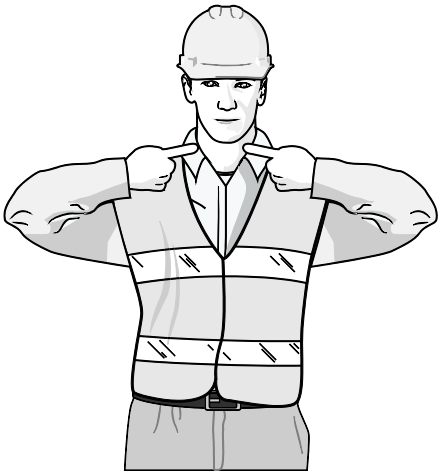


Figure 3-115

Move Forks In or Tophandler into 20' Position: Forefingers Extended and Pointed In

13. Perform this signal to indicate Move Both Forks Out or Tophandler Out To 40' Position (See Figure 3-116).

Figure 3-116

Move Both Forks Out or Tophandler Out to 40' Position: Forefingers Extended and Pointed Out

14. Perform this signal to indicate Move Forks, Load Right or Side Shift Tophandler Right (see Figure 3-117).

Figure 3-117

Move Forks, Load Right or Side Shift Tophandler Right: Left Hand Pointed Forward with Palm Facing In, Right Fist Closed with Forefinger Pointed to Palm of Left Hand

15. Perform this signal to indicate Move Forks, Load Left or Side Shift Tophandler Left (see Figure 3-118).

Figure 3-118

Move Forks, Load Left or Side Shift Tophandler Left: Right Hand Pointed Forward with Palm Facing In. Left Fist Closed with Forefinger Pointed to Palm of Right Hand

NOTE: Performance steps 16 through 19 are hand and arm signals for the ATLAS. They are not to be used for the Kalmar RTCH.

16. Perform this signal to indicate Hold Left Fork, Move Right Fork In (see Figure 3-119).

Figure 3-119

Hold Left Fork, Move Right Fork In: Right Fist Closed, Left Forefinger Extended and Pointed to Right Fist

17. Perform this signal to indicate Hold Right Fork, Move Left Fork In (see Figure 3-120).

Figure 3-120

Hold Right Fork, Move Left Fork In: Left Fist Closed, Right Forefinger Extended and Pointed to Left Fist

18. Perform this signal to indicate Hold Right Fork, Move Left Fork Out (see Figure 3-121).

Figure 3-121

Hold Right Fork, Move Left Fork Out: Left Fist Closed, Right Forefinger Extended and Pointed Out

19. Perform this signal to indicate Hold Left Fork, Move Right Fork Out (see Figure 3-122).

Figure 3-122

Hold Left Fork, Move Right Fork Out: Right Fist Closed, Left Forefinger Extended and Pointed Out

20. Perform this signal to indicate Oscillate Left Side Up, Right Side Down (see Figure 3-123).

Figure 3-123

Oscillate Left Side Up, Right Side Down: Left Hand Displaying the V-sign and Pointed Down, Right Hand Displaying the V-sign and Pointed Up

21. Perform this signal to indicate Oscillate Right Side Up, Left Side Down (see Figure 3-124).

Figure 3-124

Oscillate Right Side Up, Left Side Down: Left Hand Displaying the V-sign and Pointed Up, Right Hand Displaying the V-sign and Pointed Down

22. Perform this signal to indicate Tilt Load Out or Forks Up (see Figure 3-125).

Figure 3-125

Tilt Load Out or Forks Up: Right Hand Displaying the V-sign and Pointed Up, Left Hand Pointed Up with Palm Facing Forward

23. Perform this signal to indicate Tilt Load In or Fork Down (see Figure 3-126).

Figure 3-126

Tilt Load Down or Forks Down: Right Hand Displaying the V-sign and Pointed Up, Left Hand Pointed Down with Palm Facing Back

NOTE: Performance steps 24 and 25 are hand and arm signals for the Kalmar RTCH. They are not to be used for the ATLAS.

24. Perform this signal to indicate Lock Twistlocks or Hook Up Complete (see Figure 3-127).

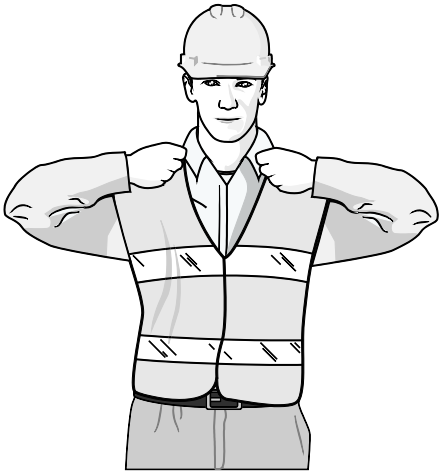


Figure 3-127

Lock Twistlocks or Hook Up Complete: Both Fists Facing Each Other

25. Perform this signal to indicate Unlock Twistlocks or Unlock Load (see Figure 3-128).

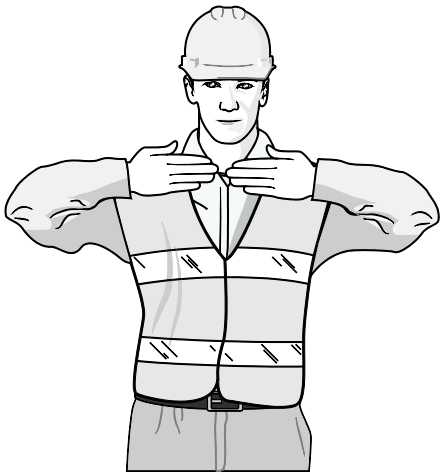


Figure 3-128

Unlock Twistlocks or Unlock Load: Both Hands Extended Pointing In and Palms Facing Back

26. Perform this signal to indicate Level Load, Level Forks, or Level Tophandler (see Figure 3-129).

Figure 3-129

Level Load, Level Forks, or Level Tophandler: Right Hand Extended, Pointed In, Palm Facing Down

27. Perform this signal to indicate Center and Level Load, Forks, or Tophandler (see Figure 3-130).

Figure 3-130

Center and Level Load, Forks, or Tophandler: Right Hand Extended, Pointed In and Palm Facing Down, Left Hand Extended, Pointing Up and Palm Facing In

NOTE: Performance steps 28 and 29 are hand and arm signals for the Kalmar RTCH. They are not to be used for the ATLAS.

28. Perform this signal to indicate Rotate Right End of Load or Tophandler Clockwise (see Figure 3-131).

Figure 3-131

Rotate Right End of Load or Tophandler Clockwise: Rotate Right Hand Palm Up, Left Forefinger Extended and Pointed in Direction of Movement

29. Perform this signal to indicate Rotate Left End of Load or Tophandler Counterclockwise (see Figure 3-132).

Figure 3-132

Rotate Left End of Load or Tophandler Counterclockwise: Rotate Left Hand Palm Up, Right Forefinger Extended and Pointed in Direction of Movement

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on communicating with hand and arm signals during MHE operations.

Performance Measures	**GO**	**NO GO**
1. Performed the signal to indicate Ready.	_____	_____
2. Performed the signal to indicate Move Load Slowly.	_____	_____
3. Performed the signal to indicate Stop All Movement.	_____	_____
4. Performed the signal to indicate Boom Up.	_____	_____
5. Performed the signal to indicate Boom Down.	_____	_____
6. Performed the signal to indicate Boom Out.	_____	_____
7. Performed the signal to indicate Boom In.	_____	_____
8. Performed the signal to indicate Turn Left or Crab Left.	_____	_____
9. Performed the signal to indicate Turn Right or Crab Right.	_____	_____
10. Performed the signal to indicate Forks, Hook, Load or Tophandler Up.	_____	_____
11. Performed the signal to indicate Forks, Hook, Load or Tophandler Down.	_____	_____
12. Performed the signal to indicate Move Both Forks In or Tophandler Into 20' Position.	_____	_____

Performance Measures	GO	NO GO
13. Performed the signal to indicate Move Both Forks Out or Tophandler Out to 40' Position.	_____	_____
14. Performed the signal to indicate Move Forks, Load Right or Side Shift Tophandler Right.	_____	_____
15. Performed the signal to indicate Move Forks, Load Left or Side Shift Tophandler Left.	_____	_____
16. Performed the signal to indicate Hold Left Fork, Move Right Fork In.	_____	_____
17. Performed the signal to indicate Hold Right Fork, Move Left Fork In.	_____	_____
18. Performed the signal to indicate Hold Right Fork, Move Left Fork Out.	_____	_____
19. Performed the signal to indicate Hold Left Fork, Move Right Fork Out.	_____	_____
20. Performed the signal to indicate Oscillate Left Side Up, Right Side Down.	_____	_____
21. Performed the signal to indicate Oscillate Right Side Up, Left Side Down.	_____	_____
22. Performed the signal to indicate Tilt Load Out or Forks Up.	_____	_____
23. Performed the signal to indicate Tilt Load In or Forks Down.	_____	_____
24. Performed the signal to indicate Lock Twistlocks or Hook Up Complete.	_____	_____
25. Performed the signal to indicate Unlock Twistlocks or Unlock Load.	_____	_____
26. Performed the signal to indicate Level Load, Level Forks, or Level Tophandler.	_____	_____
27. Performed the signal to indicate Center and Level Load, Forks, or Tophandler.	_____	_____
28. Performed the signal to indicate Rotate Right End of Load or Tophandler Clockwise.	_____	_____
29. Performed the signal to indicate Rotate Left End of Load or Tophandler Counterclockwise.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
FM 21-60 Visual Signals	
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	

Required	Primary
TC 55-60-17 Training Program for the 50,000-lb Rough Terrain Container Handler	

Skill Level 2
Subject Area 17: Primary Cargo Operations (Air)

551-88H-2508
Direct Marking Center of Balance for a Multi-axle or Tracked Vehicle

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to direct marking center of balance for a multi-axle or tracked vehicle in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, multi-axle vehicle or tracked vehicle with operator, portable scales, platform scales, pencil, worksheet, tape measure, chalk, calculator, and wooden beam.

Standards: Direct marking center of balance for a multi-axle or tracked vehicle without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the marking of center of balance for multi-axle or tracked vehicles.

Note: None

Performance Steps

1. Ensure portable scales are serviceable and zeroed.

2. Direct personnel to determine the weight of a multi-axle vehicle by weighing all axles (W1, W2, W3), using the prescribed procedures.

a. Direct driver to position front axle of vehicle on scales.

b. Direct driver to apply the parking brake and to dismount vehicle.

c. Obtain weight from the scales for front axle and note weight on worksheet as W1.

d. Apply a strip of masking tape above the front axle on both sides of the vehicle.

e. Write front axle weight (FAW) on the masking tape or write on vehicle with a piece of chalk (example: FAW 2,900 pounds).

f. Direct the driver to remount vehicle and drive forward until the intermediate axle is centered on the scales.

g. Direct the driver to apply the parking brake and dismount the vehicle.

h. Obtain weight from scales for intermediate axle and note weight on worksheet as W2.

i. Apply a strip of masking tape above the intermediate axle on both sides of the vehicle.

j. Write intermediate axle weight (IAW) on the masking tape or write on vehicle with a piece of chalk (example: IAW 3,700 pounds).

k. Direct the driver to remount vehicle and drive forward until the rear axle is centered on the scales.

l. Direct the driver to apply the parking brake and to dismount the vehicle.

m. Obtain weight from the scales for rear axle and note weight on worksheet as W3.

n. Apply a strip of masking tape above the rear axle on both sides of the vehicle.

o. Write rear axle weight (RAW) on the masking tape or write on vehicle with a piece of chalk (example: RAW 4,000 pounds).

p. Direct the driver to remount vehicle and drive forward until the vehicle has cleared the scales.

NOTE: If not enough portable scales are available, the vehicles can be taken onto the scales one at a time.

3. Direct personnel to obtain vehicle distances (D1, D2, D3) for a multi-axle vehicle using the prescribed procedures.

a. Using a tape measure, measure from the RDL to the center of the front axle wheel hub.

b. Enter distance on the worksheet as D1 in inches (example: D1 = 20 inches).

c. Using a tape measure, measure from the RDL to the center of the intermediate axle wheel hub.

d. Enter distance on the worksheet as D2 in inches (example: D2 = 70 inches).

e. Using a tape measure, measure from the RDL to the center of the rear axle wheel hub.

f. Enter distance on the worksheet as D3 in inches (example: D3 = 104 inches).

4. Direct personnel to determine axle distance for tandem axle vehicles using the prescribed procedures.

a. For tandem axles with less than 48-inch axle separation, compute center of balance (CB) from RDL to tandem midpoint (see Figure 3-133).

b. For tandem axles with separation that exceeds 48 inches, compute axle distances separately (see Figure 3-134).

NOTE: Example: Formula for 3-axle vehicle: (W1 x D1) + (W2 x D2) + (W3 x D3) / Gross Weight = CB

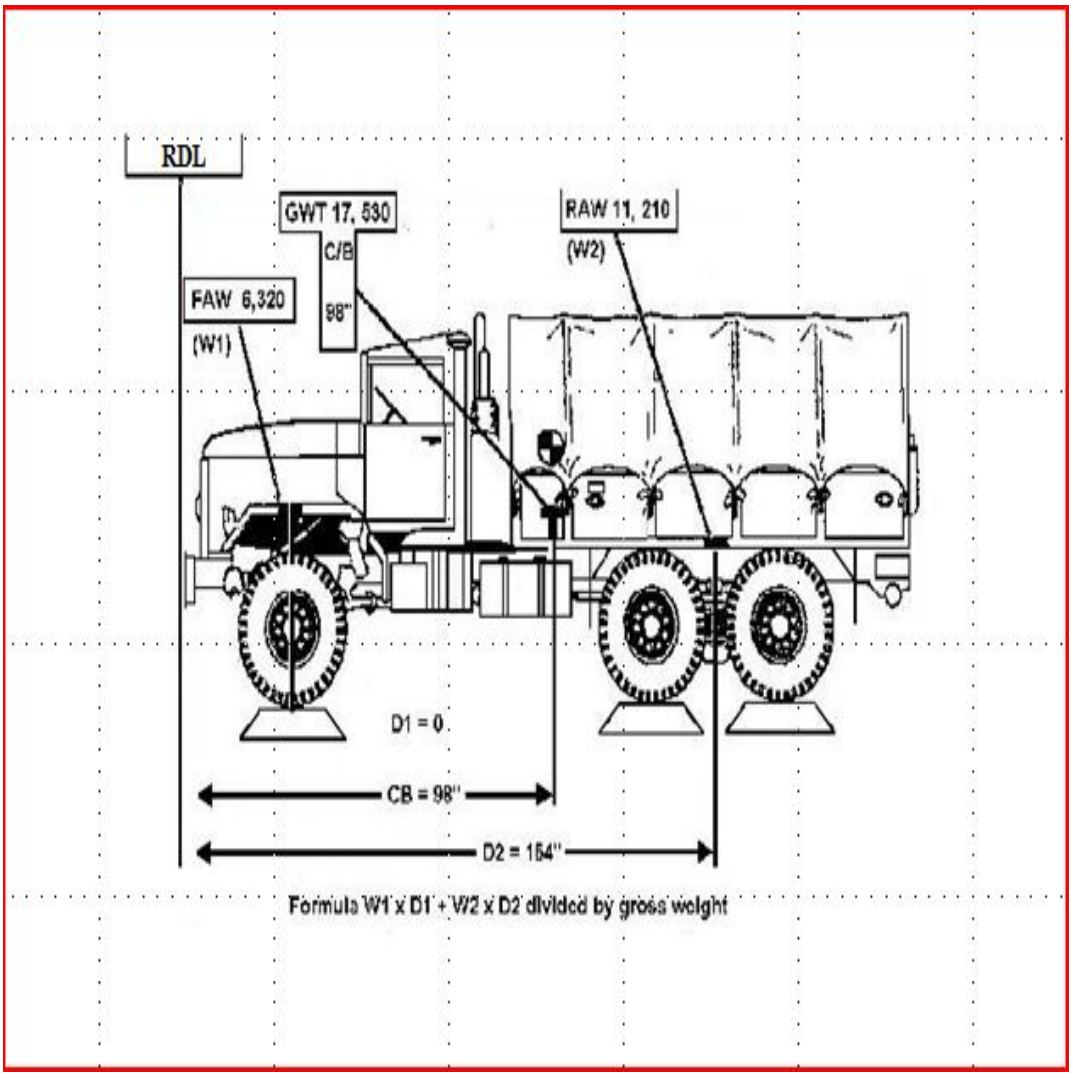


Figure 3-133

Computing CB from RDL to Tandem Midpoint

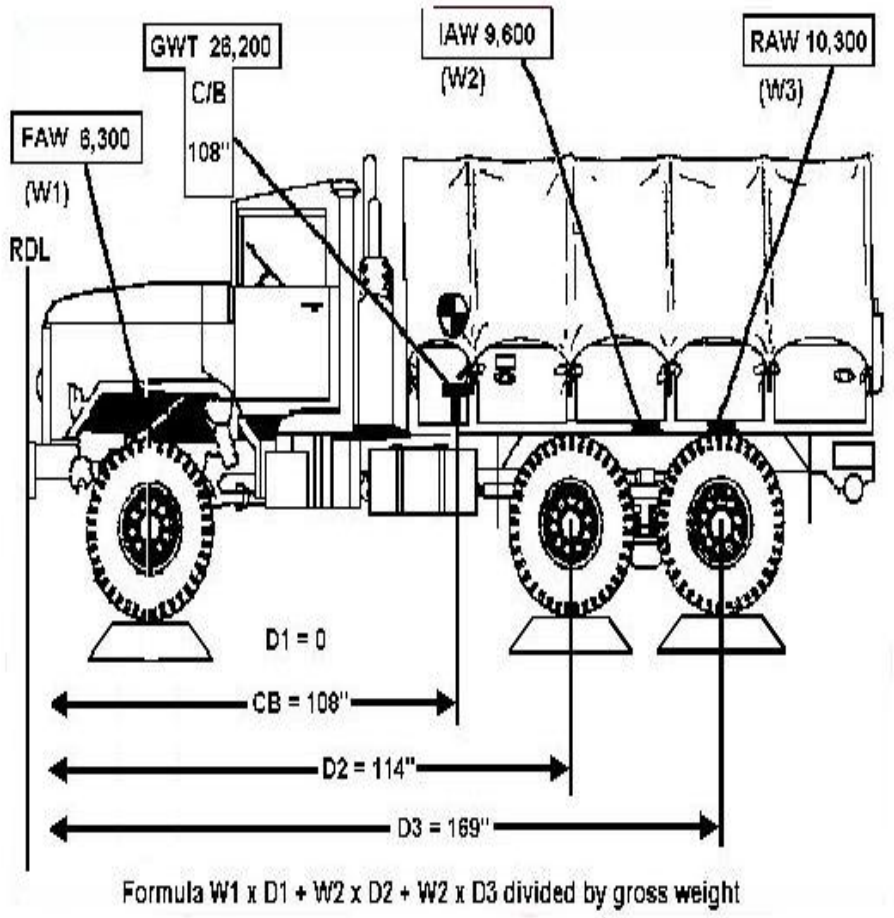


Figure 3-134

Computing Tandem Axles Separately With Separation that Exceeds 48 Inches

5. Direct personnel to enter required information into the center balance formula and compute center balance for a multi-axle vehicle.

a. Determine moments by multiplying weights by distances to obtain moments and then adding moments together.

b. Determine gross weight by adding all axle weights together.

c. Divide the total moments by the gross weight to obtain the CB in inches.

d. Round off answer to the nearest whole inch (example: 56.9 inches is rounded to 57 inches).

6. Direct personnel to mark center of balance for a multi-axle vehicle using the prescribed procedures.

a. Measure back from RDL to center balance distance obtained from computations.

b. Mark center balance by forming a T-shape with masking tape or by making a "T" with chalk. The vertical portion of the "T" represents the center of balance mark.

c. Write gross weight on the horizontal portion of the "T' formed by the masking tape or chalk.

d. Write the letters "CB" on the vertical portion of the T-shape and annotate the CB in inches (example: 57 inches) (see Figure 3-135).

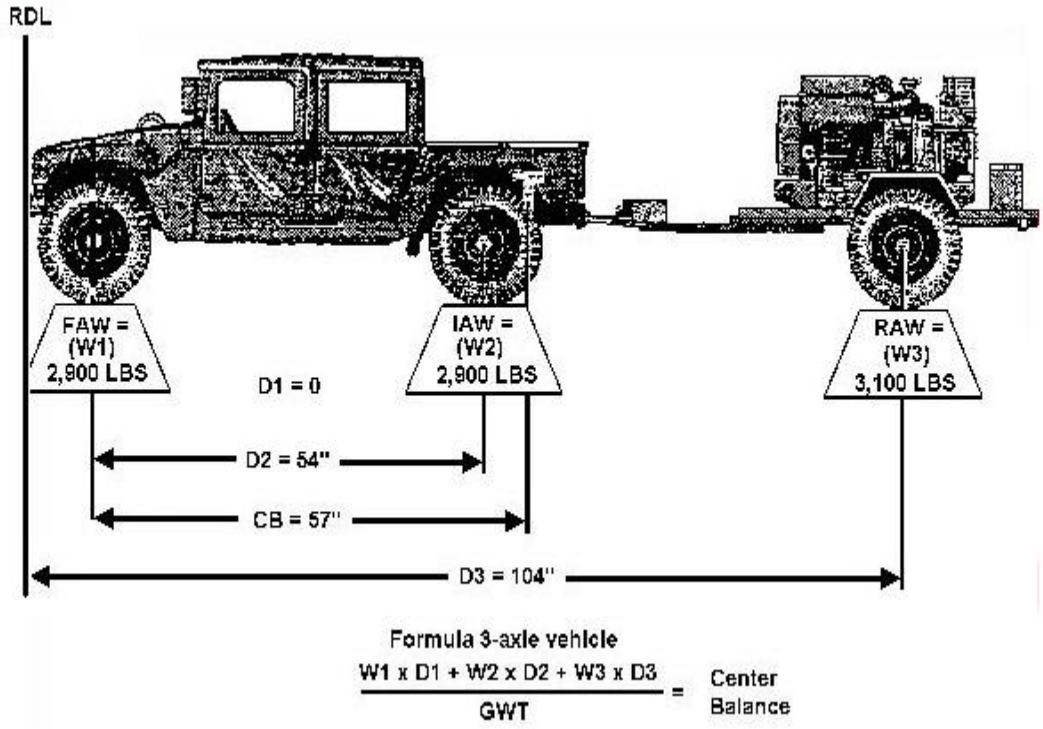


Figure 3-135

Writing Letters CB on Vertical Portion of T-shape and Annotating the CB in Inches

7. Direct personnel to determine the weight of a tracked vehicle using prescribed procedures (see Figure 3-136).

a. Direct driver to drive vehicle onto a platform scale large enough to accommodate the entire vehicle.

b. Record weight of tracked vehicle.

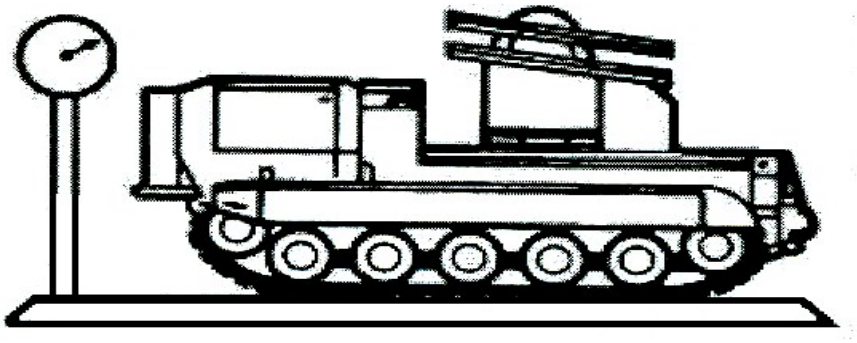


Figure 3-136

Determining the Weight of a Tracked Vehicle

8. Direct personnel to determine the center of balance of a tracked vehicle using prescribed procedures (see Figure 3-137).

a. Direct the driver to drive the vehicle onto a wooden beam or pole until the vehicle tilts forward.

b. Mark the side of the vehicle at the point of tilt.

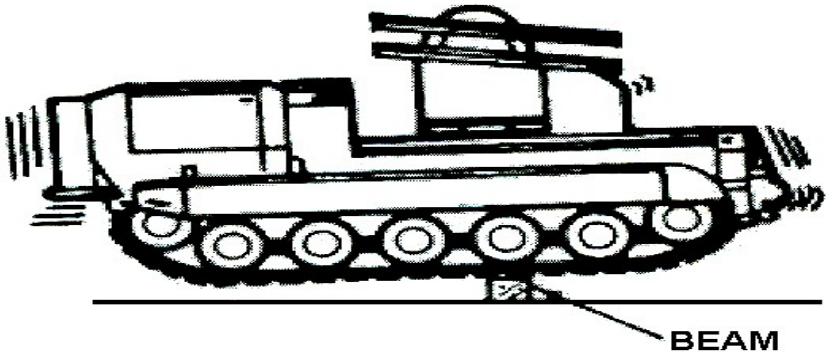


Figure 3-137

Determining the Center of Balance of a Tracked Vehicle

9. Direct personnel to mark the center of balance and gross weight of a tracked vehicle using prescribed procedures (see Figure 3-138).

NOTE: Use appropriate materials when marking vehicles.

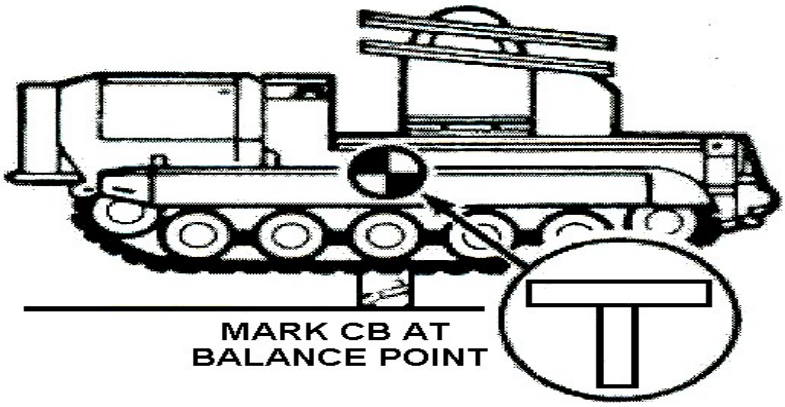


Figure 3-138

Marking the CB and Gross Weight of a Tracked Vehicle

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the marking of center of balance for a multi-axle or tracked vehicle.

Performance Measures	**GO**	**NO GO**
1. Ensured portable scales were serviceable and zeroed.	_____	_____
2. Directed personnel to determine the weight of a multi-axle vehicle by weighing all axles (W1, W2, W3), using the prescribed procedures.	_____	_____
3. Directed personnel to obtain vehicle distances (D1, D2, D3) for a multi-axle vehicle using the prescribed procedures.	_____	_____
4. Directed personnel to determine axle distance for tandem axle vehicles using the prescribed procedures.	_____	_____
5. Directed personnel to enter required information into the center balance formula and compute center balance for a multi-axle vehicle.	_____	_____
6. Directed personnel to mark center of balance for a multi-axle vehicle using the prescribed procedures.	_____	_____
7. Directed personnel to determine the weight of a tracked vehicle using prescribed procedures.	_____	_____
8. Directed personnel to determine the center of balance of a tracked vehicle using prescribed procedures.	_____	_____
9. Directed personnel to mark the center of balance and gross weight of a tracked vehicle using prescribed procedures.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DTR 4500.9-R-Part II Defense Transportation Regulations, Cargo Movement	
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2510
Direct Storage of 463L Pallet System

Conditions: Assigned as a cargo checker with the requirement to direct the storage of a 463L pallet system in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, 463L pallets, top and side nets, dunnage, and storage facility.

Standards: Direct storage of 463L pallet systems without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the storage of 463L pallets.

Note: None

Performance Steps

1. Ensure personnel comply with basic storage guidelines for 463L pallets.

   a. Unserviceable pallets are never stored.

   b. Pallets are cleaned before being placed in storage.

   c. Aluminum rails on all sides of the pallet are checked for separation.

   d. Pallet surface is checked for bowing.

   e. Pallet is checked for missing or bent tie-down rings.

   f. Indents (notches) on the aluminum side rails are examined for distortion.

NOTE: Distorted notches will hamper the effective locking of the pallet into the pallet position.

2. Direct personnel to lay out three-point dunnage, using one of the three acceptable methods:

   a. Wooden 4x4s arranged to form three rows of support.

   b. A minimum of nine sandbags, arranged to provide two lines of support and one center line of support.

   c. A minimum of nine serviceable military-type, five-gallon cans, arranged on edge to form three rows of support.

3. Ensure personnel comply with standard guidelines when handling pallets.

4. Ensure personnel inspect the top and bottom of each pallet.

NOTE: Pallets with dents, gouges, or scratches can be kept and stored if the skin is not fractured. If the pallet has bent rails, missing tie-down rings or holes, or the metal skin is peeling, turn the pallet in for repair.

5. Ensure personnel stack pallets 40 high with three pieces of dunnage between each group of ten pallets (see Figure 3-139).

NOTE: Tally the number of pallets stored and report the total to immediate supervisor.

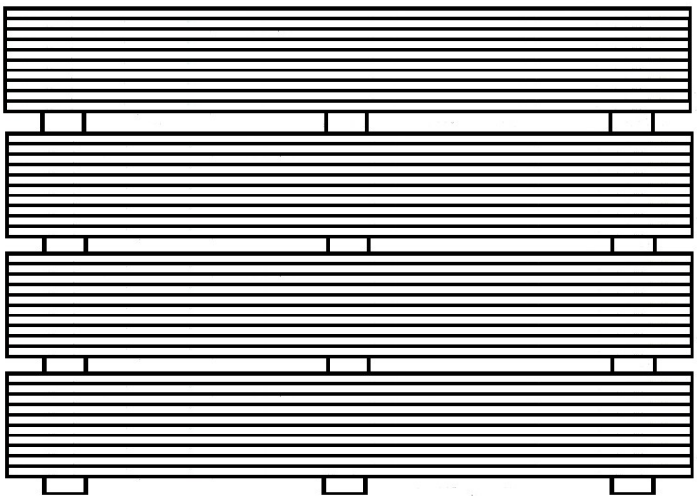


Figure 3-139

Pallets Stacked 40 High

6. Direct personnel to lay out each complete set of nets (one top and two side nets) (see Figure 3-140).

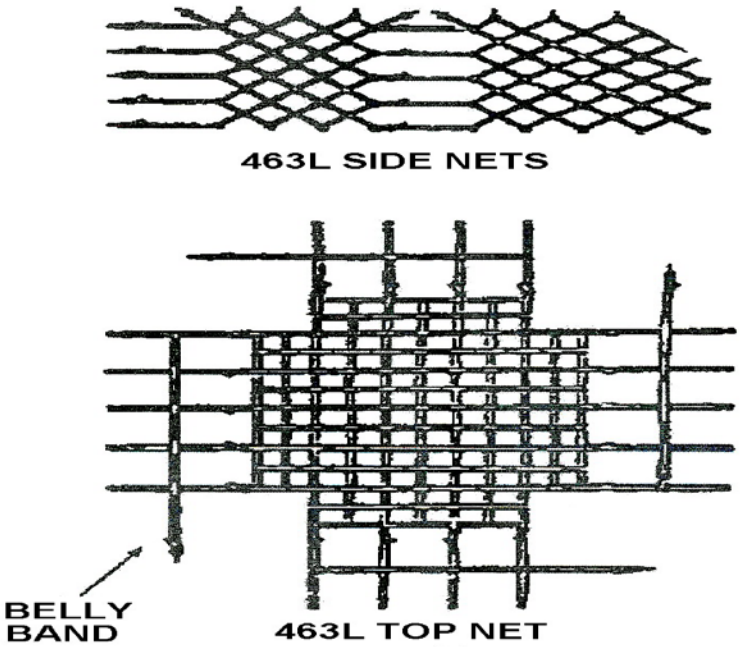


Figure 3-140

Nets Laid Out

7. Direct personnel to inspect each set of nets.

a. Check for broken, frayed, or separated webbing/straps.

b. Check for missing rings, buckles, or attaching hooks.

c. Check for mildew and fiber deterioration.

NOTE: If one of the nets is rejected due to damage, the complete set must be sent in for maintenance and repair.

8. Direct personnel to clean (wipe off mildew, if required) and dry the nets before being stored.

NOTE: Never store wet or unserviceable nets.

9. Direct personnel to lay out the two side nets and top net as a set, fold the nets, and secure the nets together.

10. Direct personnel to place nets into the storage location per prescribed guidelines.

a. Stack and store nets in sets, in a cool, dry, well-ventilated storage area with overhead cover.

b. Keep nets away from heat, direct sunlight, and damp areas.

c. Keep nets away from acid, batteries, chemicals and alkalies.

d. Do not place nets on cement, wood, or asphalt floors.

11. Report activities to supervisor.

a. Tally the number of pallets stored and report the total to the supervisor.

b. Tally the number of serviceable nets stored and report the total to the supervisor.

c. Tally and report the number of unserviceable nets and pallets and request replacements.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing storage of 463L pallet system.

Performance Measures		**GO**	**NO GO**
1.	Ensured personnel complied with basic storage guidelines for 463L pallets.	_____	_____
2.	Directed personnel to lay out three-point dunnage, using one of the three acceptable methods.	_____	_____
3.	Ensured personnel complied with standard guidelines when handling pallets.	_____	_____
4.	Ensured personnel inspected the top and bottom of each pallet.	_____	_____
5.	Ensured personnel stacked pallets 40 high with three pieces of dunnage between each group of ten pallets.	_____	_____

Performance Measures	GO	NO GO
6. Directed personnel to lay out each complete set of nets (one top and two side nets).	_____	_____
7. Directed personnel to inspect each set of nets.	_____	_____
8. Directed personnel to clean and dry the nets before being stored.	_____	_____
9. Directed personnel to lay out the two side nets and top net as a set, fold the nets, and secure the nets together.	_____	_____
10. Directed personnel to place nets into the storage location per prescribed guidelines.	_____	_____
11. Reported activities to supervisor.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2512
Direct Construction of a 463L Pallet

Conditions: Assigned as a cargo checker with the requirement to direct the construction of a 463L pallet in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, 463L pallet, dunnage, top and side nets, and cargo.

Standards: Direct the building of a 463L pallet without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the constructioin of a 463L pallet.

Note: 1. Never push or slide pallets across concrete floors or ramp surfaces. This will damage the bottom skin of the pallets. 2. If one of the nets is rejected for damage, send the complete set in for maintenance and repair. 3. A set of large 463L pallet nets has a maximum capacity of 10,000 pounds at 8Gs when properly installed. 4. The side net hooks are connected inward to the 463L pallet. The top net is connected to the rings on the side net with hook facing out.

Performance Steps

1. Direct the procedures required to inspect 463L pallets for serviceability prior to constructing pallet.

    a. Direct personnel to position three-point dunnage.

    b. Direct personnel to position a 463L pallet on the dunnage.

    c. Direct personnel to check the pallet for cleanliness.

    d. Direct personnel to clean the pallet if required.

    e. Direct personnel to check the aluminum rails on all sides of the pallet for separation.

    f. Direct personnel to check the pallet surface for bowing.

    g. Direct personnel to check the pallet for missing or bent tie-down rings.

    h. Direct personnel to examine the indents (notches) on the aluminum side rails for distortion.

NOTE: Distorted notches will hamper the effective locking of the pallet into the pallet position.

    i. Direct personnel to repeat steps a through h until all pallets have been inspected.

    j. Direct personnel to report all unserviceable pallets to pallet and net control and request replacement pallets.

2. Direct the procedures required to construct a 463L pallet (see Figure 3-141).

NOTE: Never push or slide pallets across concrete floors or ramp surfaces. This will damage the bottom skin of the pallets.

a. Direct personnel to load all dense, boxed, or crated cargo on the pallet first.

b. Direct personnel to place crushable and light density cargo on top of boxed and crated cargo.

c. Direct personnel to place containers marked "THIS END UP" in the upright position.

d. Direct personnel to place cargo with special labels on the pallet so that the labels are facing out whenever possible.

e. Direct personnel to place heavy items in the middle and lighter items near the end of the pallet.

f. Direct personnel to construct the load to form a cube or pyramid shape (as much as possible).

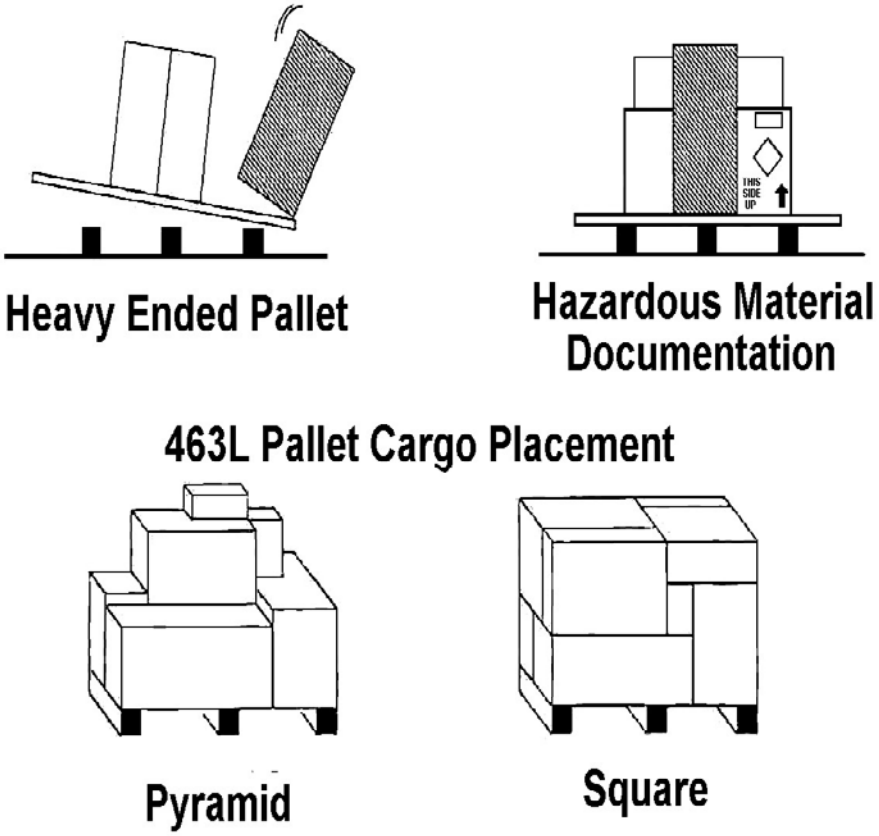


Figure 3-141

Constructing a 463L Pallet

3. Direct the procedures required to secure cargo to the pallet.

a. Direct personnel to lay out a complete set of nets.

b. Ensure personnel inspect each complete set of nets for breaks in the webbing or straps, tears where the webbing is sewn, and missing rings, hooks, and attachments.

NOTE: If one of the nets is rejected for damage, send the complete set in for maintenance and repair.

c. Ensure nets are clean and dry before they are stored.

d. Direct personnel to lay out the two side nets (see Figure 3-142) and the top net (see Figure 3-143) as a set then fold the nets and secure the three nets together.

e. Direct personnel to attach the top net to the side nets by hooks and rings. The two side nets are attached to the rings on the pallets and go around the side of the load and a top net goes over the top of the cargo (see Figure 3-144).

f. Ensure two sets of side nets are used when more than 5,500 pounds of cargo is loaded on the pallet.

NOTE: A set of large 463L pallet nets has a maximum capacity of 10,000 pounds at 8Gs when properly installed.

g. Direct personnel to cover the pallet of cargo with plastic pallet cover before netting the cargo to the pallet.

h. Ensure nets are laid on floor, untangled and inspected for missing attachments.

i. Direct personnel to begin with the left ring-side of the 463L pallet and work from left to right. Attach hook #1 on the side of the net to ring #1 on the pallet.

NOTE: The side net hooks are connected inward to the 463L pallet. The top net is connected to the rings on the side net with hook facing out.

j. Direct personnel to attach both side nets and attach straps, then lift straps over the corner of the cargo.

k. Ensure the top net is placed over the pallet after the side nets are attached and adjusted.

l. Ensure the ends of the straps are tucked in to ensure they will not become caught in the rail system when loading the pallet aboard the aircraft or in storage.

4. Inspect loaded pallet to ensure compliance with guidelines.

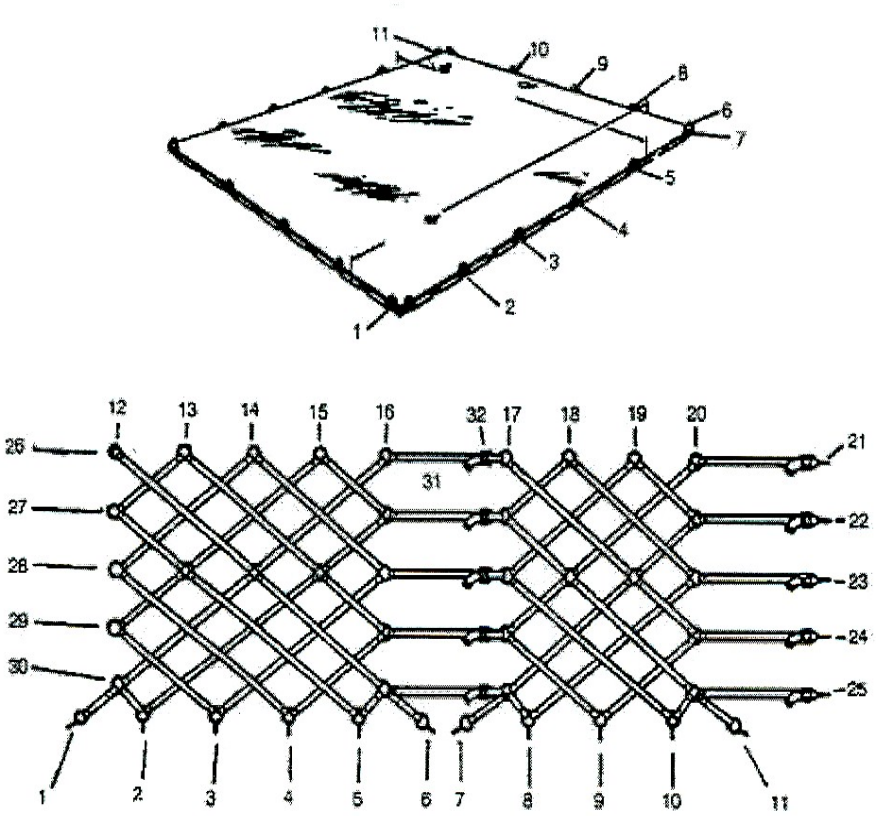


Figure 3-142

Laying Out the Two Side Nets

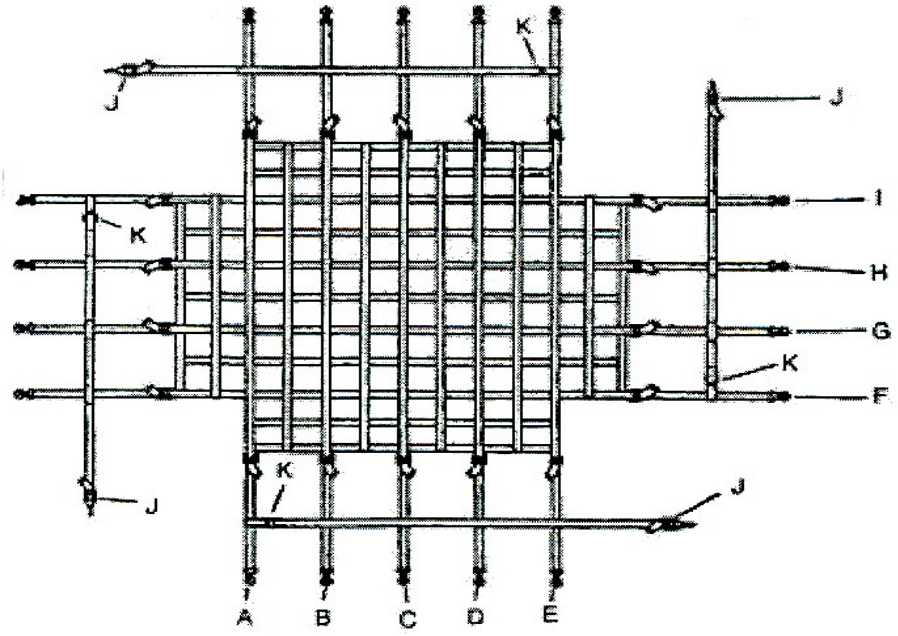


Figure 3-143

Laying Out the Top Net

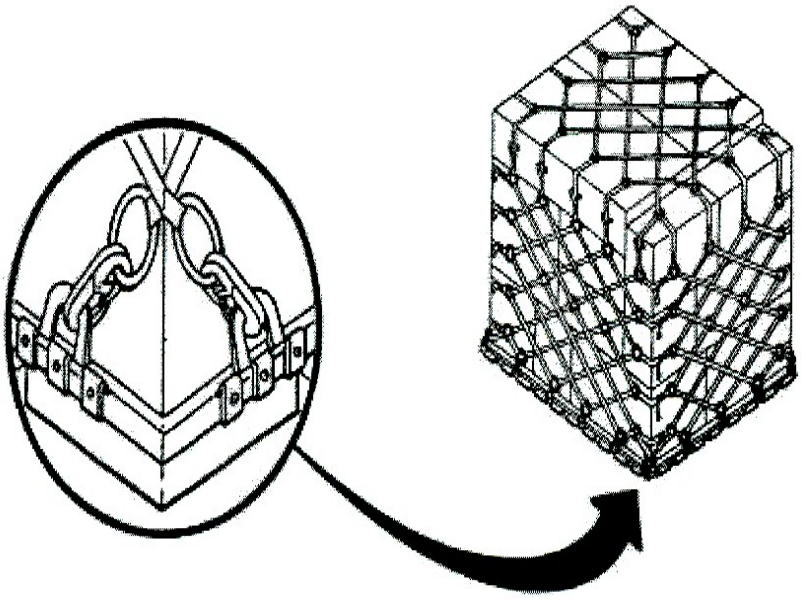


Figure 3-144

Attaching the Top Net to the Side Net by Hooks and Rings

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing construction of a 463L pallet.

Performance Measures	**GO**	**NO GO**
1. Directed the procedures required to inspect 463L pallets for serviceability prior to constructing pallet.	_____	_____
2. Directed the procedures required to construct a 463L pallet.	_____	_____
3. Directed the procedures required to secure cargo to the pallet.	_____	_____
4. Inspected loaded pallet to ensure compliance with guidelines.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2501
Lead Hook-up Team Duties

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to do so may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to do so may result in serious injury to personnel or damage to equipment.

CAUTION

Ensure that all personnel adhere to all safety precautions and uniform requirements listed within TM 4-48.09 Section 5-3. Failure to adhere to these safety precautions may result in injury to personnel or damage to equipment.

Conditions: Assigned as a cargo checker with the requirement to lead hook-up team duties in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a helicopter, signalman, static wand person, hook-up person, frequency modulated (FM) radio, safety equipment, static wand sling assembly, a load, assistance from a sling leg crew, and a designated field site.

Standards: Lead hook-up team duties without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with leading a hook-up team.

Note: None

Performance Steps

1. Conduct pre-operation checks.

    a. Inspect sling equipment serviceability.

    b. Ensure load is within aircraft weight limits.

    c. Ensure cargo is correctly prepared, rigged, and inspected for sling load movement.

    d. Conduct a safety briefing to include aircrew if possible.

e. Ensure ground crews have proper protective equipment.

f. Ensure all debris has been removed from landing zone.

g. Establish and maintain radio communications with helicopter pilot and aircrew.

h. Select an outside signalman to give hand and arm signals to pilot (see Figure 3-145).

NOTE: 1. Ensure the signalman knows how to give day and night signals as shown in TM 4-48.09. 2. The inside signalman is a part of the aircrew and ensures that the aircraft is properly positioned over the load.

i. Select a static wand person.

j. Select a hook-up person.

k. Select sling leg crew.

NOTE: Only trained crew should be used to rig loads and hook them to the aircraft.

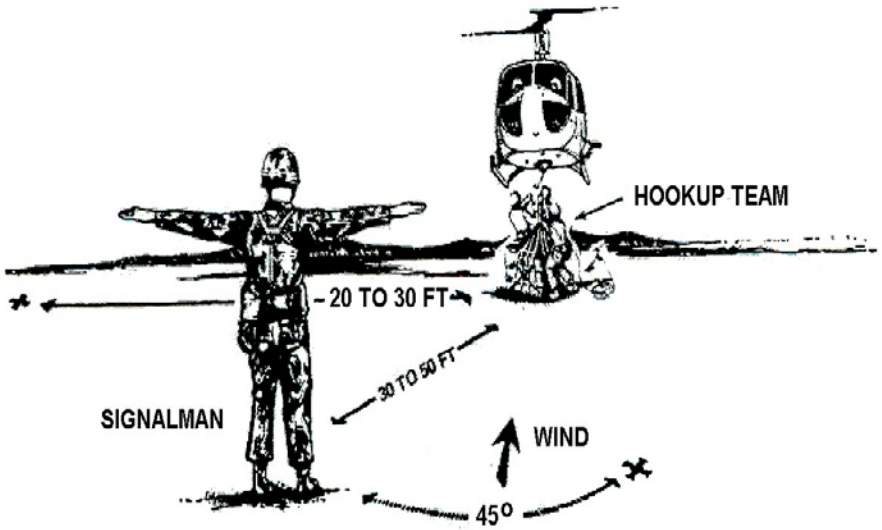


Figure 3-145

Outside Signalman

2. Lead hook-up team procedures.

DANGER

Helicopters are susceptible to high levels of stored electrical energy. Death or severe electrical shock may result from improper grounding of the cargo hook sysytem.

a. Direct the static discharge man to properly ground the static discharge wand.

b. Direct the hook-up man to kneel on top of the load on the rendezvous point side of the load.

c. Direct the static discharge man to position himself on or near the load (see Figure 3-146).

d. Ensure that the hook-up team stands upon the load only when the nose of the helicopter passes overhead.

e. Direct the discharge man to hold the discharge wand against the cargo hook and maintain contact with the cargo hook to ground out the stored electrical charge.

NOTE: If contact is lost, all personnel will pull back until contact is reestablished between the wand and the aircraft's hook. A strong static charge can jump up to 12 inches.

f. Direct the hook-up man to place the web ring or apex fitting on the cargo hook as soon as he can reach it after the hook is grounded.

g. Ensure that the assistant hook-up man keeps the sling legs straight.

h. Ensure that the hook-up man departs from the load on the rendezvous point side of the load and moves out from directly below the helicopter.

i. Ensure that the static discharge man throws the static discharge wand on the ground near the grounding rod and follows the hook-up man off of the load to the rendezvous point.

j. Direct members of the hook-up team to move quickly out from under the helicopter to the rendezvous point before the aircraft rises.

NOTE: Direct the hook-up man to stand by to return to the load on the team leader's signal in case the helicopter dips down and the sling legs become entangled in the load.

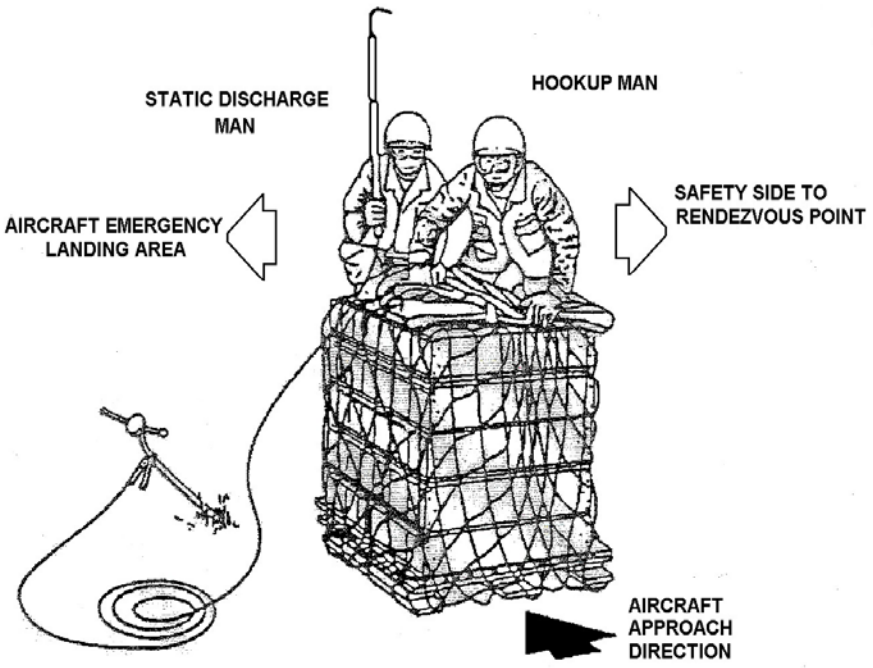


Figure 3-146

Positioning of Static Discharge Man

3. Perform signalman duties during hook-up.

a. Give signal directions to the pilot when able to be clearly seen by pilot.

b. Move with the aircraft to stay within the pilot's view.

c. Give precise signals in order to prevent misunderstanding with the pilot.

(1) Assume guidance

(2) Hover

(3) Move forward

(4) Move backwards

(5) Move upwards

(6) Move downward

(7) Move to right

(8) Move to left

(9) Hookup

(10) Affirmative Signal

(11) Negative Signal

(12) Take off

(13) Land

(14) Stop

(15) Wave-Off/Do Not Land

(16) Release Sling Load

d. Ensure hook-up crew's safety while helicopter is moving.

e. Signal pilot to position the helicopter over the load.

f. Signal pilot to maintain hover once the hook is in position.

g. Give the 'hook-up up" signal when the hook-up crew has departed from the load.

h. Give the "move upward" signal to take slack out of the sling legs.

i. Give the "affirmative" signal when the helicopter lifts the load off the ground and the slings are not tangled.

j. Give the "take off" signal in the direction that signalman wishes for pilot to depart the landing area when the load is 10 to 20 feet higher than the surrounding loads.

4. Perform signalman procedures during incorrect load (tangled sling, hook open, damaged sling) situation.

a. Give the pilot the "hook-up" signal followed by the "negative" signal.

b. Direct the aircraft downward until the hook-up personnel can correct the rigging.

c. When situation is corrected, direct the aircraft up again to check the load before giving the "affirmative" signal.

d. Give the "affirmative" signal when the helicopter lifts the load off the ground and slings are not tangled.

e. Give the "take off" signal in the direction that signalman wishes the pilot to depart the landing area when the load is 10 to 20 feet higher than the surrounding loads.

5. Ensure that a sling load inspection record is completed and distributed to the appropriate personnel as described in FM 4-20.197.

NOTE: FM 4-20.197 states that the inspector must be a pathfinder, an air assault, or a person who has obtained a sling load inspection certification.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on leading hook-up team duties.

Performance Measures	**GO**	**NO GO**
1. Conducted pre-operation checks.	_____	_____
2. Lead hook-up team procedures.	_____	_____
3. Performed signalman duties during hook-up.	_____	_____
4. Performed signalman procedures during incorrect load (tangled sling, hook open, damaged sling) situation.	_____	_____
5. Ensured that a sling load inspection record was completed and distributed to the appropriate personnel.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TM 4-48.09 Multiservice Helicopter Sling Load:	

Required	Primary
Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}	

551-88H-2504
Direct Securing of Cargo Aboard Aircraft

Conditions: Assigned as an cargo checker with the requirement to direct securing of cargo aboard aircraft in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, cargo load plan, standard tie-down devices, chains, cargo to be loaded, and air terminal or designated area.

Standards: Direct securing of cargo aboard aircraft, ensuring proper use of aircraft tie-down devices without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the securing of cargo aboard an aircraft.

Note: Ensure that chains are not placed against brake lines, hydraulic lines, fuel lines, tires, or electrical wiring. Ensure that tie-down devices are not attached to steering mechanisms, tie rods, drive shafts, grills, or fender and body braces.

Performance Steps

1. Direct the positioning of cargo aboard the aircraft.

2. Direct the attachment of MB1 and MB2 tie-down devices in a symmetrical pattern and in pairs (see Figure 3-147).

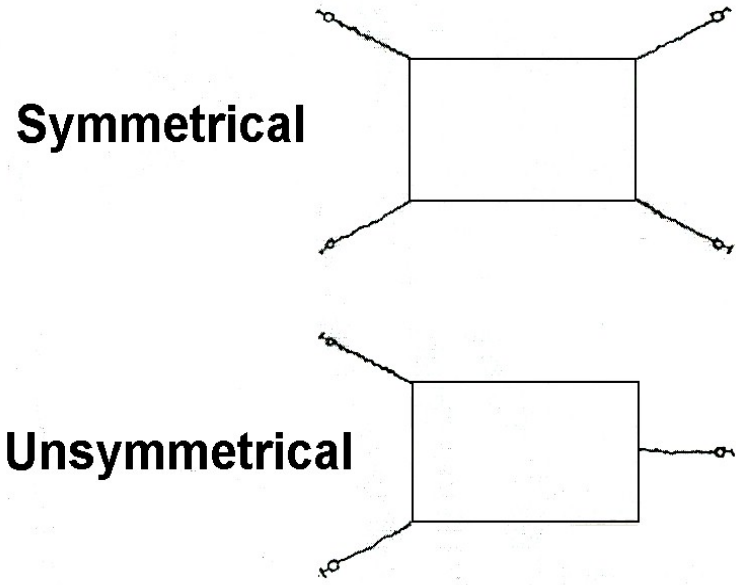


Figure 3-147

Attachment of MB1 and MB2 Tie-down Devices in a Symmetrical Pattern

3. Direct team members to turn the rings in the floor tie-down fittings so that the tension is applied to the top of the ring.

4. Direct the attachment of the hook end of the tie-down device to the aircraft floor with the hook end pointed up (see Figure 3- 148).

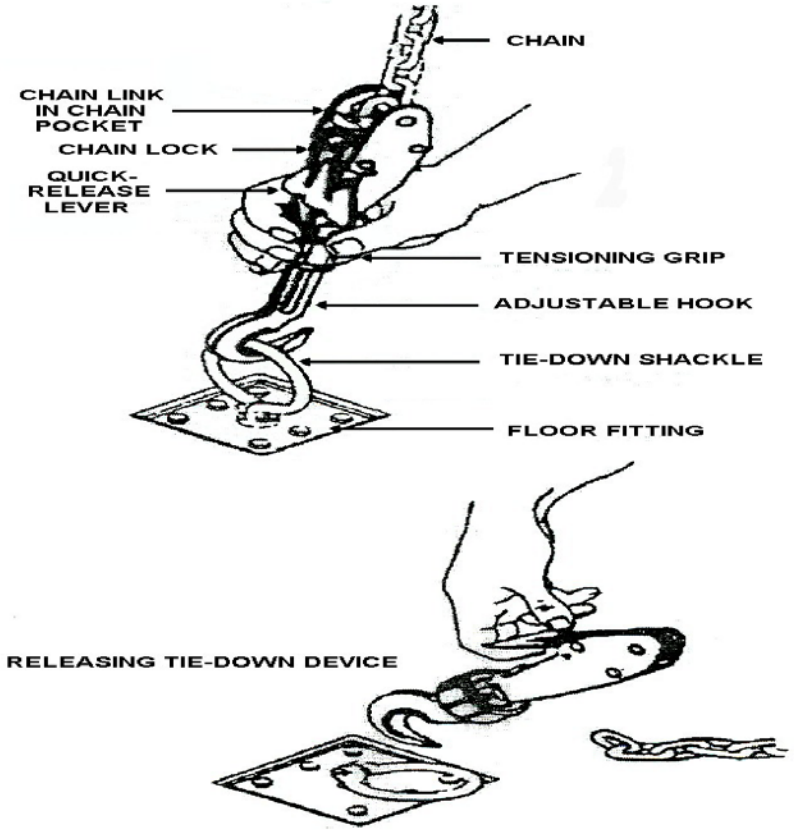


Figure 3-148

Attachment of Hook End of Tie-down Device to Aircraft Floor

5. Direct the attachment of the chain end of the tie-down device to the cargo item.

6. Ensure the attachment of no more than 50 percent of required tie-down devices to vehicle axles.

7. Ensure the attachment of tie-down devices to strong structural points on vehicles.

8. Ensure, when possible, the installation of tie-down devices at 30-degree angles from the cargo floor and 30 degrees from the longitudinal axis.

9. Direct team members to place chain loops against the solid part of the structure when forming chain loops around axles and bumpers.

10. Direct the attachment of chains so that they pull in a straight line and not against one another.

11. Ensure that tie-down devices lead directly from the floor fitting to the load being restrained.

12. Ensure the use of tie-down devices and fittings of equal strength.

13. Conduct final inspection of tie-down restraints.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the securing of cargo aboard aircraft.

Performance Measures		**GO**	**NO GO**
1.	Directed the positioning of cargo aboard the aircraft.	_____	_____
2.	Directed the attachment of MB1 and MB2 tie-down devices in a symmetrical pattern and in pairs.	_____	_____
3.	Directed team members to turn the rings in the floor tie-down fittings so that the tension is applied to the top of the ring.	_____	_____
4.	Directed the attachment of the hook end of the tie-down device to the aircraft floor with the hook end pointed up.	_____	_____
5.	Directed the attachment of the chain end of the tie-down device to the cargo item.	_____	_____
6.	Ensured the attachment of no more than 50 percent of required tie-down devices to vehicle axles.	_____	_____
7.	Ensured the attachment of tie-down devices to strong structural points on vehicles.	_____	_____
8.	Ensured, when possible, the installation of tie-down devices at 30-degree angles from the cargo floor and 30 degrees from the longitudinal axis.	_____	_____
9.	Directed team members to place chain loops against the solid part of the structure when forming chain loops around axles and bumpers.	_____	_____
10.	Directed the attachment of chains so that they pull in a straight line and not against one another.	_____	_____
11.	Ensured that tie-down devices lead directly from the floor fitting to the load being restrained.	_____	_____
12.	Ensured the use of tie-down devices and fittings of equal strength.	_____	_____
13.	Conducted final inspection of tie-down restraints.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DTR 4500.9-R-Part II Defense Transportation Regulations, Cargo Movement	

Required	Primary
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2507
Inspect Vehicles for Air Movement

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to do so may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to do so may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to do so may result in damage to equipment and injury to personnel.

Conditions: Assigned as a cargo checker with the requirement to inspect vehicles for air movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, vehicles loaded with secondary loads, tie-down equipment, and DD Form 2133 (Joint Airlift Inspection Record/Checklist).

Standards: Inspect vehicles for air movement using DD Form 2133 without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with inspecting vehicles for air movement.

Note: None

Performance Steps

1. Direct the procedures required to inspect vehicles for air movement.

    a. Inspect vehicle for cleanliness ensuring it is free of dirt, mud, snow, ice, and so on.

    b. Check to see that the vehicle is free of fluid leaks, ensuring that fuel, oil, and battery caps are tightened.

    c. Check the tire pressure for sufficient inflation, preventing wheel contact with aircraft flooring.

d. Check to see that all fuel tanks and center of balance markings are clearly visible.

e. Check to see that all fuel tanks are closed securely to prevent spillage.

f. Ensure that vehicle fuel quantity in tank is filled to the proper level or complies with appropriate Air Force waiver.

g. Ensure fuel tankers are properly drained and purged (if required).

h. Ensure fuel tanks contain the minimum amount of fuel possible.

2. Direct the procedures required to inspect vehicle loads and tie-down restraints.

a. Check to see that equipment or cargo is securely restrained.

b. Check to see that the cargo loaded in the vehicle bed is no higher than the side racks.

c. Ensure that cargo is secured with ½ inch minimum thickness manila or hemp rope.

d. Check to see that the rope is laced from side to side and front to rear to the outside vehicle tie-down points.

3. Ensure correction of any deficiencies found in the procedures stated in steps 1 and 2 and ensure that the deficiencies are annotated on the DD Form 2133 (see Figure 3-149).

JOINT AIRLIFT INSPECTION RECORD
(See instructions on back.)

PAGE 1 OF 1 PAGES

1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE (YYYYMMDD)
403rd Trans Co., Fort Bragg	Props USA	20060528

4. AIRCRAFT TYPE AND MISSION NUMBER	5. LOAD/CHALK NO.	6. START TIME	7. COMPLETE TIME	8. TALCE/CDF
C-130 HQ 3209	G-934	0600	0930	327-JAU

LEGEND (Mark blocks after each item as follows) ✓ = SATISFACTORY X = UNSATISFACTORY IF NOT APPLICABLE, LEAVE BLANK	INCREMENT (SERIAL/BUMPER NUMBER AND TYPE)											
A. DOCUMENTATION												
9. MANIFESTS/LOAD PLANS												
10. SHIPPERS DECLARATION	✓											
11. HAZARDOUS MATERIALS PREPARATION	✓											
12. LOAD LISTS/CARGO TRANSFER FORMS	✓											
B. VEHICLES/NON-POWERED EQUIPMENT												
13. CLEAN												
14. FLUID LEAKS												
15. MECHANICAL CONDITION												
a. ENGINE RUNS												
b. BRAKES OPERATIONAL												
16. BATTERY												
a. SECURE - NO LEAKS												
b. POSTS/CABLES PROTECTED												
17. FUEL TANK(S) LEVELS												
a. AS REQUIRED												
b. FUEL TANK CAPS INSTALLED												
18. JERRY CANS												
a. DOT 5L (Metal)												
b. POP (Plastic)												
19. DIMENSIONS (Fits A/C Profile or Contour)	✓											
20. CENTER OF BALANCE (Both Sides)												
21. SCALE WEIGHT (Both Sides)	✓											
22. AXLE WEIGHTS (Both Sides)												
23. TIEDOWN POINTS (Serviceable)	✓											
24. PINTLE HOOKS/CLEVISES												
a. SERVICEABLE												
b. SAFETY PIN ATTACHED (Safety chains)	✓											
25. VECHICLE EQUIPMENT SECURE (Tools, tires, etc.)												
26. TIRE PRESSURE	✓											
27. SHORING (Rolling, Parking, Sleeper, Approach)												
28. ACCOMPANYING LOAD												
a. WITHIN VEHICLE RATED CAPACITY												
b. SECURE TO VEHICLE												
29. LOX/NITROGEN CART (Vent Kit)												
C. PALLETS/PALLET TRAINS												
30. CLEAN	✓											
31. SCALE WEIGHT	✓											
32. DIMENSIONS (Fits A/C Profile or Contour)	✓											
33. CARGO PROPERLY SECURED												
a. NETTED		✓										
b. CHAINED/STRAPPED		✓										
34. DUNNAGE (3 Pieces Per Pallet)		✓										
D. HELICOPTERS (If Hyaway)												
35. FUEL QUANTITY (Gallons)												
36. BATTERY (Disconnected/Taped)		✓										
37. CENTER OF BALANCE (Both Sides)												
38. SCALE WEIGHT (Both Sides)		✓										
39. SHORING (Rolling, Parking, Approach)												
40. SPECIAL LOADING EQUIPMENT (Towbars, etc.)												

SAMPLE

41. REMARKS

M35 (117) Fuel Leak (Fuel Pan) -- Leak Corrected

THE ABOVE LISTED ITEMS HAVE BEEN INSPECTED FOR PROPER SHIPPING CONFIGURATION.

42. DEPLOYING FORCE REPRESENTATIVE (Signature/Rank/Unit of Assignment)	43. MOBILITY FORCE INSPECTOR (Signature/Rank/Unit of Assignment)
Ryan Miller /SFC/403rd Trans Co., Fort Bragg	

DD FORM 2133, OCT 1998 PREVIOUS EDITION IS OBSOLETE.

Figure 3-149

Sample of DD Form 2133 (Front)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on inspecting vehicles for air movement.

Performance Measures	**GO**	**NO GO**
1. Directed the procedures required to inspect vehicles for air movement.	_____	_____
2. Directed the procedures required to inspect vehicle loads and tie-down restraints.	_____	_____
3. Ensured correction of any deficiencies found and ensured that the deficiencies were annotated on the DD Form 2133.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 2133 Joint Airlift Inspection Record/Checklist	
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TM 38-250 Preparing Hazardous Materials for Military Air Shipments {AFMAN 24-204, NAVSUP PUB 505, MCO P4030.19J, DLAI 4145.3}	

Subject Area 18: Primary Maintenance and Rigging Operations

551-88H-2517
Rig Yard-and-Stay With a Double Purchase

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to rig a yard-and-stay with a double purchase in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, cargo, ship's gear, two 12- or 14-inch blocks, and four screw-type shackles with a capacity equal to or exceeding the safe working load (SWL) of the boom or doubled-up cargo runners (whichever is less).

Standards: Rig yard-and-stay with a double purchase without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with rigging the winch for yard-and-stay with a double purchase.

Note: None

Performance Steps

1. Reeve the ends of the cargo runners through 12- and 14-inch blocks (see Figure 3-150).

NOTE: Ensure the guys and preventers are in excellent condition and are equalized as much as possible.

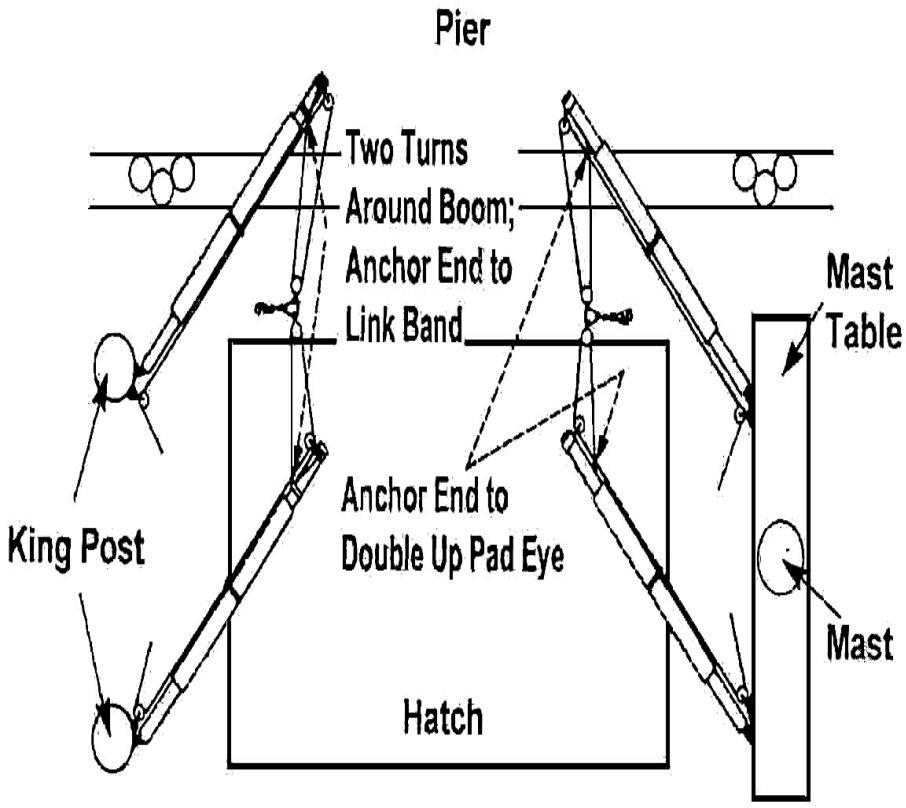


Figure 3-150

Rigging a Yard-and-Stay With a Double Purchase

2. Shackle the ends of each cargo runner to the doubling-up pad eyes.

3. Secure the ends of the cargo to the booms, if the booms are equipped with doubling-up pad eyes.

4. Secure the ends of the cargo runners to the bottom of the head block, if the booms are not equipped with doubling-up pad eyes.

5. Marry the two blocks together.

6. Raise the booms to the desired height.

7. Spot the booms for regular yard-and-stay operation.

8. Correct any deficiencies.

Evaluation Preparation: Ensure that all needed materials required to perform the task are avialable. Tell the soldier that he/she will be evaluated on rigging yard-and-stay with a double purchase.

Performance Measures	**GO**	**NO GO**
1. Reeved the ends of the cargo runners through 12- and 14-inch blocks.	_____	_____
2. Shackled the ends of each cargo runner to the doubling-up pad eyes.	_____	_____

Performance Measures	GO	NO GO
3. Secured the ends of the cargo to the booms, if the booms were equipped with doubling-up pad eyes.	_____	_____
4. Secured the ends of the cargo runners to the bottom of the head block, if the booms were not equipped with doubling-up pad eyes.	_____	_____
5. Married the two blocks together.	_____	_____
6. Raised the booms to the desired height.	_____	_____
7. Spotted the booms for regular yard-and-stay operation.	_____	_____
8. Corrected any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2518
Direct the Preparation of the Three Standard Rigs of Cargo Booms

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operater aboard a cargo vessel with the requirement to direct the preparation of the three standard rigs of cargo booms in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, safety equipment, and ship's gear.

Standards: Direct the preparation of the three standard rigs of cargo booms, ensuring proper positioning and correct rigging, without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the preparation of the three standard rigs of cargo booms.

Note: None

Performance Steps

1. Direct the rigging of a yard-and-stay rig (see Figure 3-151).

NOTE: Make on-the-spot corrections.

a. Secure stay boom outboard guys on the deck or bulwark in such a position that a horizontal projection of the line of the boom and the line of the guy will meet at an angle of 90 degrees.

b. Take a line of sight from the head of the stay boom to the heel of the yard boom and extend this line of sight to the bulwark of the ship.

c. Stand under the head of the stay boom, look to the heel of the yard boom and secure the guy where the line of sight extends to the bulwark.

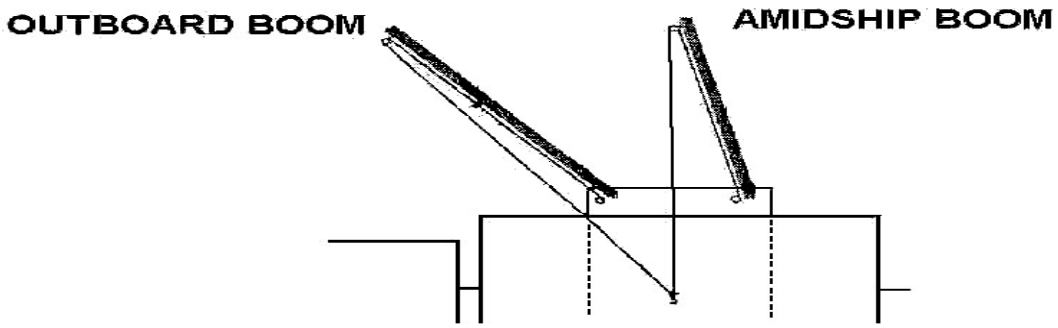


Figure 3-151

Rigging of Yard-and-Stay Rig

2. Direct the rigging of a west coast rig (see Figure 3-152).

NOTE: Make on-the-spot corrections.

a. Position the yard boom over the pier.

b. Position the stay boom so that the head of the boom is outboard of the off-shore hatch coaming.

c. Determine the point where each guy should be secured by the same method used for the yard-and-stay rig.

d. Take the line of sight for the stay boom from the head of the yard boom and the heel of the stay boom.

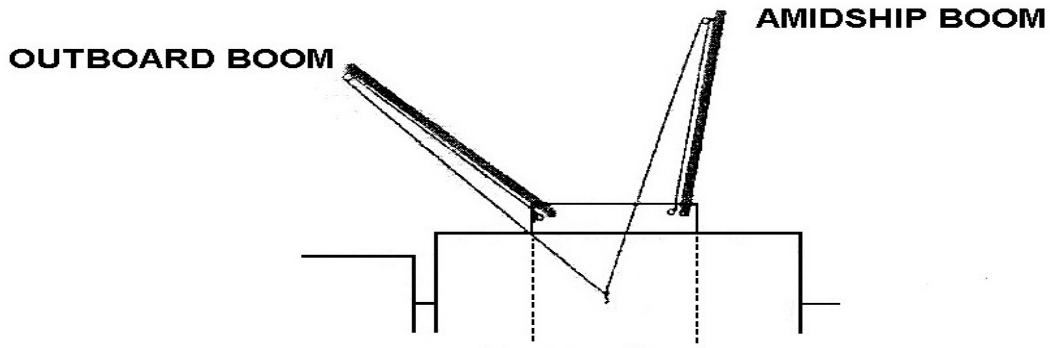


Figure 3-152

Rigging of West Coast Rig

3. Direct the rigging of a wing-and-wing rig (see Figure 3-153).

NOTE: Make on-the-spot corrections.

a. Position booms over the sides of the ship so that they both appear to be yard booms.

b. Determine the point where each of the outward guys should be secured by the same method used for the pier boom in the yard and stay rig.

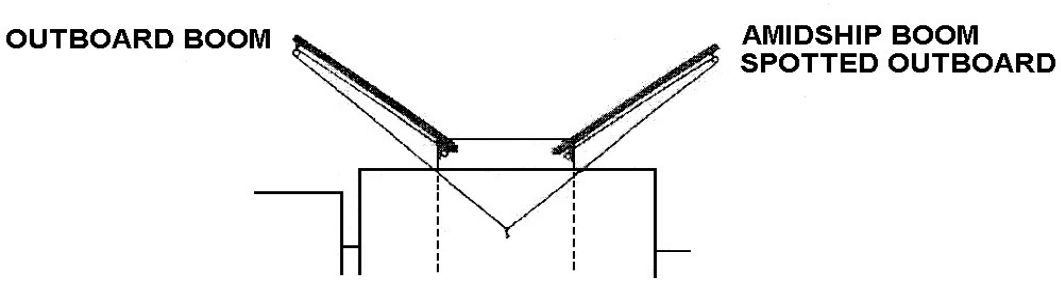


Figure 3-153

Rigging of Wing-and-Wing Rig

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the preparation of the three standard rigs of cargo booms.

Performance Measures	**GO**	**NO GO**
1. Directed the rigging of a yard-and-stay rig.	_____	_____
2. Directed the rigging of a west coast rig.	_____	_____
3. Directed the rigging of a wing-and-wing rig	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

551-88H-2523
Direct Inspection of Cargo Handling Gear

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to direct inspection of cargo handling gear in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, fiber ropes, wire ropes, chains, shackles, cargo hooks, and lubricant.

Standards: Direct the inspection of cargo handling gear without injury to personnel or damage to equipment, ensuring all unserviceable cargo-handling gear is turned in or disposed of and that no unserviceable gear will be used for cargo operations.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the inspection of cargo handling gear.

Note: None

Performance Steps

1. Direct personnel to inspect fiber rope for serviceability.

   a. Untwist strands slightly to open the rope.

   b. Check the inside of the rope for mildew, musty odor, and sawdust-like material.

   c. Check the inner fibers of each strand for dark stains, broken strands, and broken yarns.

   d. Check the central core for signs of being overstrained.

e. Pull out two fibers and try to break them.

NOTE: Ensure unserviceable rope is cut into short pieces for disposal.

2. Direct personnel to inspect wire rope for serviceability.

a. Check wire rope for frayed, kinked, worn, corroded, or flattened sling spots.

b. Check wire rope for broken wires within each strand. Allow no more than:

(1) Three broken wires in one strand of 6 x 7 rope.

(2) Six broken wires in one strand of 6 x 19 rope.

(3) Nine broken wires in one strand of 6 x 37 rope.

c. Replace the tag on rope found to be unserviceable.

d. Replace wire rope if found to be unserviceable.

3. Direct personnel to inspect cargo hooks and chains for serviceability and storage.

a. Check each link and cargo hook of the chain assembly for dents, cracks, sharp nicks or cuts, and worn surfaces.

b. Check the small radius fillets at the neck of the hook for any deviation from the original inner arc.

c. Check the chain links for stretching or distortion.

d. Check the hook and chain for rust and paint.

e. Remove rust and paint from the hook and chain.

f. Apply a light coat of lubricant to all chain links and cargo hooks in preparation for storage.

g. Store the hook and chain in a dry, well-ventilated place.

h. Report unserviceable chain to the cargo equipment supervisor for repair.

4. Direct personnel to inspect shackles and chain slings for serviceability.

a. Inspect shackles to ensure that pins are straight and screwed in.

b. Inspect chain slings for signs of stretching.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing inspection of cargo handling gear.

Performance Measures	**GO**	**NO GO**
1. Directed personnel to inspect fiber rope for serviceability.	_____	_____

Performance Measures	GO	NO GO
2. Directed personnel to inspect wire rope for serviceability.	_____	_____
3. Directed personnel to inspect cargo hooks and chains for serviceability and storage.	_____	_____
4. Directed personnel to inspect shackles and chain slings for serviceability.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

551-88H-2519
Direct the Rigging of Four Booms with a Block-in-Bight

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct the rigging of four booms with a block-in-bight in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, safety equipment, ship's gear, two 12- to 14-inch traveling blocks, and four shackles.

Standards: Direct the rigging of four booms with a block-in-bight, ensuring proper positioning and correct rigging without injury to personnel or damage to equipment.

Special Condition: Lifts are to be handled up to the safe working load (SWL) of two parts of the cargo runner, the guys and preventers, or two booms combined.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked to direct the rigging of four booms with a block-in-bight.

Note: None

Performance Steps

1. Direct the hatch gang to reeve the runner of the forward amidship boom through a 12- or 14-inch block and shackle eye-to-eye with the runner of the after amidship boom (see Figure 3-154).

2. Direct the hatch gang to reeve the runner of the forward outboard boom through a 12- or 14-inch block and shackle eye-to-eye with the runner of the after outboard boom.

3. Direct the hatch gang to hoist the shackles of the two sets of runners aloft to within a few feet of the head block of the after boom.

4. Direct the hatch gang to marry two blocks together for a regular yard-and-stay operation.

5. Direct the hatch gang to spot the booms for a regular yard-and-stay operation.

6. Direct the hatch gang to equalize the guys and preventers.

7. Ensure the correction of any deficiencies.

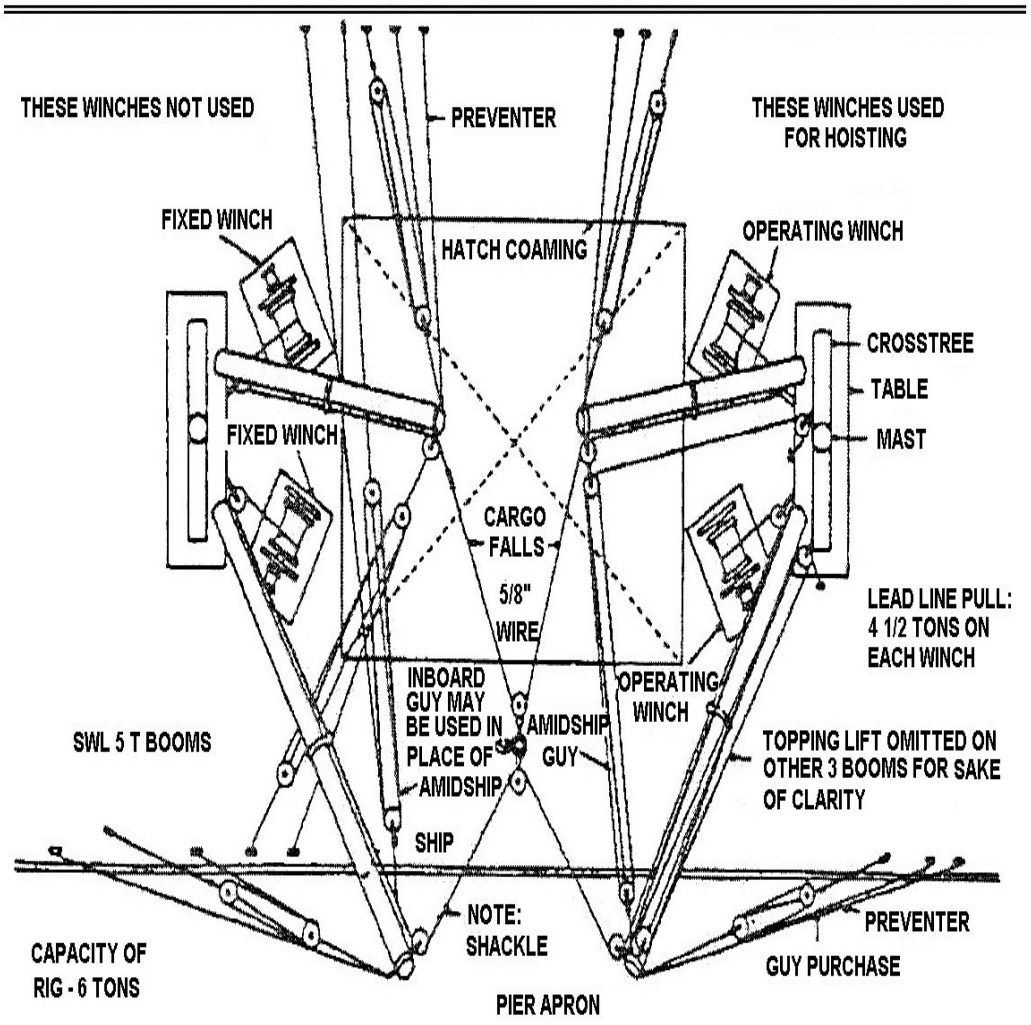


Figure 3-154

Rigging of Four Booms With a Block-in-Bight

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the rigging of four booms with a block-in-bight.

Performance Measures	**GO**	**NO GO**
1. Directed the hatch gang to reeve the runner of the forward amidship boom	_____	_____

Performance Measures	GO	NO GO
through a 12- or 14-inch block and shackle eye-to-eye with the runner of the after amidship boom.		
2. Directed the hatch gang to reeve the runner of the forward outboard boom through a 12- or 14-inch block and shackle eye-to-eye with the runner of the after outboard boom.	_____	_____
3. Directed the hatch gang to hoist the shackles of the two sets of runners aloft to within a few feet of the head block of the after boom.	_____	_____
4. Directed the hatch gang to marry two blocks together for a regular yard-and-stay operation.	_____	_____
5. Directed the hatch gang to spot the booms for a regular yard-and-stay operation.	_____	_____
6. Directed the hatch gang to equalize the guys and preventers.	_____	_____
7. Ensured the correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the doldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2521
Direct the Rigging of Four Booms Doubled Up on a Double-Rig Hatch

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to direct the rigging of four booms doubled up on a double-rig hatch in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, heavy lift cargo, safety equipment, ship's gear, four 12- to 14-inch doubling-up blocks, two 14-inch blocks, ten 1 1/4-inch or larger shackles, and two 1-inch wire straps.

Standards: Direct the rigging of four booms doubled up on a double-rig hatch without injury to personnel or damage to equipment.

Special Condition: Lifts are to be handled up to the safe working load (SWL) of two booms and exceeding the SWL of smaller cargo runners.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the rigging of four booms doubled up on a double-rig hatch.

Note: None

Performance Steps

1. Direct the hatch gang to reeve the runners through a 12- to 14-inch block and double up the runners (see Figure 3-155).

2. Direct the hatch gang to marry the doubling-up blocks on the outboard booms using a 1-inch wire rope strap reeved through a 14-inch block.

3. Direct the hatch gang to marry the doubling-up blocks to the hatch boom, as in step 2.

4. Direct the hatch gang to shackle the two blocks together using at least a 1¼-inch shackle.

5. Check all the guys and preventers to ensure they are equalized and correctly placed.

6. Check booms to ensure they are equipped with either inboard or amidship guys.

7. Direct the hatch gang to spot the booms for the regular yard-and-stay operation.

8. Ensure the correction of any deficiencies.

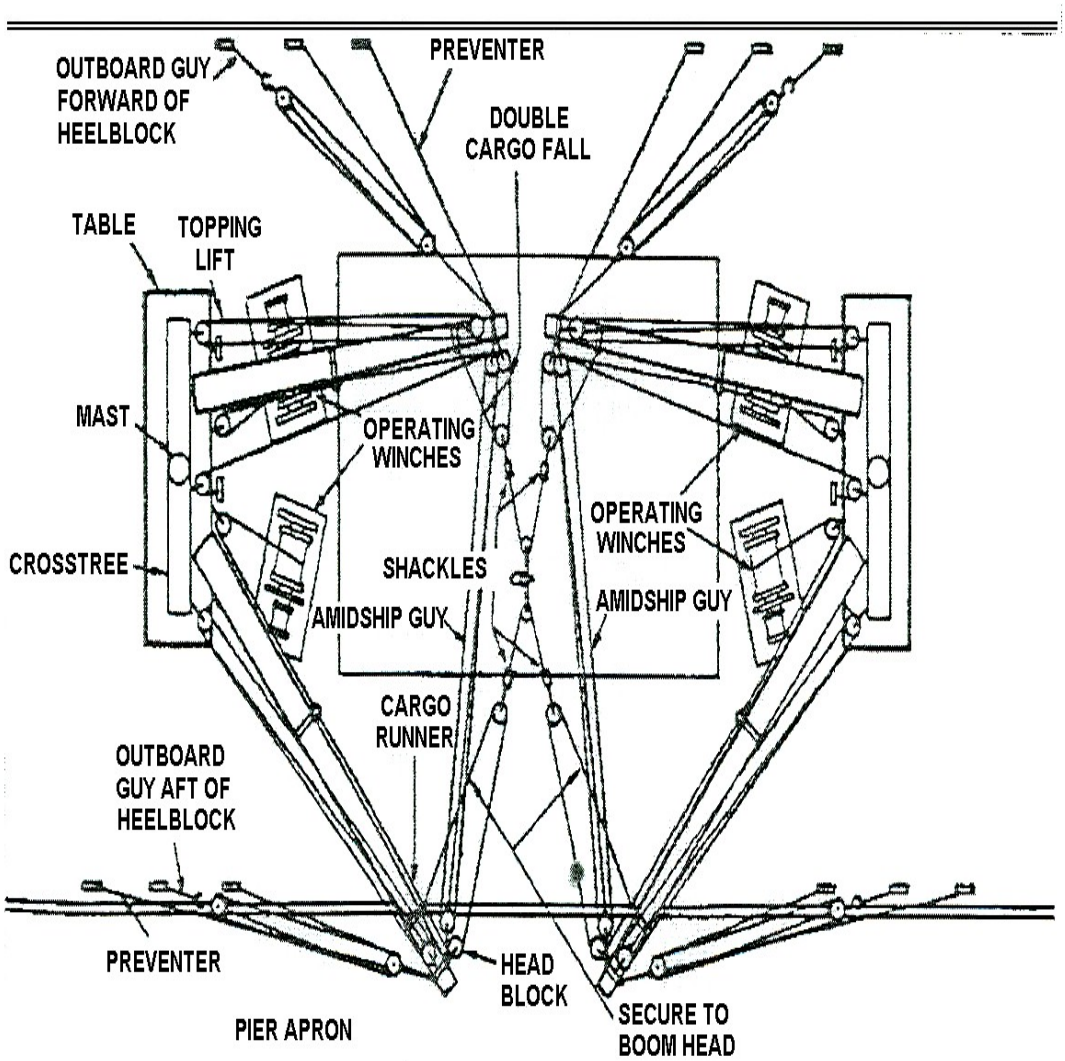


Figure 3-155

Rigging of Four Booms Doubled Up On a Double-rig Hatch

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the rigging of four booms doubled up on a double-rig hatch.

Performance Measures	GO	NO GO
1. Directed the hatch gang to reeve the runners through a 12- to 14-inch block and double up the runners.	_____	_____
2. Directed the hatch gang to marry the doubling-up blocks on the outboard booms using a 1-inch wire rope strap reeved through a 14-inch block.	_____	_____
3. Directed the hatch gang to marry the doubling-up blocks to the hatch boom, as in step 2.	_____	_____
4. Directed the hatch gang to shackle the two blocks together using at least a 1¼-inch shackle.	_____	_____
5. Checked all the guys and preventers to ensure they were equalized and correctly placed.	_____	_____
6. Checked booms to ensure they were equipped with either inboard or amidship guys.	_____	_____
7. Directed the hatch gang to spot the booms for the regular yard-and-stay operation.	_____	_____
8. Ensured the correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2526
Direct Topping Booms Equipped with Multiple-Topping Lifts (Boom in Cradle)

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct topping booms equipped with multiple-topping lifts (boom in cradle) in an operational environment, during the day or night, in normal weather conditions, given safety equipment, ship's gear, winch operator and personnel, and completed risk assessment.

Standards: Direct topping booms equipped with multiple-topping lifts without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the topping of booms equipped with multiple-topping lifts (boom in cradle).

Note: None

Performance Steps

1. Select personnel to operate winches, guys, runners, topping lift wire, and cathead (see Figure 3-156).

2. Direct the hatch gang to lay the topping lift wire along the deck or over the rail.

3. Select one member of the hatch gang to take five turns with the topping lift wire around the cathead in the direction opposite of the cargo runner.

4. Direct the winch operator to raise the boom to the desired height.

5. Select one member of the hatch gang to apply a stopper chain to secure the topping wire.

6. Direct the winch operator to slack off the topping lift slowly until the weight of the topping lift is transferred from the cathead to the stopper chain.

7. Select one member of the hatch gang to remove the topping lift wire from the cathead and secure it to the topping lift chain by making three round turns.

8. Direct the hatch gang to swing the booms to the working position.

9. Ensure the correction of all deficiencies.

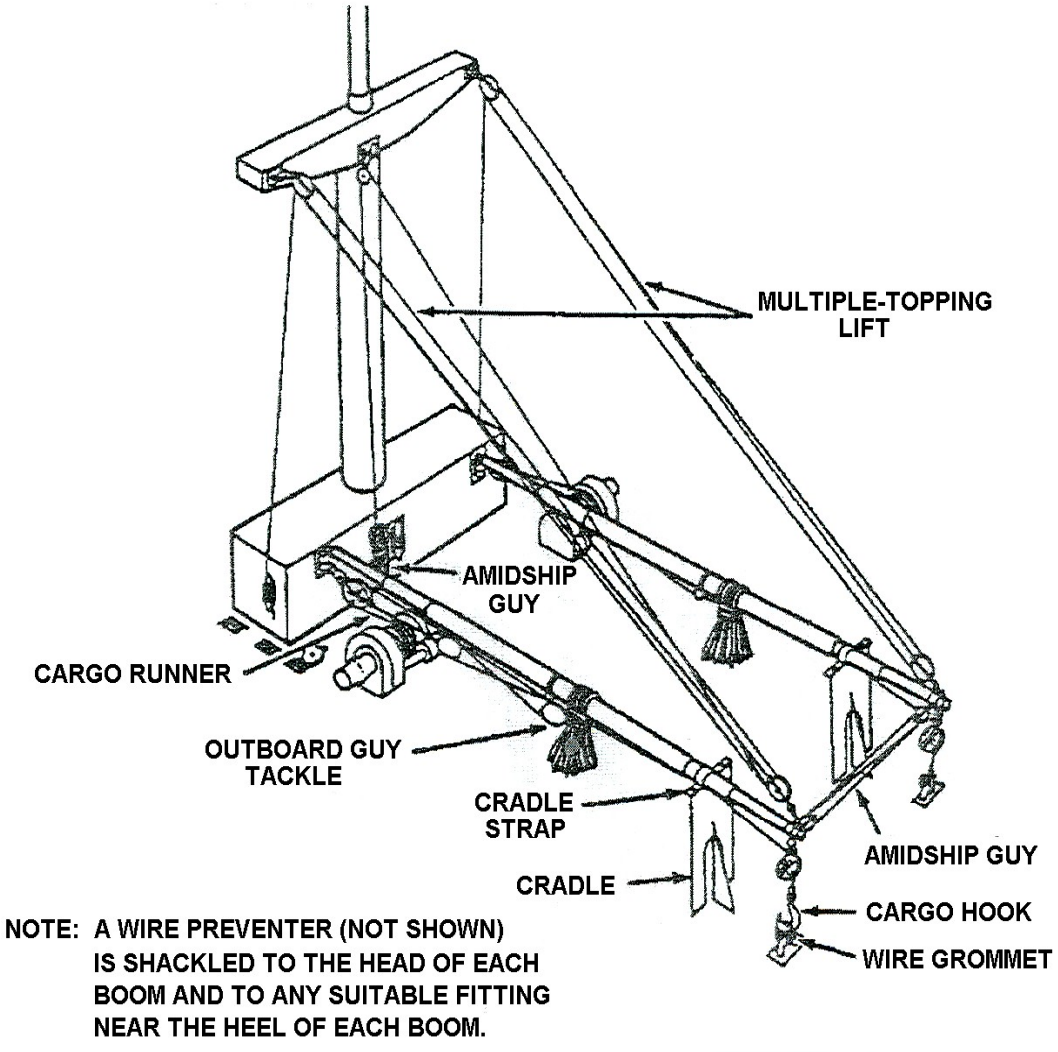


Figure 3-156

Direct Topping Booms Equipped With Multiple Topping Lifts

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing topping booms equipped with multiple-topping lifts (boom in cradle).

Performance Measures	GO	NO GO
1. Selected personnel to operate winches, guys, runners, topping lift wire, and cathead.	_____	_____
2. Directed the hatch gang to lay the topping lift wire along the deck or over the rail.	_____	_____
3. Selected one member of the hatch gang to take five turns with the topping lift wire around the cathead in the direction opposite of the cargo runner.	_____	_____
4. Directed the winch operator to raise the boom to the desired height.	_____	_____
5. Selected one member of the hatch gang to apply a stopper chain to secure the topping wire.	_____	_____
6. Directed the winch operator to slack off the topping lift slowly until the weight of the topping lift was transferred from the cathead to the stopper chain.	_____	_____
7. Selected one member of the hatch gang to remove the topping lift wire from the cathead and secure it to the topping lift chain by making three round turns.	_____	_____
8. Directed the hatch gang to swing the booms to the working position.	_____	_____
9. Ensured the correction of all deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2522
Direct Application of Wire Rope Clips Needed for Lashing Cargo

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirment to direct application of wire rope clips needed for lashing cargo in an operational environment at a terminal or aboard a cargo vessel, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, wire rope, wire rope clips, crescent wrench, and slide caliper.

Standards: Direct the application of wire rope clips needed for lashing cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the proper application of wire rope clips needed for lashing cargo.

Note: None

Performance Steps

1. Measure the diameter of the wire rope using a slide caliper (see Figure 3-157).

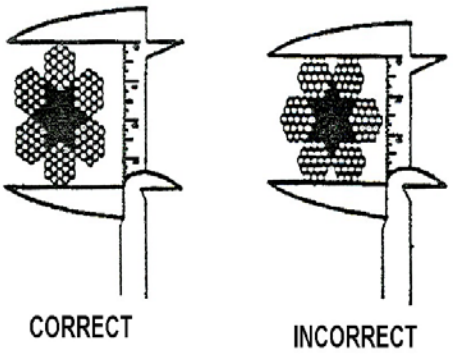


Figure 3-157

Using a Slider Caliper

2. Compute the number of wire clips needed.

NOTE: Use the following formula: Number of clips = 3D + 1, where D = diameter of wire rope. Add one clip if the wire rope has an independent wire rope core. If the result ends in a fraction, round off to the next higher whole number. Example: 3 x 5/8 + 1 = 15/8 + 8/8 = 23/8 = 2 7/8 = 3 clips.

3. Direct personnel to apply the clips, spacing them about six rope diameters apart (see Figure 3-158).

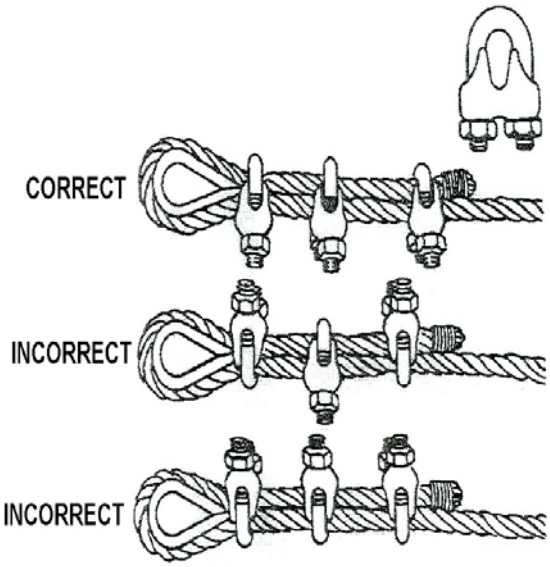


Figure 3-158

Applying and Spacing Clips

4. Direct personnel to tighten clips as follows:

   a. Apply tension to the clips farthest from the eye.

   b. Tighten the clips in order, working toward the eye or thimble.

5. Check the lashing for tightness.

6. Ensure the correction of any deficiencies.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the application of wire rope clips needed for lashing cargo.

Performance Measures	**GO**	**NO GO**
1. Measured the diameter of the wire rope using a slide caliper.	_____	_____
2. Computed the number of wire clips needed.	_____	_____
3. Directed personnel to apply the clips, spacing them about six rope diameters apart.	_____	_____
4. Directed personnel to tighten clips.	_____	_____
5. Checked the lashing for tightness.	_____	_____
6. Ensured the correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

Subject Area 19: Primary Cargo Documentation

551-88H-2520
Perform Cargo Planning Calculations

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to perform cargo planning calculations in an operational environment at a terminal, an outport, or aboard a cargo vessel, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, cargo, fiber rope, wire rope, chain, sling, lumber, slide caliper, measuring tape, paper, pencil, daily tonnage report, and DD Form 1387 (Military Shipping Label).

Standards: Perform cargo planning calculations to detemine the safe working capacity (SWC) of fiber ropes, and chains, and computing the tension of slings, board feet of lumber and the volume of cargo, ensuring accuracy, without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with performing cargo planning calculations.

Note: None

Performance Steps

1. Determine the safe working capacity (SWC) of fiber rope.

    a. Measure the diameter of fiber rope using a slide caliper.

b. Square the diameter (multiply it by itself) (SWC = D2, where D = diameter). Example: ½ x ½ = ¼, SWC = ¼ ton (560 pounds).

NOTE: Tons in this step are represented as "long tons" in the conversion. One (1) LT = 2,240 pounds.

2. Compute the SWC of wire rope.

a. Measure the diameter or locate the tag indicating the diameter of the wire rope.

b. Use formula: SWC = 8D2. Square the diameter (multiply it by itself). Example: ½ inch diameter rope ½ x ½ = ¼.

c. Multiply the answer from step b by 8 (constant) and convert the fraction to a whole number. Your answer is the SWC in short tons. Example: ¼ x 8 = 8/4 = 2; SWC = 2 tons (4,000 pounds).

NOTE: Tons in this step are represented as "short tons" in the conversion. One (1) STON = 2,000 pounds.

3. Compute the SWC of chains.

a. Measure the diameter of the chain.

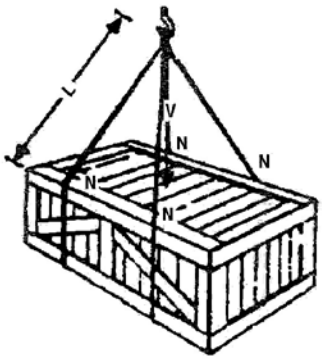
b. Square the diameter (multiply it by itself).

c. Multiply the answer from step b by 8 (constant).

NOTE: Example: Using the rule of thumb , the SWC of a chain with a link thickness of 7/8 inch is: SWC = $8D^2 = 8 (7/8)^2 = 8(0.875 X 0.875) = 8(0.765625) = 6.12$ STON or 12,240 pounds. Rounding down to tenths of a STON provides a greater margin of safety; for example, 6.12 = 6.1 STONS.

4. Compute tension of slings.

a. Multiply the weight of the load by the length of the slings (see Figure 3-159).



L = LENGTH OF SLING LEG FROM HOOK TO TOP OF CRATE

V = VERTICAL DISTANCE FROM HOOK TO TOP OF CRATE

N = NUMBER OF SLING LEGS EXTENDING FROM HOOK

Figure 3-159

Multiply Weight of the Load by the Length of the Slings

b. Multiply the number of sling legs by the vertical distance. The vertical distance is measured from the hook to the top of the load.

c. Divide the weight times the length by the number times the vertical distance. T = W x L / N x V; Where: T = tension on a single leg, W = weight of the load, N = number of slings, L = length of sling leg, V = vertical distance of sling.

Example: 1,800 x 8 / 2 x 6 = 14,400 / 12 = 1,200 pounds; Where: W = 1,800 pounds, N = 2 legs, L = 8 feet, V = 6 feet.

d. Mark the sling with the SWC which (in this example) = 1,200 pounds.

5. Compute volume of cargo.

a. Measure the length, width, and height of the cargo.

b. Convert feet into inches (round off all measurements to the nearest whole inch).

c. Multiply length by width by height in inches.

d. Divide 1,728 cubic inches (1,728 cubic inches = 1 cubic foot) into the number in Step 5c and round off the answer to the nearest tenth. This gives the volume of the cargo in cubic feet.

Example: For a container measuring 8 inches by 1 foot, 2 inches by 2 feet, 2 inches - 8 x 14 x 26 / 1,728 = 2,912 / 1,728 = 1.685 or 1.7 cubic feet.

e. Enter data on DD Form 1387.

6. Compute board feet of lumber.

a. Measure the length, width, and height of a piece of lumber.

b. Round off all measurements to the nearest whole inch.

c. Multiply length by width by height in inches.

d. Divide the answer by 144 square inches.

e. Annotate board feet on the operations report.

NOTE: Round off the answer to the nearest tenth.

7. Convert tonnages.

a. Convert LTONs into STONs: Multiply the number of LTONs by 1.12 STONs (example: 500 LTONs x 1.12 STONs = 560 STONs).

b. Convert STONs into LTONs: Divide the number of STONs by 1.12 (example: 560 STONs divided by 1.12 = 500 LTONs).

c. Convert cubic feet into measurement tons (40 cubic feet = 1 measurement ton): Divide the number of cubic feet by 40.

d. Record tonnages on the daily tonnage report.

NOTE: The daily tonnage report should be legible with 100 percent accuracy.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on performing cargo planning calculations.

Performance Measures	**GO**	**NO GO**
1. Determined the SWC of fiber rope.	_____	_____
2. Computed the SWC of wire rope.	_____	_____
3. Computed the SWC of chains.	_____	_____
4. Computed tension of slings.	_____	_____
5. Computed volume of cargo.	_____	_____
6. Computed board feet of lumber.	_____	_____
7. Converted tonnages.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 1387 Military Shipping Label	
TC 4-13.17 Cargo Specialist's Handbook	
TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7J}	

551-88H-2525
Review Cargo Markings to Facilitate Handling

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to review cargo markings to facilitate handling in an operational environment at a terminal or outport, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, cargo with markings, and DD Form 1387 (Military Shipment Label).

Standards: Review cargo markings to facilitate handling without injury to personnel or damage to equipment, ensuring that all cargo is properly sorted by the consignee and is properly categorized.

Special Condition: None

Special Standards: None

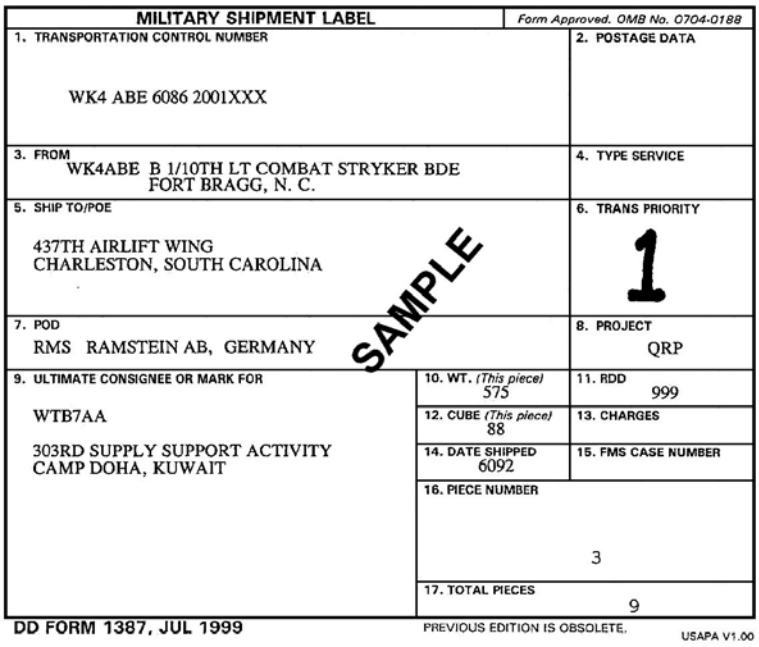
Special Equipment: None

Cue: You are assigned as a cargo checker tasked with reviewing the cargo markings of all cargo loaded to facilitate handling.

Note: None

Performance Steps

1. Check address markings on DD Form 1387 when sorting or stowing cargo to facilitate handling (see Figure 3-160).



MILITARY SHIPMENT LABEL — Form Approved. OMB No. 0704-0188

1. TRANSPORTATION CONTROL NUMBER: WK4 ABE 6086 2001XXX

2. POSTAGE DATA:

3. FROM: WK4ABE B 1/10TH LT COMBAT STRYKER BDE
FORT BRAGG, N. C.

4. TYPE SERVICE:

5. SHIP TO/POE: 437TH AIRLIFT WING
CHARLESTON, SOUTH CAROLINA

6. TRANS PRIORITY: 1

SAMPLE

7. POD: RMS RAMSTEIN AB, GERMANY

8. PROJECT: QRP

9. ULTIMATE CONSIGNEE OR MARK FOR: WTB7AA
303RD SUPPLY SUPPORT ACTIVITY
CAMP DOHA, KUWAIT

10. WT. (This piece): 575

11. RDD: 999

12. CUBE (This piece): 88

13. CHARGES:

14. DATE SHIPPED: 6092

15. FMS CASE NUMBER:

16. PIECE NUMBER: 3

17. TOTAL PIECES: 9

DD FORM 1387, JUL 1999 — PREVIOUS EDITION IS OBSOLETE. — USAPA V1.00

Figure 3-160

Address Markings on DD Form 1387

2. Check cargo marked with code 999 (expedited handling) in the required delivery date (RDD) block of DD Form 1387.

3. Check project code, if any, to aid in keeping components together for tallying and port clearance.

4. Check the SHIP TO/POE address to determine the correct consignee in the continental United States (CONUS) or to segregate and stage cargo for onward shipment at a transshipment point.

5. Check the ULTIMATE CONSIGNEE OR MARK FOR block to determine storage or stowage location in an overseas area.

6. Check the first six positions of the TRANSPORTATION CONTROL NUMBER (TCN) as the coded name and address for identification purposes if the address is not legible.

7. Inspect containers for labels or markings to find out whether or not the containers contain dangerous or hazardous material.

8. Check special handling, identification data, and storage location.

9. Check precautionary, special handling labels, and markings are used to reduce damage to cargo and danger to personnel.

10. Check category symbols and label colors when supplies are being sorted by commodity or when there is an urgent need for a specific item.

11. Annotate all deficiencies.

12. Report deficiencies to supervisor.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the Soldier that he/she will be evaluated on reviewing cargo markings to facilitate handling.

Performance Measures		**GO**	**NO GO**
1.	Checked address markings on DD Form 1387 when sorting or stowing cargo to facilitate handling.	_____	_____
2.	Checked cargo marked with code 999 in the RDD block of DD Form 1387.	_____	_____
3.	Checked project code, if any, to aid in keeping components together for tallying and port clearance.	_____	_____
4.	Checked the SHIP TO/POE address to determine the correct consignee in CONUS or to segregate and stage cargo for onward shipment at a transshipment point.	_____	_____
5.	Checked the ULTIMATE CONSIGNEE OR MARK FOR block to determine storage or stowage location in an overseas area.	_____	_____
6.	Checked the first six positions of the TCN as the coded name and address for identification purposes if the address was not legible.	_____	_____
7.	Inspected containers for labels or markings to find out whether or not the containers contained dangerous or hazardous material.	_____	_____
8.	Checked special handling, identification data, and storage location.	_____	_____
9.	Checked precautionary, special handling labels, and markings were used to reduce damage to cargo and danger to personnel.	_____	_____
10.	Checked category symbols and label colors when supplies were being sorted by commodity or when there was an urgent need for a specific item.	_____	_____
11.	Annotated all deficiencies.	_____	_____
12.	Reported deficiencies to supervisor.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 1387 Military Shipping Label	
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 20: Primary Cargo Operations (Ship and Shore)

551-88H-2503
Determine Materials Handling Equipment Required for Operations

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a senior forklift operator with the requirement to determine materials handling equipment required for operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, cargo vessel, cargo, prestowage plan or stowage plan, and materials handling equipment (MHE).

Standards: Determine MHE required for operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior forklift operator tasked with determining what MHE is required to complete the operation.

Note: None

Performance Steps

1. Interpret the cargo stowage plan or prestowage plan.

2. Determine cargo designated for discharge or loading at assigned hatch.

3. Determine the type and quantity of MHE required for loading or discharging the different types of cargo at the assigned hatch using the following prescribed criteria.

a. Employ gas or electric forklifts to handle cargo on the pier and in the warehouse.

b. Employ gas or electric forklifts aboard a vessel to handle itemized cargo.

c. Employ only electric forklifts to handle ammunition.

d. Employ warehouse tractors to push or tow equipment.

e. Employ warehouse tractors and trailers to transport cargo over smooth surfaces.

f. Employ cranes to discharge heavy lifts above the capacity of the ship's gear or in place of the ship's gear.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on determining MHE required for operations.

Performance Measures	**GO**	**NO GO**
1. Interpreted the cargo stowage plan or prestowage plan.	_____	_____
2. Determined cargo designated for discharge or loading at assigned hatch.	_____	_____
3. Determined the type and quantity of MHE required to load or discharge the type of cargo at assigned hatch.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2527
Supervise Loading of Cargo In and Out of Containers

Conditions: Assigned as a cargo checker with the requirement to supervise loading of cargo in and out of containers in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, DD Form 1384 (Transportation Control and Movement Document), cargo to be loaded, cargo handling personnel, container, a low mast forklift, an operator, and safety clothing.

Standards: Manage operations to inspect containers and load cargo into containers and unload cargo out of containers without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with supervising the loading of cargo into and out of containers.

Note: None

Performance Steps

1. Inspect container for serviceability.

NOTE: Performance Steps 1 through 12 pertain to the loading of containers.

2. Check that the container selected is suited to the type of cargo being loaded.

3. Direct personnel to load like cargo together to make maximum use of container space.

4. Direct personnel that heavy items and wet commodities are placed on the floor of the container and light and dry commodities are placed on top.

5. Check that the weight of the cargo is distributed evenly throughout the container.

6. Check that the cargo is stowed tightly to keep it from shifting.

7. Oversee cargo checking procedures as cargo is being loaded into a container.

8. Direct personnel that discrepancies noted in cargo checking or handling procedures are to be corrected immediately and cargo shortages, overages, and damages are to be noted on DD Form 1384.

9. Check that cargo is blocked and braced when loading is complete.

10. Check that doors have been closed securely and are watertight after cargo has been loaded and properly blocked and braced.

NOTE: 1. Direct cargo handlers to prepare a packing list to be placed inside a waterproof envelope and attached to the interior and exterior portion of the door. 2. Ensure that hazardous material (HAZMAT) warning labels DD Form 1387-2 (Special Handling Data/Certification) are attached (if required).

11. Check that the seal is applied to doors and that the seal number is annotated on DD Form 1384.

12. Direct the hatch foreman to make on-the-spot corrections as required during operations.

13. Inspect the container for exterior damage, such as holes, dents, cuts, or distortions and annotate any discrepancies on the tally sheet or DD Form 1384.

NOTE: Performance Steps 13 through 18 pertain to the unloading of containers.

14. Check the container seal number against the seal number listed on DD Form 1384, block 43 (Remarks line), to see if they match. Annotate any discrepancies on DD Form 1384 or tally sheet.

15. Open the container and check for damage to cargo and for securing measures, noting the discrepancies on DD Form 1384.

16. Oversee cargo checking procedures as cargo is being removed from a container.

17. Inspect the interior of the container for damage and ensure that all dunnage, nails, bolts, and other shoring, blocking, and bracing materials are removed. Annotate any discrepancies on DD Form 1384 or tally sheet.

18. Check that discrepancies noted in the cargo checking or handling procedures are corrected immediately.

19. Report any damage or shortages to the noncommissioned officer in charge (NCOIC).

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising loading of cargo in and out of containers.

Performance Measures	**GO**	**NO GO**
1. Inspected container for serviceability.	_____	_____
2. Checked that the container selected was suited to the type of cargo being loaded.	_____	_____
3. Directed personnel to load like cargo together to make maximum use of container space.	_____	_____
4. Directed personnel that heavy items and wet commodities were to be placed on the floor of the container and light and dry commodities were to be placed on top.	_____	_____
5. Checked that the weight of the cargo was distributed evenly throughout the container.	_____	_____
6. Checked that the cargo was stowed tightly to keep it from shifting.	_____	_____
7. Oversaw cargo checking procedures as cargo was being loaded into a container.	_____	_____
8. Directed personnel that discrepancies noted in cargo checking or handling	_____	_____

Performance Measures	GO	NO GO
procedures had to be corrected immediately and shortages, overages, and damages had to be noted on DD Form 1384.		
9. Checked that cargo was blocked and braced when loading was completed.	_____	_____
10. Checked that doors were closed securely and were watertight after cargo had been loaded and properly blocked and braced.	_____	_____
11. Checked that the seal was applied to doors and that the seal number was annotated on DD Form 1384.	_____	_____
12. Directed the hatch foreman to make on-the-spot corrections as required during operations.	_____	_____
13. Inspected the container for exterior damage, such as holes, dents, cuts, or distortions and annotated any discrepancies on the tally sheet or DD Form 1384.	_____	_____
14. Checked the container seal number against the seal number listed on DD Form 1384, block 43 (Remarks line), to see if they matched. Annotated any discrepancies on DD Form 1384 or tally sheet.	_____	_____
15. Opened the container and checked for damages to cargo and for securing measures, noted the discrepancies on DD Form 1384.	_____	_____
16. Oversaw cargo checking procedures as cargo was being removed from a container.	_____	_____
17. Inspected the interior of a container for damage and ensured that all dunnage, nails, bolts, and other shoring, blocking, and bracing materials were removed. Annotated any discrepancies on DD Form 1384 or tally sheet.	_____	_____
18. Checked that discrepancies noted in the cargo checking or handling procedures were corrected immediately.	_____	_____
19. Reported any damage or shortages to the NCOIC.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-12 (Change 001) Army Container Operations	
DD FORM 1384 Transportation Control and Movement Document	
DD FORM 1387-2 Special Handling Data/Certification	

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 21: Primary Hagglunds Crane Operations

551-88H-2408
Direct Hatch Cover Operations

Conditions: Assigned as senior crane operator with the requirement to direct hatch cover operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, assigned hatch, a hatch gang, a signalman, a safety briefing, safety clothing, and a crane with an operator.

Standards: Direct opening and closing of a hatch aboard a cargo vessel without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing hatch cover operations.

Note: None

Performance Steps

1. Ensure personnel place strips of dunnage on the nonworking hatch cover.

2. Ensure hatch gang removes grading and places it on nonworking side of vessel.

3. Ensure personnel unsecure hatch cover using T-wrench.

4. Ensure hatch gang secures tag lines with a bowline knot to hatch cover using the D-ring closest to each corner.

5. Ensure the signalman has the crane operator center the hook over the hatch.

6. Ensure the signalman has the crane operator lower the hook.

7. Ensure hatch gang attaches two (2) each, two-legged bridle slings to the hook.

8. Ensure the hatch gang attaches sling shackles to D-rings (color coded yellow) on the hatch cover.

9. Ensure the hatch gang mans the tag lines.

10. Ensure the signalman has the crane operator slowly raise the hatch cover slightly above the nonworking hatch cover.

11. Ensure the signalman has the crane operator position and lower the hatch cover directly over the nonworking hatch cover.

12. Ensure the hatch gang closes the hatch by replacing the hatch cover in the reverse order of that in which they were removed.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing hatch cover operations.

Performance Measures		**GO**	**NO GO**
1.	Ensured personnel placed strips of dunnage on the nonworking hatch cover.	_____	_____
2.	Ensured hatch gang removed grading and placed it on nonworking side of the vessel.	_____	_____
3.	Ensured personnel unsecured hatch cover by using a T-wrench.	_____	_____
4.	Ensured hatch gang secured tag lines with a bowline knot to hatch cover using the D-ring closest to each corner.	_____	_____
5.	Ensured the signalman had the crane operator center the hook over the hatch.	_____	_____
6.	Ensured the signalman had the crane operator lower the hook.	_____	_____
7.	Ensured hatch gang attached two (2) each, two-legged bridle slings to the hook.	_____	_____
8.	Ensured the hatch gang attached sling shackles to D-rings (color coded yellow) on the hatch cover.	_____	_____
9.	Ensured the hatch gang manned the tag lines.	_____	_____
10.	Ensured the signalman had the crane operator slowly raise the hatch cover slightly above the nonworking hatch cover.	_____	_____
11.	Ensured the signalman had the crane operator position and lower the hatch cover directly over the nonworking hatch cover.	_____	_____
12.	Ensured the hatch gang closed the hatch by replacing the hatch cover in the reverse order of that in which they were removed.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TC 4-15.51 Marine Crewman’s Handbook	

551-88H-2412
Supervise Stowage of Containers Aboard a Cargo Vessel

Conditions: Assigned as a cargo container handler with the requirement to supervise stowage of containers aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, ship's gear, tag lines, containers, lashing equipment, Hagglunds crane, and an operator.

Standards: Supervise stowage of containers aboard a cargo vessel without injury to personnel or damage to equipment.

Special Condition: The securing of containers on a ship's deck will depend solely on the type of vessel. On cellularized containerships, there are no lashings under deck. Most new ships will employ a locking type stacking cone for on-deck stowage. These procedures allow the cone to secure the bottom container to the deck or hatch cover, or lock each container above to the one below. The use of cones will keep the containers from shifting from side-to-side, but are unable to restrain any lifting or tipping movement.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo container handler tasked with supervising the stowage of containers aboard a Cargo Vessel.

Note: None

Performance Steps

1. Ensure personnel check twist locks to make sure they engage and disengage (see Figure 3-161).

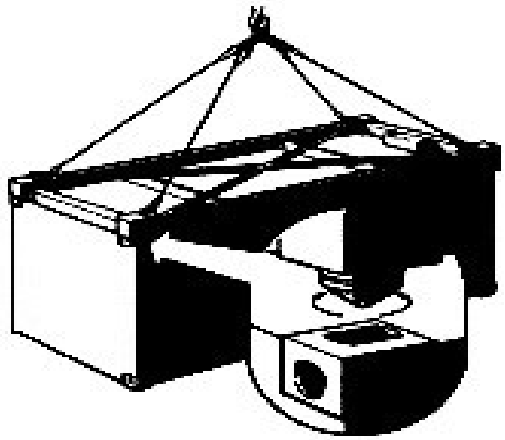


Figure 3-161

Twist Locks

2. Ensure installation of twist lock devices into hatch cover fittings.

3. Ensure personnel stow containers onto twist lock devices.

4. Ensure personnel activate and check twist locks to make sure that they are locked.

5. Ensure personnel install stack fitting twist lock devices between containers when stacking (see Figure 3-162).

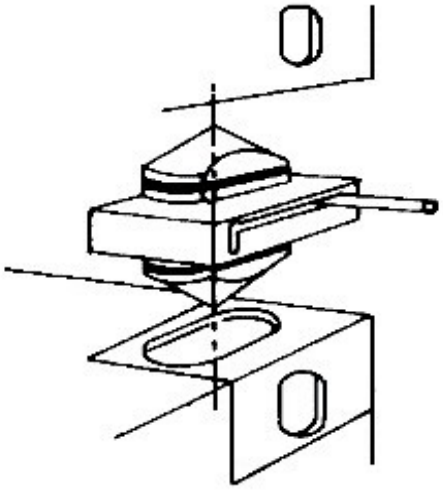


Figure 3-162

Stack Fitting Twist Lock Devices

6. Ensure personnel stack containers no more than three (3) high.

7. Ensure personnel attach lashing assemblies to front and rear of containers (see Figure 3-163).

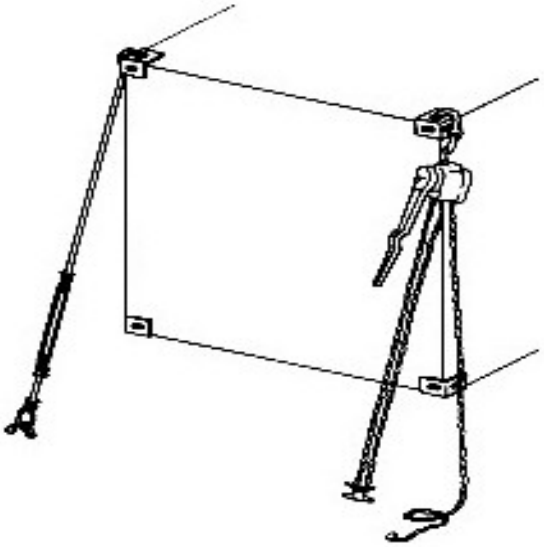


Figure 3-163

Lashing Assemblies

8. Ensure personnel secure lashing assemblies to D-ring on top of hatch cover.

9. Ensure personnel apply tension to the lashing devices.

10. Ensure personnel check devices to make sure that proper tension has been applied.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising stowage of containers aboard a cargo vessel.

Performance Measures		**GO**	**NO GO**
1.	Ensured personnel checked twist locks and made sure they engaged and disengaged.	_____	_____
2.	Ensured installation of twist lock devices into hatch cover fittings.	_____	_____
3.	Ensured personnel stowed containers onto twist lock devices.	_____	_____
4.	Ensured personnel activated and checked twist locks and made sure they were locked.	_____	_____
5.	Ensured personnel installed stack fitting twist lock devices when stacking two (2) or no more than three (3) containers.	_____	_____
6.	Ensured personnel stacked containers no more than three (3) high.	_____	_____
7.	Ensured personnel attached lashing assemblies to the front and rear of the containers.	_____	_____
8.	Ensured personnel secured lashing assemblies to the D-ring on top of the hatch cover.	_____	_____
9.	Ensured personnel applied tension to the lashing devices.	_____	_____
10.	Ensured personnel checked devices to make sure proper tension was applied.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2404
Direct Stowing Hagglunds Crane in Parking Support

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct stowing of the Hagglunds crane in a parking support in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, and a Hagglunds crane.

Standards: Direct the stowing of the Hagglunds crane in parking support without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the stowing of the Hagglunds crane into the parking support.

Note: The Hagglunds crane is put in the park support position after operation; therefore this task will start with the unstowing of the Hagglunds crane from the park support position.

Performance Steps

1. Direct the unstowing of the Hagglunds crane in parking support.

    a. Unclamp boom.

    b. Start Hagglunds crane.

    c. Turn the single/twin selector to the single position.

d. Remove hook from the fastening device and raise slightly.

e. Raise boom (jib) to the desired height.

f. Slew crane toward the area of operation.

2. Direct the stowing of the Hagglunds crane in parking support.

a. Start Hagglunds crane.

b. Slew (swing) crane into the stowage position.

c. Lower hook slowly.

d. Lower boom (jib) until it stops.

e. Turn on boom (jib) radius bypass switch and hold in position.

f. Lower boom (jib) slowly onto the parking support.

g. Lower cargo hook to the cargo hook fastening device that locks the boom (jib) in the parking support and hook it in place in the locking device.

h. Slack off on the cargo hook to prevent stress to the wire sheaves and winches.

i. Stop the motor of the crane and switch off all accessories.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing stowing of the Hagglunds crane in the parking support.

Performance Measures	**GO**	**NO GO**
1. Directed unstowing of the Hagglunds crane in parking support.	_____	_____
2. Directed stowing of the Hagglunds crane in parking support.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2403
Direct Preparation of Hagglunds Crane for Operations

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct preparation of Hagglunds crane for operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, a Hagglunds crane, and DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

Standards: Direct the preparation of the Hagglunds crane for operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the preparation of the Hagglunds crane for operations.

Note: None

Performance Steps

1. Direct pre-operational checks for the Hagglunds crane.

a. Ensure the ship is not listing more than 5 degrees and the trim is not exceeding 2 degrees during crane operations on any ship.

b. Ensure the hydraulic oil level is checked by looking through the sight glass indicator on the oil tank to ensure the oil level is just below the maximum mark.

c. Ensure the feed pump is started 24 hours before operation, during the winter months, and the winter/summer switch is placed on winter if the outside temperature is below 41 degrees and on summer if the outside temperature is above 41 degrees.

NOTE: This step is rated only in winter months.

d. Ensure the brake indicators (point and scale) are checked, ensuring the pointers do not register in the red.

e. Ensure hook blocks are checked, ensuring that wires run correctly through the sheaves.

f. Ensure jib (boom) is unclamped from parking stand or hook is released from pad eye.

g. Ensure cab control levers are checked, ensuring that they are in the neutral position.

2. Direct set-up procedures for single mode operations (see Figure 3-163).

a. Ensure single/twin control is switched to single.

b. Ensure slew (swing) lock lever is disengaged.

c. Ensure crane is started.

d. Ensure luffing/swing control lever is used to raise, lower, and swing the boom (jib).

e. Ensure hoisting control lever is used to raise or lower the cargo hook.

f. Ensure both control levers are positioned in the neutral position to stop the movement of the boom (jib) and raise and lower the cargo hook.

g. Ensure emergency shutdown switch is turned on if the low oil light comes on.

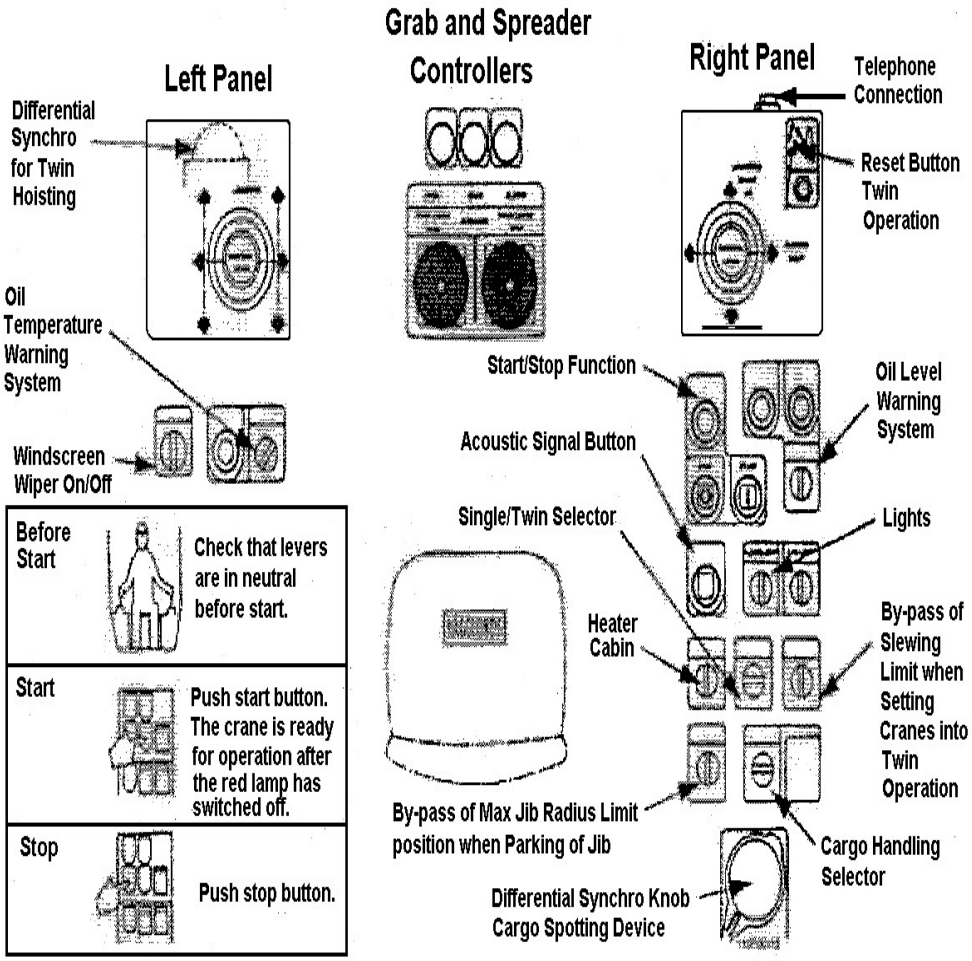


Figure 3-163

Setup Procedures for Single Mode Operations

3. Ensure deficiencies are annotated on DA Form 2404 and reported to the hatch foreman or the ship's mate.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the preparation on the Hagglunds crane for operations.

Performance Measures	**GO**	**NO GO**
1. Directed pre-operational checks for the Hagglunds crane.	_____	_____
2. Directed set-up procedures for single mode operations.	_____	_____
3. Ensured deficiencies were annotated on DA Form 2404 and reported to the hatch foreman or the ship's mate.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DA FORM 2404 Equipment Inspection and Maintenance Worksheet	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2406
Direct Set-up Procedures on Hagglunds Crane for Twin Mode Operations

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct set-up procedures on the Hagglunds crane for twin mode operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, and a Hagglunds crane.

Standards: Direct the set-up procedures on a Hagglunds crane for twin mode operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the set-up procedures of the Hagglunds crane for twin mode operations.

Note: None

Performance Steps

1. Assign an assistant crane operator to assist the master crane operator.

2. Direct the crane operator to start slave/single crane.

3. Direct the slewing/swinging of the slave crane next to the master crane.

4. Direct the assistant crane operator to engage the slew/swing lock levers on the crane platform by extracting the slew lockpin and pulling up on the lever until the lock engages.

5. Direct the crane operator to shut down the slave/single crane and move over the master crane.

6. Direct the crane operator to place the single/twin control switch to the twin mode.

7. Direct the crane operator to start the cranes from the master crane to begin operations.

8. Direct the signalman to hoist the hook and raise the boom (jib).

9. Direct the operator to slew (swing) the crane 360 degrees in either direction.

10. Direct the operator to synchronize the booms by using the twin reset button and move the booms up and down until both booms move together at the same height.

11. Direct the operator to synchronize the hooks by using the differential synchro knob for twin mode and moving the hooks up and down until both hooks move together at the same time.

12. Direct crew to secure a twin hook to the single hooks and begin the operation.

NOTE: Instruct the crane operator to turn the emergency shutdown switch on if the low oil light comes on.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the set-up procedures on the Hagglunds crane for twin mode operations.

Performance Measures	**GO**	**NO GO**
1. Assigned an assistant crane operator to assist the master crane operator.	_____	_____
2. Directed the crane operator to start slave/single crane.	_____	_____
3. Directed the slewing/swinging of the slave crane next to the master crane.	_____	_____
4. Directed the assistant crane operator to engage the slew/swing lock levers on the crane platform by extracting the slew lockpin and pulling up on the lever until the lock engages.	_____	_____
5. Directed the crane operator to shut down the slave/single crane and move over the master crane.	_____	_____
6. Directed the crane operator to place the single/twin control switch to the twin mode.	_____	_____
7. Directed the crane operator to start the cranes from the master crane to begin operations.	_____	_____
8. Directed the signalman to hoist the hook and raise the boom (jib).	_____	_____
9. Directed the operator to slew (swing) the crane 360 degrees in either direction.	_____	_____
10. Directed the operator to synchronize the booms by using the twin reset button	_____	_____

Performance Measures	GO	NO GO
and moving the booms up and down until both booms moved together at the same height.		
11. Directed the operator to synchronize the hooks by using the differential synchro knob for twin mode and moving the hooks up and down until both hooks moved together at the same time.	_____	_____
12. Directed crew to secure a twin hook to the single hooks and begin the operation.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2407
Direct Spreader Operations with Hagglunds Crane using 20- and 40-foot Spreaders

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to direct spreader operations with the Hagglunds crane using 20- and 40-foot spreaders in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, a Hagglunds crane, and 20- and 40-foot spreaders.

Standards: Direct spreader operations with Hagglunds crane using 20- and 40-foot spreaders without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with directing the operation of the Hagglunds crane using 20- and 40-foot spreaders.

Note: None

Performance Steps

1. Direct personnel to attach tag lines to the spreader frame.

2. Direct personnel to attach the spreader to the cargo hook.

3. Direct the operator to wait for the signalman's signal to hoist.

4. Direct the operator to move the spreader horizontally until alignment of the flippers makes contact with the sides and ends of the container.

5. Direct the signalman to signal the operator to lower the spreader onto the container.

6. Ensure all four spreader bayonet cones enter all four container corner fittings evenly.

7. Direct the operator to check that all four bayonet cones lock into all four container corner fittings.

NOTE: The automatic spreader can be locked from the inside of the cab on the Hagglunds crane.

8. Direct the operator to hoist the container when the signalman gives the signal.

9. Direct the operator to move the container to the designated stowage area of the vessel.

10. Direct the operator to align the container over the cell guides on the hatch being loaded or on the designated spot on the vessel's deck.

11. Direct the operator to lower the container slowly into the hatch or onto the deck when the signalman gives the signal.

12. Direct the crew to check that the spreader is unlocked from the container.

NOTE: The automatic container spreader can be unlocked from the inside of the cab on the Hagglunds crane.

13. Ensure the correction of any deficiencies.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing spreader operations with the Hagglunds crane using the 20- and 40-foot spreaders.

Performance Measures	**GO**	**NO GO**
1. Directed personnel to attach tag lines to the spreader frame.	_____	_____
2. Directed personnel to attach the spreader to the cargo hook.	_____	_____
3. Directed the operator to wait for the signalman's signal to hoist.	_____	_____
4. Directed the operator to move the spreader horizontally until alignment of the flippers made contact with the sides and ends of the container.	_____	_____
5. Directed the signalman to signal the operator to lower the spreader onto the container.	_____	_____
6. Ensured all four spreader bayonet cones entered all four container corner fittings evenly.	_____	_____
7. Directed the operator to check that all four bayonet cones locked into all four container corner fittings.	_____	_____
8. Directed the operator to hoist the container when the signalman gave the signal.	_____	_____

Performance Measures	GO	NO GO
9. Directed the operator to move the container to the designated stowage area of the vessel.	_____	_____
10. Directed the operator to align the container over the cell guides on the hatch being loaded or on the designated spot on the vessel's deck.	_____	_____
11. Directed the operator to lower the container slowly into the hatch or onto the deck when the signalman gave the signal.	_____	_____
12. Directed the crew to check that the spreader was unlocked from the container.	_____	_____
13. Ensured the correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TM 10-3990-204-12&P Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists) Together with Supplemental Operating Maintenance and Repair Instructions (SOMARPI) for Spreader, Lifting Frames and Spacer/Stabilizer Bar	

Subject Area 22: Primary 40-ton Crane Operations

551-88H-2607
Supervise RT875 Rough Terrain Container Crane Operations

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to supervise the RT875 rough terrain container crane operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a signalman, operator's manual, tag lines with handlers, operator and assistant operator, safety clothing, a 40-ton rough terrain container crane (RTCC), containers to load/off-load, and a designated off-load area.

Standards: Direct the operations of a RTCC without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with supervising the operation of a 40-ton rough terrain container crane.

Note: None

Performance Steps

1. Direct signalman using standard hand signals by ensuring signalman does the following:

   a. Checks to see that the swing of the crane will not bring the boom tip within 10 feet of power lines.

   b. Checks to see that the boom and the counterweight are clear of all obstructions and people before signaling the operator to swing the boom.

c. Checks to see that all people are clear of the under carriage and the path of the crane if the crane's location is to be changed.

d. Checks to see that the boom is clear of overhead obstructions before signaling operator to raise the boom.

e. Checks to see that the cargo handlers are aware of his intentions and that the load is slung correctly before signaling the operator to raise the hook.

f. Checks to see that there is no one underneath the hook or load who would be endangered before signaling operator to lower the hook.

g. Informs the operator, whenever possible, of the weight of heavy lifts when going from light to heavy lifts.

h. Coordinates with the crane operator to find a safe working capacity of the crane at the radius being used.

i. Positions themselves so they are visible to the operator while giving all signals.

j. Tells the operator to secure the crane when there will be lengthy delays, such as lunch breaks or cargo securing operations.

k. Signals the operator to stop immediately upon observing any safety hazards.

l. Informs the hatch foreman immediately if any safety hazards arise.

m. Uses the correct signals to accomplish steps a through l (see figure 3-164).

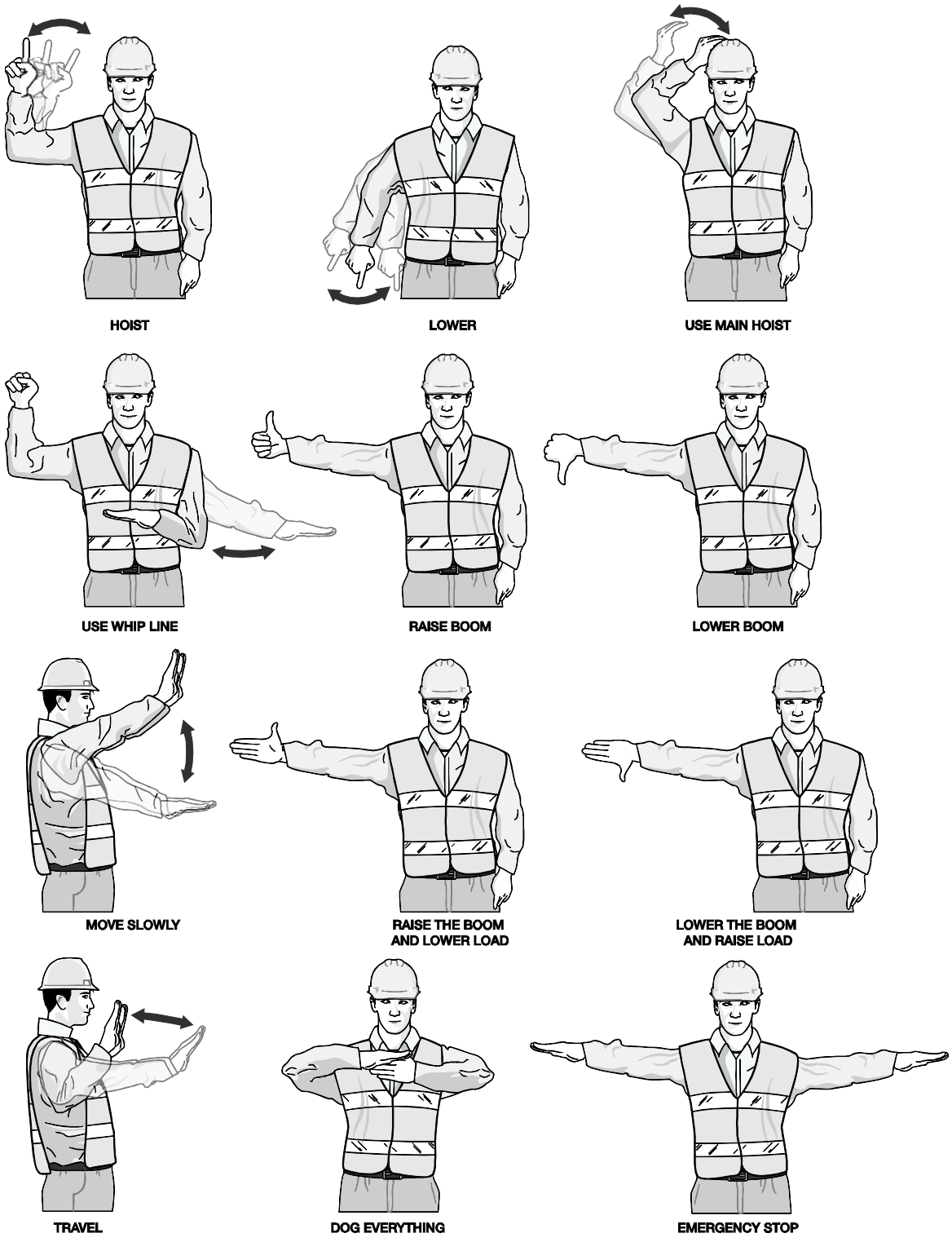


Figure 3-164

Standard Crane Hand Signals

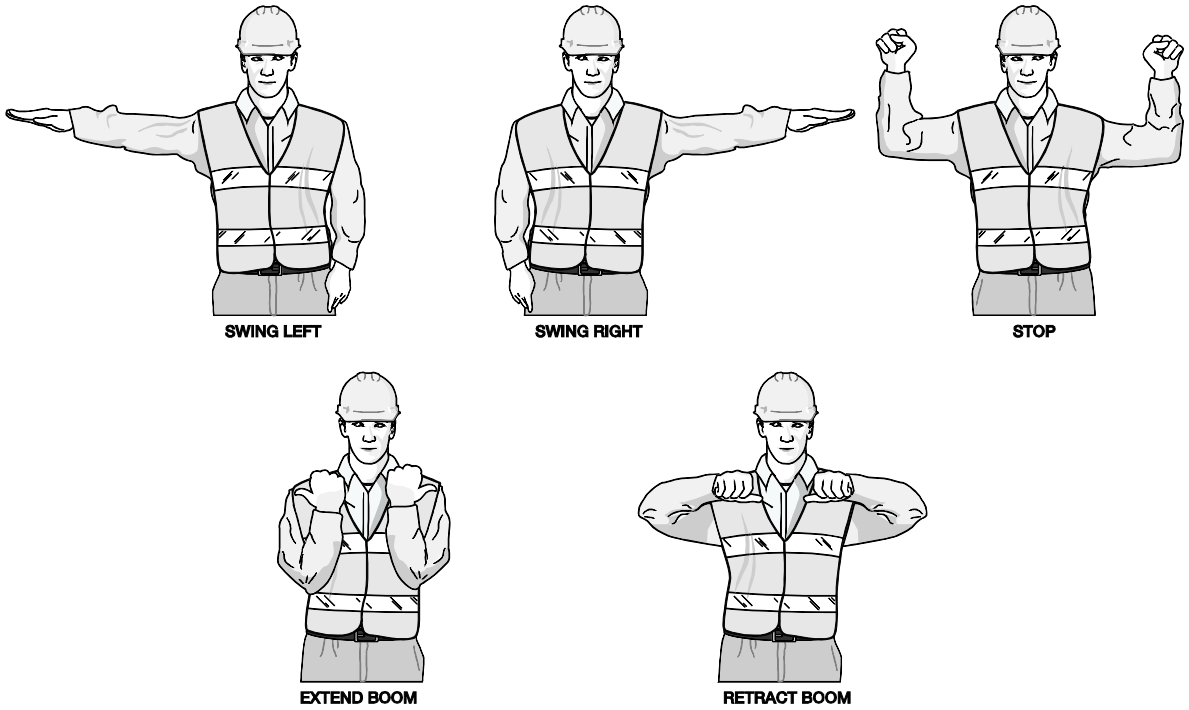


Figure 3-164

Standard Crane Hand Signals (continued)

2. Direct operator lifting a container with a 40-ton rough terrain container crane by ensuring operator does the following:

NOTE: Ensure operator uses slow, even pressure when working the control levers.

a. Positions RTCC parallel to the container by:

(1) Driving up to and parking parallel to the container.

(2) Setting up the crane on outriggers.

(3) Checking weight of container added to the lifting devices and checking load chart to ensure container can be safely lifted.

(4) Raising spreader to a position higher than the top of the container.

b. Swings the spreader directly over the corner fittings of the container.

c. Lowers the spreader so that the four (4) twist locks are inserted into the four (4) corner fittings of the container.

d. Lifts container by:

(1) Pulling main hoist lever until container is lifted 4 or 5 inches from the ground.

(2) Slowly releasing lift lever.

(3) Checking that hoist brake is holding properly and then continues to make lift until obstacles are cleared.

e. Swings container to the front of the crane and lowers container to the ground.

f. Engages swing lock control.

g. Engages swing brake selector control.

3. Direct operator driving a RTCC with a load (pick and carry) by ensuring operator:

a. Approaches the side of the container in the pick and carry mode, with spreader bar attached with boom locked in over the front.

b. Stops crane 1 to 3 feet from container.

c. Lowers spreader bar onto container and ensures twist locks have been engaged.

d. Checks weight of container; adds to spreader bar and slings.

e. Checks on rubber capacity load chart, pick and carry mode to ensure load does not surpass rated capacity.

f. Confirms tag lines are attached and tag line handlers are in position.

g. Confirms signalman is in a visible position.

h. Lifts container 18 to 36 inches off the ground.

i. Moves crane to off load area at creeper speed not to exceed 2.5 miles per hour.

j. Lowers container to the ground.

NOTE: If container must be swung over the side, notify operators to check on rubber load chart (stationary capacity 360 degree arc). It may be necessary to place crane on outriggers.

4. Direct RTCC operator shutdown procedures by ensuring operator:

a. Anchors the hook and hook blocks to the securing eye in front of the crane.

b. Removes slack from the hoist line.

c. Confirms the swing lock control lever is in locked position (handle pushed down).

d. Confirms the swing brake is engaged (pushed).

e. Sets the parking brake.

f. Operates engine at fast idle speed for approximately five (5) minutes to avoid high internal heat rise and heat dissipation.

g. Shuts down the engine by switching the ignition toggle switch to the off position.

h. Closes and locks all doors on the crane.

i. Places chock under wheels.

j. Drains air tanks.

k. Drains the sump of the fuel-water separator.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising the RT875 RTCC operations.

Performance Measures	**GO**	**NO GO**
1. Directed signalman using standard hand signals.	_____	_____
2. Directed operator lifting a container with a 40-ton RTCC.	_____	_____
3. Directed operator driving a RTCC with a load (pick and carry).	_____	_____
4. Directed RTCC operator shutdown procedures.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TM 5-3810-306-10 Operator's Manual for Container Crane, 40-ton, Rough Terrain, Model RT875CC NSN 3810-01-205-2716	

Subject Area 23: Primary Cargo Operations (Ship)

551-88H-2513
Direct Stowage of Wheeled and Tracked Vehicles on RO/RO Deck

WARNING

It is possible that safe ventilation levels will be exceeded during RO/RO operations of gas turbine powered M-l tanks. To prevent this from occurring, never have more than two M-1 tanks idling, one M-1 tank maneuvering, and one M-1 tank climbing a ramp on any two adjacent decks in two adjacent holds.

Conditions: Assigned as a cargo checker with the requirement to direct stowage of wheeled and tracked vehicles on the RO/RO deck in an operational environment aboard a RO/RO vessel, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, traffic control plan, RO/RO flow plan, stowage plan, wheeled and tracked vehicles, and lashing materials.

Standards: Direct the stowage of wheeled and tracked vehicles on the RO/RO deck without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker onboard a vessel tasked with directing the stowage of wheeled and tracked vehicles on the RO/RO Deck.

Note: None

Performance Steps

1. Direct the stowage of vehicles on the lower decks.

NOTE: The roll-on loading pattern must be considered during roll-on operations. Roll-on access to the ship is gained through the port and starboard side ports in hold 3 on B deck. Vehicles travel from the pier, up the portable vehicle ramp (PVR), and through the side port door.

a. Ensure vehicles are driven from the side port through the watertight door in bulkhead 198 (starboard), to the ramp down in hold 4 portside.

b. Ensure vehicles make a U-turn at the aft end of hold 4 to enter the ramp and at the foot of the ramp on each successive deck.

2. Direct the stowage of vehicles on the upper decks.

a. Ensure vehicles are driven from the side port, through the watertight door in bulkhead 198 (port), and up the internal ramp to "A" deck.

b. Ensure vehicles to be stored on the main deck aft (MDA) proceed to the starboard aft end of "A" deck, through the watertight door in frame 146 and through the vehicular passageway out onto the MDA.

NOTE: This route from the side port door to the MDA, is also known as the critical path because it must be left open until the MDA has been filled with vehicles.

c. Ensure vehicles are moved to the weather deck by making a U-turn and proceeding up the hydraulic ramp.

3. Direct the stowage of vehicles within fire lanes.

a. Ensure vehicles are positioned so as to not block fire lanes.

b. Ensure vehicles are positioned alongside fire lanes.

c. Ensure the extension of lashings across fire lanes are below knee level.

NOTE: Fire lanes are designated for the ship's fire and damage control parties. These parties must be able to access any area of the ship during an emergency. They must extinguish fires or repair damages to prevent the loss of life, cargo, and vessel.

4. Direct the securing of wheeled vehicles.

a. Ensure the use of blocking to shore up the bumper or chassis to relieve tension from the vehicle springs.

b. Ensure that each vehicle is restrained using lashing equipment.

5. Direct the securing of tracked vehicles.

a. Ensure placement of gear lever in neutral (multifuel) and engagement of the handbrake.

b. Ensure vehicles (gasoline-driven) are left in gear with handbrake set.

c. Ensure locking or lashing of movable turrets.

d. Ensure vehicles are lashed with chain lashing.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the stowage of wheeled and tracked vehicles on the RO/RO deck.

Performance Measures	**GO**	**NO GO**
1. Directed the stowage of vehicles on the lower decks.	_____	_____
2. Directed the stowage of vehicles on the upper decks.	_____	_____
3. Directed the stowage of vehicles within fire lanes.	_____	_____
4. Directed the securing of wheeled vehicles.	_____	_____
5. Directed the securing of tracked vehicles.	_____	_____

Performance Measures **GO** **NO GO**

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-2528
Check Winch Operations

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury of personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury of personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury of personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to check winch operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, hatch gang, winch, winch operator, and cargo to load or unload.

Standards: Check winch operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with checking that proper winch operations are being applied.

Note: None

Performance Steps

1. Inspect winches to ensure runners are wound in the correct direction over the top of the drum and are free of foreign objects (such as dunnage, paper, rags, and trash).

NOTE: The hatch foreman is required to make on-the-spot corrections during winch operations.

2. Direct winch operator to open ventilation cover and ensure the ventilation safety pin pops out.

NOTE: If the ventilator safety pin does not pop out, you may have to pull it out by hand.

3. Check operator turns each power switch to the on position one at a time and listens for the fan to come on.

4. Check operator pushes winch control to the lower position to remove the cargo hook from the pad eye.

5. Check operator actuates winch controls to confirm winches are running smoothly.

6. Check operating safety procedures are followed by observation.

7. Direct operator to plumb the draft before hoisting the cargo.

8. Check signalman is giving correct standard hand signals to the winch operator.

9. Check signalman is visible to the winch operator at all times during the operation.

10. Check winch operator for smoothness of operation and ability to control the swing of the draft.

11. Check winch operator turns the switch to off before leaving winch controls.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on checking winch operations.

Performance Measures		**GO**	**NO GO**
1.	Inspected winches to ensure runners were wound in the correct direction over the top of the drum and were free of foreign objects.	_____	_____
2.	Directed winch operator to open ventilation cover so the ventilation safety pin popped out.	_____	_____
3.	Checked operator turned each power switch to the on position one at a time and listened for fan to come on.	_____	_____
4.	Checked operator pushed winch control to the lower position to remove the cargo hook from the pad eye.	_____	_____
5.	Checked operator actuated winch controls to confirm winches were running smoothly.	_____	_____
6.	Checked operating safety procedures were followed by observation.	_____	_____
7.	Directed operator to plumb the draft before hoisting the cargo.	_____	_____
8.	Checked signalman gave correct standard hand signals to the winch operator.	_____	_____
9.	Checked signalman was visible to the winch operator at all times during the operation.	_____	_____
10.	Checked winch operator for smoothness of operation and ability to control the swing of the draft.	_____	_____
11.	Checked winch operator turned the switch to off before leaving winch	_____	_____

Performance Measures **GO** **NO GO**

controls.

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required **Primary**
TC 4-13.17 Cargo Specialist's Handbook

Subject Area 24: Primary Cargo Operations (Rail)

551-88H-2305
Compute Blocking and Bracing Materials Required for Rail Movement

WARNING

Wear all required safety equipment while performing this task.

Conditions: Assigned as a cargo checker with the requirement to compute blocking and bracing materials required for rail movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, pen or pencil, paper, tape measure, safety clothing, designated area, and Transportation Coordinator's Automated Information for Movement System II (TC-AIMS II) access.

Standards: Compute blocking and bracing materials required for rail movement using TC-AIMS II.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with computing the blocking and bracing materials needed for a rail movement.

Note: None

Performance Steps

1. Check unit TC-AIMS II report to determine what vehicles are listed.

2. Record vehicles not on TC-AIMS II report.

3. Record blocking and bracing material requirements for vehicles on TC-AIMS II report.

4. Compute blocking and bracing material requirements.

5. Prepare to allow for sufficient amounts of materials if units are required to construct patterns of blocking and bracing materials according to the American Association of Railroads (AAR) rules.

6. Submit a request for blocking and bracing to the installation transportation officer (ITO).

NOTE: If there is no ITO, submit the request for blocking and bracing materials to the shipping activity or responsible supply agency.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on computing blocking and bracing materials required for rail movement.

Performance Measures	GO	NO GO
1. Checked unit TC-AIMS II report to determine what vehicles were listed.	_____	_____
2. Recorded blocking and bracing material requirements for vehicles on TC-AIMS II report.	_____	_____
3. Recorded vehicles not on TC-AIMS II report.	_____	_____
4. Computed blocking and bracing material requirements.	_____	_____
5. Prepared to allow for sufficient amounts of materials if units were required to construct patterns of blocking and bracing materials according to AAR rules.	_____	_____
6. Submitted a request for blocking and bracing to the installation transportation officer (ITO).	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
FM 3-35 Army Deployment and Redeployment	
TM 55-2200-001-12 Transportability Guidance for Application of Blocking, Bracing and Tiedown Materials for Rail Transport (Reprinted with Changes 1 through 4)	

551-88H-2306
Conduct Rail Loading Operations

Conditions: Assigned as a cargo checker with the requirement to conduct rail loading operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, wheeled and tracked vehicles, railcars, load plan, and bracing, blocking, and tie-down equipment.

Standards: Conduct rail loading operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with conducting rail loading operations.

Note: None

Performance Steps

1. Ensure vehicles arriving at the ramp are compared with the sequence given on the load plan.

2. Ensure spanners are secured in place in order to bridge the distance between rail cars.

3. Ensure that all vehicles are loaded from the rearmost car and moved forward to their assigned places.

4. Ensure that guides are stationed on the ramp and each side of the rail car near the spanners.

NOTE: Direct guides not to walk backwards on the railcars.

5. Monitor the flatcar that the vehicles are being driven onto.

NOTE: Load all vehicles from the rearmost car and move them forward to the assigned position.

6. Ensure that vehicles are positioned in their allocated spaces on the railcar according to the load plan.

7. Ensure that hand brakes are set on wheeled vehicles and levers are wired and blocked.

NOTE: The hand brake will not be set on tracked vehicles, but levers will be wired or locked in the disengaged position.

8. Ensure personnel disconnect trailers, if required, and lower the landing legs on semi-trailers and support wheels on small trailers.

9. Verify that procedures employed in securing vehicles are in compliance with AAR Interchange Rules.

10. Ensure that lashings are not tightened completely until all blocks and chocks are nailed in place.

11. Ensure that all loads on railcars are within clearance limits.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on conducting rail loading operations.

Performance Measures	**GO**	**NO GO**
1. Ensured vehicles arriving at the ramp were compared with the sequence given on the load plan.	_____	_____
2. Ensured spanners were secured in place in order to bridge the distance between rail cars.	_____	_____
3. Ensured that all vehicles were loaded from the rearmost car and moved forward to their assigned places.	_____	_____
4. Ensured that guides were stationed on the ramp and each side of the rail car near the spanners.	_____	_____
5. Monitored the flatcar that the vehicles were being driven onto.	_____	_____
6. Ensured that vehicles were positioned in their allocated spaces on the railcar according to the load plan.	_____	_____
7. Ensured that hand brakes were set on wheeled vehicles and levers were wired and blocked.	_____	_____
8. Ensured personnel disconnected trailers, if required, and lowered the landing legs on semi-trailers and support wheels on small trailers.	_____	_____
9. Verified that procedures employed in securing vehicles were in compliance with AAR Interchange Rules.	_____	_____
10. Ensured that lashings were not tightened completely until all blocks and chocks were nailed in place.	_____	_____
11. Ensured that all loads on railcars were within clearance limits.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
Association of American Railroads Interchange Rules	
TC 4-13.17 Cargo Specialist's Handbook	
TM 55-2200-001-12 Transportability Guidance for Application of Blocking, Bracing and Tiedown Materials for Rail Transport (Reprinted with Changes 1 through 4)	

Required **Primary**

Skill Level 3
Subject Area 25: Basic Cargo Checking Operations

551-88H-3524
Check Stowage of General Cargo at Assigned Hatch

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to check stowage of general cargo at an assigned hatch in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, cargo handlers, ship's gear, general hatch set, dunnage, coopering, shoring, lashing materials, and safety clothing.

Standards: Check stowage of general cargo at assigned hatch without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked with checking stowage of general cargo at an assigned hatch.

Note: None

Performance Steps

1. Check that the cargo space is being used properly.

2. Check the placement of cargo to ensure it will not be damaged by movement of the vessel at sea.

3. Check that the cargo is stowed so that it can be efficiently discharged at the proper port.

NOTE: Cargo to be off-loaded first should be stowed last.

4. Check the placement of dunnage.

5. Check the stowage of filler cargo.

6. Check the bracing, blocking, and cribbing of cargo.

7. Check the construction of a false bulkhead where required to protect cargo or block off unused space.

8. Check the placing and securing of lashing.

9. Inspect the completion of any construction required to protect the cargo.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on checking stowage of general cargo at an assigned hatch.

Performance Measures	**GO**	**NO GO**
1. Checked that the cargo space was being used properly.	_____	_____
2. Checked the placement of cargo to ensure it would not be damaged by movement of the vessel at sea.	_____	_____
3. Checked that the cargo was stowed so that it could be efficiently discharged at the proper port.	_____	_____
4. Checked the placement of dunnage.	_____	_____
5. Checked the stowage of filler cargo.	_____	_____
6. Checked the bracing, blocking, and cribbing of cargo.	_____	_____
7. Checked the construction of a false bulkhead where required to protect cargo or block off unused space.	_____	_____
8. Checked the placing and securing of lashing.	_____	_____
9. Inspected the completion of any construction required to protect the cargo.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3505
Protect Cargo Against Pilferage

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a section chief with the requirement to protect cargo against pilferage in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo, tally sheet, DD Form 1384 (Transportation Control and Movement Document), clipboard, pen or pencil, cargo security policies, and directives and SOPs.

Standards: Protect cargo against pilferage without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked with protecting cargo against pilferage.

Note: None

Performance Steps

1. Oversee cargo security program.

    a. Analyze the cargo transfer and in-transit storage operation to identify weaknesses.

    b. Thoroughly indoctrinate all personnel in cargo security policies, directives, and procedures.

    c. Implement physical security policies.

    d. Assign cargo security personnel.

    e. Use theft prevention and detection equipment.

2. Implement preventive measures for security personnel.

a. Request cargo security from military police.

b. Post a security guard or cargo checker at open warehouses and ship hatches during lunch and break periods.

c. Ensure a cargo checker is present during cargo transfer operations.

d. Provide security personnel with advanced notice of cargo entering the terminal that will require surveillance and protection.

e. Ensure containers and warehouses are closed and locked during lunch and break periods.

3. Implement physical security measures.

a. Ensure that the perimeter of the entire terminal is fenced with chain link fence topped by three strands of barbed wire.

b. Inspect the perimeter fence daily.

c. Maintain manned gatehouses at all vehicle and personnel entrances and exits.

d. Provide a security cage, crib, or vault in the shipping and receiving area for control of sensitive or high risk cargo.

e. Establish and maintain strict control and accountability procedures for all keys to security areas, containers, and other locked cargo areas.

f. Establish a truck control system through the use of gate passes.

g. When possible, secure military-owned containers (MILVANs) and commercial containers by butting their door ends against each other.

h. Ensure doors of railway cars containing cargo are kept closed except during loading and offloading.

i. Make on-the-spot security checks as required.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on protecting cargo against pilferage.

Performance Measures	**GO**	**NO GO**
1. Oversaw cargo security program.	_____	_____
2. Implemented preventive measures for security personnel.	_____	_____
3. Implemented physical security measures.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 1384 Transportation Control and Movement Document	
DoD 5100.76-M Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives	
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 26: Basic Cargo Operations (Air)

551-88H-3519
Direct Dangerous or Hazardous Cargo Operations for Air Movement

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to direct dangerous or hazardous cargo operations for air movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, dangerous or hazardous cargo, firefighting equipment, local SOP, tie-down equipment, load plan, and DD Form 1387-2 (Special Handling Data/Certification).

Standards: Direct dangerous or hazardous cargo operations for air movement without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked with directing the preparation of dangerous or hazardous cargo for air movement.

Note: None

Performance Steps

1. Ensure dangerous or hazardous cargo is compatible.

2. Direct the inspection of dangerous or hazardous cargo for damage, punctures, distortions, dents, and leakage.

3. Ensure that the container unit and pallet loads in the cargo compartment are positioned so that the DD Form 1387-2 and hazard labels are visible to air crews and loading personnel (see Figure 3-165).

4. Ensure safety precautions are observed according to the local SOP and dangerous/hazardous cargo safety instructions.

5. Ensure adequate firefighting equipment is available.

6. Ensure that an Air Force technical representative is present when handling dangerous or hazardous cargo.

7. Direct that dangerous and hazardous cargo is stowed according to the approved load plan and that only authorized tie-down materials are used.

8. Ensure on-the-spot correction of any deficiencies.

SPECIAL HANDLING DATA/CERTIFICATION

1. ITEM NOMENCLATURE	2. NET QUANTITY PER PACKAGE	3. TRANSPORTATION CONTROL NO.
MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	12 gallons	WK888740730001XXX
	4. CONSIGNMENT GROSS WEIGHT 3,600 pounds	5. DESTINATION Fort Carson, CO

6. SUPPLEMENTAL INFORMATION
Fuel in tank--gasoline w/truck
Battery, wet, filled with acid, corrosive material, 2 quarts

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and in proper condition for transportation according to the applicable regulations of the Dept of Transportation. THIS IS A U.S. DEPARTMENT OF DEFENSE SHIPMENT! *(Complete applicable blocks below)*

7. DTR REFERENCE

8. HANDLING INSTRUCTIONS

SAMPLE

9. ADDRESS OF SHIPPER	10. TYPED NAME, SIGNATURE AND DATE
Charleston AFB, South Carolina	SFC J. J. Bond, 23 June 2007 J. J. Bond

DD FORM 1387-2, NOV 2004 PREVIOUS EDITION IS OBSOLETE. *Form Approved/OMB No. 0704-0188*
Adobe Professional 7.0

Figure 3-165

DD Form 1387-2

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing dangerous or hazardous cargo operations for air movement.

Performance Measures	**GO**	**NO GO**
1. Ensured dangerous or hazardous cargo was compatible.	_____	_____
2. Directed the inspection of dangerous or hazardous cargo for damage, punctures, distortions, dents, and leakage.	_____	_____
3. Ensured that the container unit and pallet loads in the cargo compartment were positioned so that the DD Form 1387-2 and hazard labels were visible to air crews and loading personnel.	_____	_____

Performance Measures	GO	NO GO
4. Ensured safety precautions were observed according to the local SOP and dangerous/hazardous cargo safety instructions.	_____	_____
5. Ensured adequate firefighting equipment was available.	_____	_____
6. Ensured that an Air Force technical representative was present when handling dangerous or hazardous cargo.	_____	_____
7. Directed that dangerous and hazardous cargo was stowed according to the approved load plan and that only authorized tie-down materials were used.	_____	_____
8. Ensured on-the-spot correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
CFR Title 49 Transportation	
DD FORM 1387-2 Special Handling Data/Certification	
TC 4-13.17 Cargo Specialist's Handbook	
TM 38-250 Preparing Hazardous Materials for Military Air Shipments {AFMAN 24-204, NAVSUP PUB 505, MCO P4030.19J, DLAI 4145.3}	

551-88H-3512
Manage Aircraft Load Teams

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a section chief with the requirement to manage aircraft load teams in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, tie-down restraints, vehicles, manifests, DD Form 1387-2 (Special Handling Data/Certification), cargo, loadmaster, load team personnel, and means of communication.

Standards: Manage aircraft load teams without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked with managing the aircraft load teams.

Note: None

Performance Steps

1. Designate load teams to the aircraft.
2. Direct all loading operations.
3. Ensure that all personnel comply with flight line safety rules.
    a. Personnel will not smoke on the aircraft parking ramp.
    b. Personnel will not sit or lie on the ramp or under vehicles, aircraft, or equipment.

c. Load team members will not wear rings or watches.

d. Personnel will not throw equipment about the aircraft.

e. Personnel will not refuel or service equipment within 50 feet of an aircraft.

4. Cease operations immediately if a safety hazard exists; resume operations only after the safety hazard has been corrected.

5. Ensure all equipment and supplies are properly restrained in the aircraft.

6. Coordinate with the airlift control element (ALCE) ready line coordinator for any special assistance or equipment needed.

7. Collect required copies of the passenger and cargo manifests, ensuring they are given to the aircraft loadmaster.

8. Ensure that DD Forms 1387-2 are attached to the manifest for hazardous cargo (see Figure 3-166).

9. Direct personnel not to load hazardous cargo that does not have a DD Form 1387-2.

10. Conduct a preflight briefing for all accompanying troops if loading is to be accomplished with the engine running.

11. Notify the ALCE of the load completion time.

SPECIAL HANDLING DATA/CERTIFICATION

1. ITEM NOMENCLATURE	2. NET QUANTITY PER PACKAGE	3. TRANSPORTATION CONTROL NO.
MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	12 gallons	WK888740730001XXX
	4. CONSIGNMENT GROSS WEIGHT 3,600 pounds	5. DESTINATION Fort Carson, CO

6. SUPPLEMENTAL INFORMATION
Fuel in tank--gasoline w/truck
Battery, wet, filled with acid, corrosive material, 2 quarts

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and in proper condition for transportation according to the applicable regulations of the Dept of Transportation. THIS IS A U.S. DEPARTMENT OF DEFENSE SHIPMENT! *(Complete applicable blocks below)*

7. DTR REFERENCE

8. HANDLING INSTRUCTIONS

SAMPLE

9. ADDRESS OF SHIPPER	10. TYPED NAME, SIGNATURE AND DATE
Charleston AFB, South Carolina	J. J. Bond SFC J. J. Bond, 23 June 2007

DD FORM 1387-2, NOV 2004 PREVIOUS EDITION IS OBSOLETE. *Form Approved OMB No. 0704-0188*
Adobe Professional 7.0

Figure 3-166

DD Form 1387-2

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on managing aircraft load teams.

Performance Measures		GO	NO GO
1.	Designated load teams to the aircraft.	_____	_____
2.	Directed all loading operations.	_____	_____
3.	Ensured that all personnel complied with flight line safety rules.	_____	_____
4.	Ceased operations immediately when a safety hazard existed and resumed operations only after the safety hazard had been corrected.	_____	_____
5.	Ensured all equipment and supplies were properly restrained in the aircraft.	_____	_____
6.	Coordinated with the ALCE ready line coordinator for any special assistance or equipment needed.	_____	_____
7.	Collected required copies of the passenger and cargo manifests, ensuring they were given to the aircraft loadmaster.	_____	_____
8.	Ensured that DD Forms 1387-2 were attached to the manifest for hazardous cargo.	_____	_____
9.	Directed personnel not to load hazardous cargo that did not have a DD Form 1387-2.	_____	_____
10.	Conducted a preflight briefing for all accompanying troops when loading was to be accomplished with the engine running.	_____	_____
11.	Notified the ALCE of the load completion time.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-16 Movement Control	
DD FORM 1387-2 Special Handling Data/Certification	
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3501
Manage Helicopter External Sling Load Operations

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

Helicopters are susceptible to high levels of stored static electrical energy. Death or severe electrical shock may result from improper grounding of the cargo hook. Use extreme caution when attaching the apex fitting to the cargo hook during a dual-point hookup. The aircraft must hover close to the load which could cause the aircraft to strike the load or personnel. Special care must be taken when connecting the aft hook. The rear of the aircraft has a tendency to dip down if the pilot has to move to the rear. The rigged load must weigh less than the capacity of the vertical pendant. Aircraft must land when using the longline sling procedures. If the load is on a slope, make sure the area up slope of the load is clear to allow the helicopter to land on the up slope side of the load. Longline sling procedures are not authorized on tandem loads.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in this task. Failure to comply may result in injury to personnel or damage to equipment.

Accompanying loads must be authorized for sling load in the appropriate rigging procedures. Do not exceed sling set, cargo hook, and aircraft limitations.

Conditions: Assigned as a load planner with the requirement to manage helicopter external sling load operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, DA Form 7382 (Sling Load Inspection Record), hookup team, safety clothing, helicopter, external load, cargo hook, pendant, and static discharge wand if reach pendant not used.

Standards: Manage helicopter external sling load operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as section chief tasked with managing helicopter external sling load operations.

Note: When a reach pendant is used, a static discharge wand is not required (see Figure 3-167).

Figure 3-167

Reach Pendant

Performance Steps

1. Establish a helicopter support team (HST) upon receipt of mission orders.

   a. Brief the support team leader on the sling load mission.

   b. Determine the priority of what items to be sling loaded.

   c. Ensure that all sensitive items of supplies or equipment are secured.

   d. Ensure that the hookup team is provided a copy of the Sling Load Inspection Record (see Appendix I-2 TM 4-48.09 and Figure 3-168).

   e. Survey the helicopter landing site.

2. Establish communication and terminal guidance to be followed during the operation.

   a. Maintain coordination with commander and S3/G3 for logistical support.

   b. Ensure that all safety warnings are observed.

   c. Ensure that the command, staff, and aviation crew leader have been briefed on the emergency lighting pattern established for the operation.

   d. Ensure that HST personnel are wearing protective clothing.

   e. Ensure that only trained ground crew members are used to rig and hookup sling loads to a helicopter.

   f. Ensure safe use of materials handling equipment (MHE) at all times.

3. Brief hookup team leader to ensure that the ground crew knows the location of the aircraft emergency area and personnel rendezvous point.

a. Coordinate with HST team leader to confirm that the grounding rod is put in the ground on the opposite side of the rendezvous point.

b. Coordinate to confirm that the signalman knows how to use day and night signals.

c. Coordinate to confirm that the signalman is positioned correctly so that the pilot can see him at all times

4. Coordinate with HST team leader to ensure that the external load is rigged properly and in compliance with all safety rules for sling loading equipment and supplies.

a. Check to see if all debris has been removed from the landing site.

b. Check to see if the landing sites are marked properly.

c. Check to see if security and concealment for sensitive items are maintained (if required).

d. Verify that loads are rigged to meet helicopter flight requirements.

e. Verify that the ground crew knows the emergency light patterns to be used in case of an emergency.

f. Verify that the ground slope does not exceed the maximum angle of approach.

5. Coordinate with HST team leader to ensure that the static discharge man is positioned on or near the load/equipment when the helicopter arrives.

a. Manage the operation to verify that the static discharge wand is being used to discharge the static electricity.

b. Manage the operation to verify that the static discharge wand cable is attached to a ground rod.

NOTE: Be prepared to stop the operation if an unsafe act has occurred.

6. Coordinate with HST team leader to ensure that the hookup man stands on the load after the nose of the helicopter passes overhead.

a. Manage the operation to ensure that the hookup man kneels on top of the load on the rendezvous point side of the load.

b. Manage the operation to ensure that the hookup man places the apex fitting on the cargo hook after the static discharge man has maintained contact between the static discharge wand and the cargo hook.

c. Manage the operation to ensure that the hookup man departs the load on the rendezvous point side and moves from directly below the helicopter.

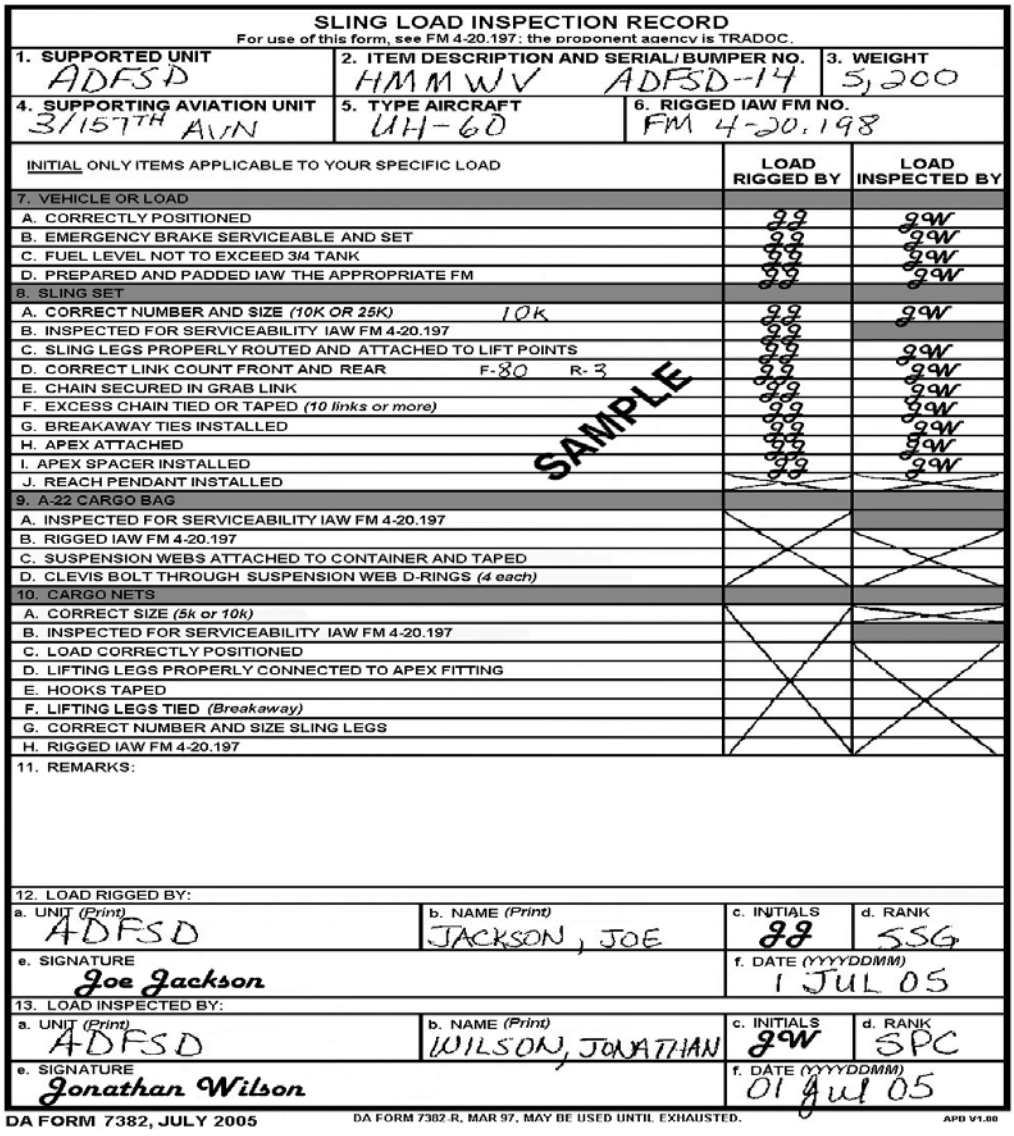
d. Manage the operation to ensure that the hookup team moves to the rendezvous point when the signalman gives the affirmative signal to the pilot.

e. Manage the operation to ensure that the static discharge man throws the static discharge wand on the ground rod and follows the hookup man off the load on the rendezvous point side.

NOTE: Be prepared to stop the operation if an unsafe act has occurred.

7. Coordinate with HST team leader to verify that on-the-spot corrections are made and verify that the Sling Load Inspection Record is completed properly.

NOTE: TM 4-48.09 states that the inspector must be a pathfinder, an air assault, or a person who has obtained a sling load inspection certification.



SLING LOAD INSPECTION RECORD

For use of this form, see FM 4-20.197; the proponent agency is TRADOC.

1. SUPPORTED UNIT	2. ITEM DESCRIPTION AND SERIAL/ BUMPER NO.	3. WEIGHT
ADFSD	HMMWV ADFSD-14	5,200
4. SUPPORTING AVIATION UNIT	**5. TYPE AIRCRAFT**	**6. RIGGED IAW FM NO.**
3/157TH AVN	UH-60	FM 4-20.198

INITIAL ONLY ITEMS APPLICABLE TO YOUR SPECIFIC LOAD	LOAD RIGGED BY	LOAD INSPECTED BY
7. VEHICLE OR LOAD		
A. CORRECTLY POSITIONED	JJ	JW
B. EMERGENCY BRAKE SERVICEABLE AND SET	JJ	JW
C. FUEL LEVEL NOT TO EXCEED 3/4 TANK	JJ	JW
D. PREPARED AND PADDED IAW THE APPROPRIATE FM	JJ	JW
8. SLING SET		
A. CORRECT NUMBER AND SIZE *(10K OR 25K)* 10K	JJ	JW
B. INSPECTED FOR SERVICEABILITY IAW FM 4-20.197	JJ	
C. SLING LEGS PROPERLY ROUTED AND ATTACHED TO LIFT POINTS	JJ	JW
D. CORRECT LINK COUNT FRONT AND REAR F-80 R-3	JJ	JW
E. CHAIN SECURED IN GRAB LINK	JJ	JW
F. EXCESS CHAIN TIED OR TAPED *(10 links or more)*	JJ	JW
G. BREAKAWAY TIES INSTALLED	JJ	JW
H. APEX ATTACHED	JJ	JW
I. APEX SPACER INSTALLED	JJ	JW
J. REACH PENDANT INSTALLED		
9. A-22 CARGO BAG		
A. INSPECTED FOR SERVICEABILITY IAW FM 4-20.197		
B. RIGGED IAW FM 4-20.197		
C. SUSPENSION WEBS ATTACHED TO CONTAINER AND TAPED		
D. CLEVIS BOLT THROUGH SUSPENSION WEB D-RINGS *(4 each)*		
10. CARGO NETS		
A. CORRECT SIZE *(5k or 10k)*		
B. INSPECTED FOR SERVICEABILITY IAW FM 4-20.197		
C. LOAD CORRECTLY POSITIONED		
D. LIFTING LEGS PROPERLY CONNECTED TO APEX FITTING		
E. HOOKS TAPED		
F. LIFTING LEGS TIED *(Breakaway)*		
G. CORRECT NUMBER AND SIZE SLING LEGS		
H. RIGGED IAW FM 4-20.197		

SAMPLE

11. REMARKS:

12. LOAD RIGGED BY:			
a. UNIT *(Print)* ADFSD	b. NAME *(Print)* JACKSON, JOE	c. INITIALS JJ	d. RANK SSG
e. SIGNATURE Joe Jackson		f. DATE *(YYYYDDMM)* 1 JUL 05	
13. LOAD INSPECTED BY:			
a. UNIT *(Print)* ADFSD	b. NAME *(Print)* WILSON, JONATHAN	c. INITIALS JW	d. RANK SPC
e. SIGNATURE Jonathan Wilson		f. DATE *(YYYYDDMM)* 01 Jul 05	

DA FORM 7382, JULY 2005 — DA FORM 7382-R, MAR 97, MAY BE USED UNTIL EXHAUSTED. — APD V1.00

Figure 3-168

Sample of Sling Load Inspection Record

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on managing helicopter external sling load operations.

Performance Measures	GO	NO GO
1. Established a helicopter support team (HST) upon receipt of mission orders.	_____	_____
2. Established communication and terminal guidance to be followed during the operation.	_____	_____
3. Briefed hookup team leader to ensure that the ground crew knew the location of the aircraft emergency area and personnel rendezvous point.	_____	_____
4. Coordinated with HST team leader to ensure that the external load was rigged properly and in compliance with all safety rules for sling loading equipment and supplies.	_____	_____
5. Coordinated with HST team leader to ensure that the static discharge man was positioned on or near the load/equipment when the helicopter arrived.	_____	_____
6. Coordinated with HST team leader to ensure that the hookup man stood on the load after the nose of the helicopter passed overhead.	_____	_____
7. Coordinated with HST team leader to verify that on-the-spot corrections were made and verified that the Sling Load Inspection Record was completed properly.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
DA FORM 7382 Sling Load Inspection Record	
FM 3-21.38 Pathfinder Operations	
TM 4-48.09 Multiservice Helicopter Sling Load: Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}	

551-88H-3523
Rig a Cargo Net (Helicopter)

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a load planner of an external sling load operation with the requirement to rig a cargo net for a helicopter in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety equipment, 5,000- or 10,000-lb cargo net, cargo, pressure-sensitive tape or ¼-inch cotton webbing, Type III nylon cord, and 10,000- or 25,000-lb sling set.

Standards: Rig a cargo net for a helicopter without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as load planner tasked to rig a cargo net for a helicopter.

Note: None

Performance Steps

1. Perform the procedures required to rig a cargo net for a helicopter.

    a. Remove the cargo net from the storage bag.

    b. Spread the cargo net on the ground by pulling evenly on each of the four lifting legs to open the net to its fullest extension.

    c. Inspect the net for serviceability.

    d. Place cargo on the net with sides of the load parallel with the yellow cord.

e. Center the heaviest items in the center of the net and the lighter items on top of the heavy items.

f. Place all four lifting legs on top of the load.

g. Attach all four metal hooks to the apex fitting in the following sequence: 1, 3, 2, and 4 to provide equal lift on all legs. Hooks do not have to face in the same direction.

h. Tape or tie all four hooks together to prevent them from coming unhooked from the apex.

i. Tape or tie (breakaway technique) all sixteen lifting legs together at 3- to 4-foot intervals until no more slack can be pulled up on the legs.

j. Continue to pull the net up and tape the net mesh so that the net is tight and flat against the sides of the load.

k. Lift and tape the sling legs so that the net does not get caught on the pallet or load protrusions.

l. Tape excess net to itself to avoid snagging on the load.

NOTE: Do not tape the net to the load.

m. Coil the lifting legs on top of the load.

NOTE: Normally, the net apex fitting is directly attached to the cargo hook. If the load is a large one, the lifting legs may not be long enough to allow the hookup man to perform a safe hookup to the aircraft. If you cannot lift the apex fitting at least 6 feet above the load, add a leg or legs from a sling set. Route the chain end of the sling through the apex fitting and insert link 3 in the grab hook. Remember, the sling leg capacity must be greater than the weight of the load.

2. Make a final inspection of the apex fitting, netting, and taping before hookup to the aircraft, ensuring the net and load is secure (see Figure 3-169).

NOTE: All loads rigged must be inspected by a certified sling load inspector and a copy of the Sling Load Inspection Record must be attached to the load.

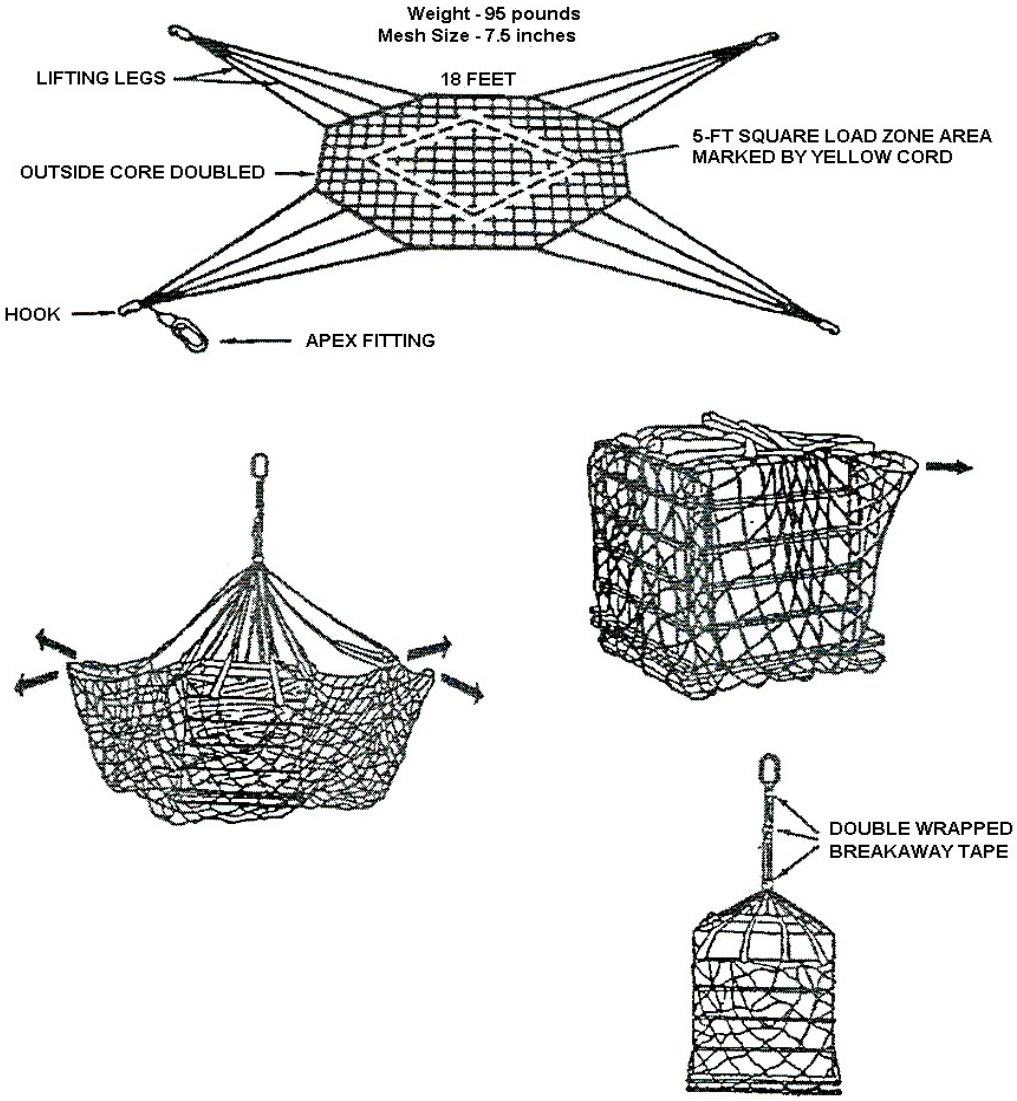


Figure 3-169

Apex Fitting, Netting, and Taping

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on rigging a cargo net for a helicopter.

Performance Measures	**GO**	**NO GO**
1. Performed the procedures required to rig a cargo net for a helicopter.	_____	_____
2. Made a final inspection of the apex fitting, netting, and taping before hookup to the aircraft, ensuring the net and load were secure.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

TM 4-48.09 Multiservice Helicopter Sling Load: Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}

Primary

551-88H-3522
Rig a Single Point Load for External Air Transport

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman of an external sling load operation with the requirement to rig a single point load for external air transport in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, pressure-sensitive tape or ¼-inch cotton webbing, Type III nylon cord, 10,000- or 25,000-lb sling set, and equipment to be rigged.

Standards: Rig a single point load for external transport by a helicopter without injury to personnel or damage to equipment.

Special Condition: Ensure all personnel observe safety warnings.

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked to rig a single point load for external air transportation.

Note: None

Performance Steps

1. Locate the rigging procedure for the item of equipment in TM 4-48.10.

2. Verify that the equipment corresponds to the item nomenclature in the load description section of the rigging procedure.

3. Ensure that the items on the certified materials list are available before rigging the load.

4. Ensure that all preparation steps outlined in TM 4-48.10 are followed before rigging the load.

5. Prepare the load.

6. Remove the sling from the storage bag.

7. Place the apex fitting centered at the top of the load.

8. Route the outer sling legs and the inner sling legs to their respective lifting provisions.

9. Loop the free end of the chain on each sling through the lifting provision and insert the proper chain in the grabhook.

10. Secure any excess chain with tape or nylon cord.

11. Tape or tie (breakaway technique) the sling legs to the load or other sling legs to prevent any entanglement of the sling legs with the load when the helicopter removes the slack in the legs.

12. Check the rigging to ensure it will not become entangled with the load (see Figure 3-170).

13. Check for untaped or unpadded load areas that could damage the slings.

NOTE: All loads rigged must be inspected by a certified sling load inspector and a copy of the Sling Load Inspection Record must be attached to the load.

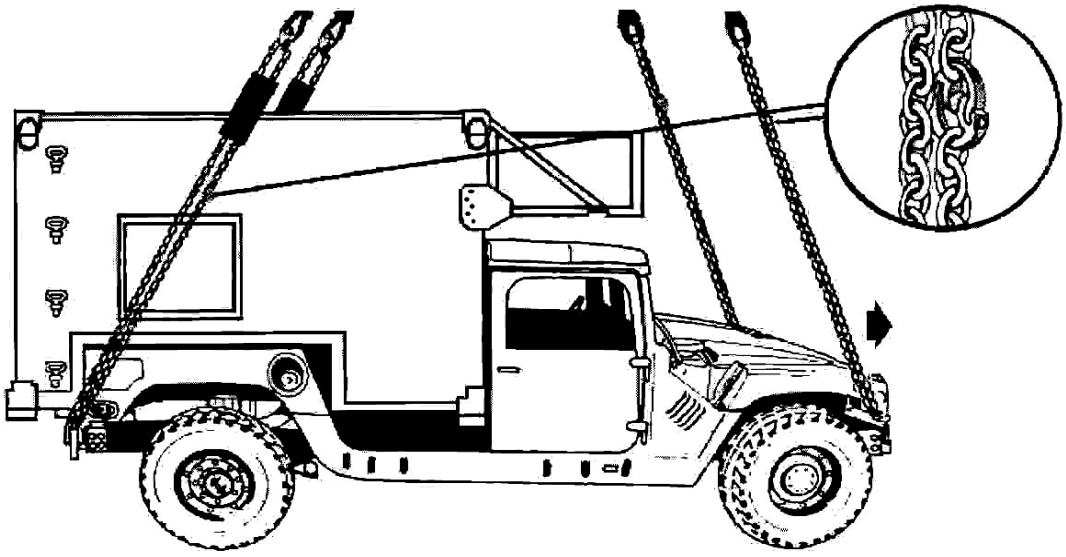


Figure 3-170

Load with Four-lift Points

Evaluation Preparation: TEnsure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on rigging a single point load for external air transport.

Performance Measures	**GO**	**NO GO**
1. Located the rigging procedure for the item of equipment.	_____	_____
2. Verified that the equipment corresponded to the item nomenclature in the load	_____	_____

Performance Measures		GO	NO GO
	description section of the rigging procedure.		
3.	Ensured that the items on the certified materials list were available before rigging the load.	_____	_____
4.	Ensured that all preparation steps were followed before rigging the load.	_____	_____
5.	Prepared the load.	_____	_____
6.	Removed the sling from the storage bag.	_____	_____
7.	Placed the apex fitting centered at the top of the load.	_____	_____
8.	Routed the outer sling legs and the inner sling legs to their respective lifting provisions.	_____	_____
9.	Looped the free end of the chain on each sling through the lifting provision and inserted the proper chain in the grabhook.	_____	_____
10.	Secured any excess chain with tape or nylon cord.	_____	_____
11.	Taped or tied (breakaway technique) the sling legs to the load or other sling legs.	_____	_____
12.	Checked the rigging to ensure it would not become entangled with the load.	_____	_____
13.	Checked for untaped or unpadded load areas that could damage the slings.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 4-48.09 Multiservice Helicopter Sling Load: Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}	
TM 4-48.10 Multiservice Helicopter Sling Load: Single-point Load Rigging Procedures	

Subject Area 27: Basic Cargo Operations (Shore)

551-88H-3518
Direct Temporary Storage of Dangerous or Hazardous Cargo

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to direct temporary storage of dangerous or hazardous cargo in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, dangerous or hazardous cargo, storage instructions, storage area, and dunnage.

Standards: Direct temporary storage of dangerous or hazardous cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked with directing the temporary storage of dangerous or hazardous cargo.

Note: None

Performance Steps

1. Ensure the storage area is clean, level, and well drained.

2. Provide shelter if dangerous or hazardous cargo is subject to weather or temperature.

3. Ensure dangerous or hazardous cargo is stowed away from over-head power lines and in areas free of combustible material.

4. Ensure dangerous or hazardous cargo is stacked as specified by storage instructions.

5. Ensure dunnage, if used, is the type specified in the governing storage instructions.

6. Restrict activity in the storage area to receiving, inspecting, and discharging.

7. Ensure guards are posted and signs are displayed for dangerous, hazardous, or classified cargo.

8. Inspect dangerous hazardous cargo often, including checking gauges on any sealed container to determine its condition.

9. Ensure commodity distance tables are followed.

10. Ensure adequate decontamination or fire fighting teams, or both, are readily available when special weapons are stored.

11. Report discrepancies to the supervisor.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing temporary storage of dangerous or hazardous cargo.

Performance Measures		**GO**	**NO GO**
1.	Ensured the storage area was clean, level, and well drained.	_____	_____
2.	Provided shelter if dangerous or hazardous cargo was subject to weather or temperature.	_____	_____
3.	Ensured dangerous or hazardous cargo was stowed away from over-head power lines and in areas free of combustible material.	_____	_____
4.	Ensured dangerous or hazardous cargo was stacked as specified by storage instructions.	_____	_____
5.	Ensured dunnage, if used, was the type specified in the governing storage instructions.	_____	_____
6.	Restricted activity in the storage area to receiving, inspecting, and discharging.	_____	_____
7.	Ensured guards were posted and signs were displayed for dangerous, hazardous, or classified cargo.	_____	_____
8.	Inspected dangerous hazardous cargo often, including checking gauges on any sealed container to determine its condition.	_____	_____
9.	Ensured commodity distance tables were followed.	_____	_____
10.	Ensured adequate decontamination or fire fighting teams, or both, were readily available when special weapons were stored.	_____	_____
11.	Reported discrepancies to the supervisor.	_____	_____

Performance Measures **GO** **NO GO**

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
CFR Title 46 Shipping	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3517
Direct Dangerous or Hazardous Cargo Operations for Motor Transport Movement

DANGER

Adhere to all DANGER statements listed with the handling of dangerous or hazardous cargo while conducting motor transport movements. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed with the handling of dangerous or hazardous cargo while conducting motor transport movements. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed with the handling of dangerous or hazardous cargo while conducting motor transport movements. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a section chief with the requirement to direct dangerous or hazardous cargo operations for motor transport movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a cargo truck, forklift, dangerous or hazardous cargo, blocking, bracing, and tie-down equipment, fire extinguishers, and DD Form 626 [Motor Vehicle Inspection (Transporting Hazardous Materials)].

Standards: Direct dangerous or hazardous cargo operations for motor transport movement without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked to direct dangerous or hazardous cargo operations for motor transport movement.

Note: None

Performance Steps

1. Review DD Form 626 for completeness (see Figure 3-171).
    a. Ensure that each item on the form is filled out completely.
    b. Ensure that deficiencies are corrected before vehicles are loaded.
2. Ensure firefighting equipment is available and readily accessible.

3. Ensure that NO SMOKING signs are posted 50 feet from the loading area.

4. Direct truck drivers to turn motors off while explosives and flammables are being loaded.

5. Ensure that gasoline-operated forklifts are equipped with spark arrestors.

6. Ensure that cargo labels match cargo being loaded.

7. Direct the loading of cargo.

a. Ensure personnel follow proper cargo loading procedures.

b. Ensure personnel exercise proper care when loading hazardous cargo.

c. Ensure cargo is not being overloaded.

8. Check vehicles for proper labels and markings, taking classified issues into consideration.

9. Ensure that cargo on the truck and trailer has been properly blocked and braced to prevent movement during transport.

10. Direct the load team to correct any discrepancies immediately.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)
(Read instructions before completing this form.)

This form applies to all vehicles which must be marked or placarded in accordance with Title 49 CFR.	1. BILL OF LADING/TRANSPORTATION CONTROL NUMBER

SECTION 1 - DOCUMENTATION	ORIGIN a.	DESTINATION b.
2. CARRIER/GOVERNMENT ORGANIZATION	1-505th Arty Bn	
3. DATE/TIME OF INSPECTION	1 July 2006/1009	
4. LOCATION OF INSPECTION	1-505th Arty Bn	
5. OPERATOR(S) NAME(S)	CPL Walker, SGT Tollen	
6. OPERATOR(S) LICENSE NUMBER(S)	USA# 0748-84/USA 4881-70	
7. MEDICAL EXAMANER'S CERTIFICATE*	N/A	

8. *(X if satisfactory at origin)*

								9. CVSA DECAL DISPLAYED ON COMMERCIAL EQUIPMENT*	YES	NO
a. MILITARY HAZMAT ENDORSEMENT	X	d. ERG OR EQUIVALENT COMMERCIAL:		YES		NO		a. TRUCK/TRACTOR	X	
b. VALID LEASE*		e. DRIVER'S VEHICLE INSPECTION REPORT*					X	b. TRAILER	X	
c. ROUTE PLAN										

SECTION II - MECHANICAL INSPECATION
All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.

10. TYPE OF VEHICLE(S)	11. VEHICLE NUMBER(S)
Truck, cargo, 2 1/2-ton M35A2C	USA 1326647

12. PART INSPECTED *(X if applicable)*	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT		ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
a. SPARE ELECTRICAL FUSES	X				k. EXHAUST SYSTEM	X				
b. HORN OPERATIVE	X				l. BRAKE SYSTEM*	X				
c. STEERING SYSTEM	X				m. SUSPENSION	X				
d. WINDSHIELD/WIPERS	X				n. COUPLING DEVICES	X				
e. MIRRORS	X				o. CARGO SPACE	X				
f. WARNING EQUIPMENT	X				p. LANDING GEAR*	X				
g. FIRE EXTINGUISHER*	X				q. TIRES, WHEELS, RIMS	X				
h. ELECTRICAL WIRING	X				r. TAILGATE/DOORS*	X				
i. LIGHTS AND REFLECTORS	X				s. TARPAULIN*	X				
j. FUEL SYSTEM*	X				t. OTHER *(Specify)*					

13. INSPECTION RESULTS *(X one)* ACCEPTED [ ] REJECTED [ ]
(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)

14. SATELLITE MOTOR SURVEILLANCE SYSTEM: *(X one)* ACCEPTED [ ] REJECTED [ ]

15. REMARKS

SAMPLE

16. INSPECTOR SIGNATURE *(Origin)*	17. INSPECTOR SIGNATURE *(Destination)*
Marvin Lee	

SECTION III - POST LOADING INSPECTION
This section applies to Commercial and Government/Military vehicles. All items will be checked prior to release of loaded equipment and shall be checked on all incoming loaded equipment.

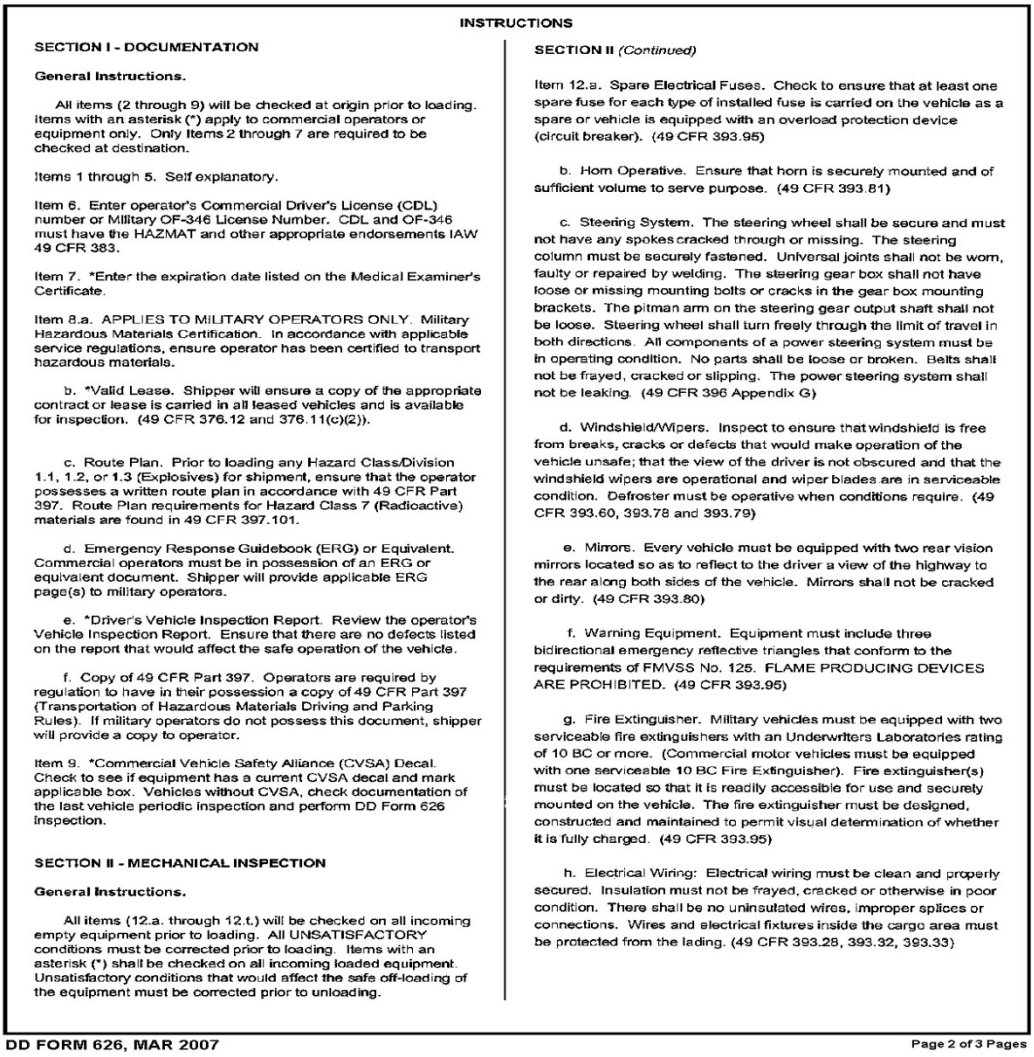
	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR					
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT					
20. SEALS APPLIED TO CLOSED VEHICLE; TARPAULIN APPLIED ON OPEN EQUIPMENT					
21. PROPER PLACARDS APPLIED					
22. SHIPPING PAPERS/DD FORM 836 FOR GOVERNMENT VEHICLE SHIPMENTS					
23. COPY OF DD FORM 626 FOR DRIVER					
24. SHIPPED UNDER DOT SPECIAL PERMIT 868					

25. INSPECTOR SIGNATURE *(Origin)*	26. DRIVER(S) SIGNATURE *(Origin)*
Moe Howard	Bud Abbott
27. INSPECTOR SIGNATURE *(Destination)*	28. DRIVER(S) SIGNATURE *(Destination)*
Larry Fine	Lou Costello

DD FORM 626, MAR 2007 PREVIOUS EDITION IS OBSOLETE. Page 1 of 3 Pages
Adobe Professional 7.0

Figure 3-171

Sample of DD Form 626



INSTRUCTIONS

SECTION I - DOCUMENTATION

General Instructions.

All items (2 through 9) will be checked at origin prior to loading. Items with an asterisk (*) apply to commercial operators or equipment only. Only Items 2 through 7 are required to be checked at destination.

Items 1 through 5. Self explanatory.

Item 6. Enter operator's Commercial Driver's License (CDL) number or Military OF-346 License Number. CDL and OF-346 must have the HAZMAT and other appropriate endorsements IAW 49 CFR 383.

Item 7. *Enter the expiration date listed on the Medical Examiner's Certificate.

Item 8.a. APPLIES TO MILITARY OPERATORS ONLY. Military Hazardous Materials Certification. In accordance with applicable service regulations, ensure operator has been certified to transport hazardous materials.

b. *Valid Lease. Shipper will ensure a copy of the appropriate contract or lease is carried in all leased vehicles and is available for inspection. (49 CFR 376.12 and 376.11(c)(2)).

c. Route Plan. Prior to loading any Hazard Class/Division 1.1, 1.2, or 1.3 (Explosives) for shipment, ensure that the operator possesses a written route plan in accordance with 49 CFR Part 397. Route Plan requirements for Hazard Class 7 (Radioactive) materials are found in 49 CFR 397.101.

d. Emergency Response Guidebook (ERG) or Equivalent. Commercial operators must be in possession of an ERG or equivalent document. Shipper will provide applicable ERG page(s) to military operators.

e. *Driver's Vehicle Inspection Report. Review the operator's Vehicle Inspection Report. Ensure that there are no defects listed on the report that would affect the safe operation of the vehicle.

f. Copy of 49 CFR Part 397. Operators are required by regulation to have in their possession a copy of 49 CFR Part 397 (Transportation of Hazardous Materials Driving and Parking Rules). If military operators do not possess this document, shipper will provide a copy to operator.

Item 9. *Commercial Vehicle Safety Alliance (CVSA) Decal. Check to see if equipment has a current CVSA decal and mark applicable box. Vehicles without CVSA, check documentation of the last vehicle periodic inspection and perform DD Form 626 inspection.

SECTION II - MECHANICAL INSPECTION

General Instructions.

All items (12.a. through 12.t.) will be checked on all incoming empty equipment prior to loading. All UNSATISFACTORY conditions must be corrected prior to loading. Items with an asterisk (*) shall be checked on all incoming loaded equipment. Unsatisfactory conditions that would affect the safe off-loading of the equipment must be corrected prior to unloading.

SECTION II *(Continued)*

Item 12.a. Spare Electrical Fuses. Check to ensure that at least one spare fuse for each type of installed fuse is carried on the vehicle as a spare or vehicle is equipped with an overload protection device (circuit breaker). (49 CFR 393.95)

b. Horn Operative. Ensure that horn is securely mounted and of sufficient volume to serve purpose. (49 CFR 393.81)

c. Steering System. The steering wheel shall be secure and must not have any spokes cracked through or missing. The steering column must be securely fastened. Universal joints shall not be worn, faulty or repaired by welding. The steering gear box shall not have loose or missing mounting bolts or cracks in the gear box mounting brackets. The pitman arm on the steering gear output shaft shall not be loose. Steering wheel shall turn freely through the limit of travel in both directions. All components of a power steering system must be in operating condition. No parts shall be loose or broken. Belts shall not be frayed, cracked or slipping. The power steering system shall not be leaking. (49 CFR 396 Appendix G)

d. Windshield/Wipers. Inspect to ensure that windshield is free from breaks, cracks or defects that would make operation of the vehicle unsafe; that the view of the driver is not obscured and that the windshield wipers are operational and wiper blades are in serviceable condition. Defroster must be operative when conditions require. (49 CFR 393.60, 393.78 and 393.79)

e. Mirrors. Every vehicle must be equipped with two rear vision mirrors located so as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. Mirrors shall not be cracked or dirty. (49 CFR 393.80)

f. Warning Equipment. Equipment must include three bidirectional emergency reflective triangles that conform to the requirements of FMVSS No. 125. FLAME PRODUCING DEVICES ARE PROHIBITED. (49 CFR 393.95)

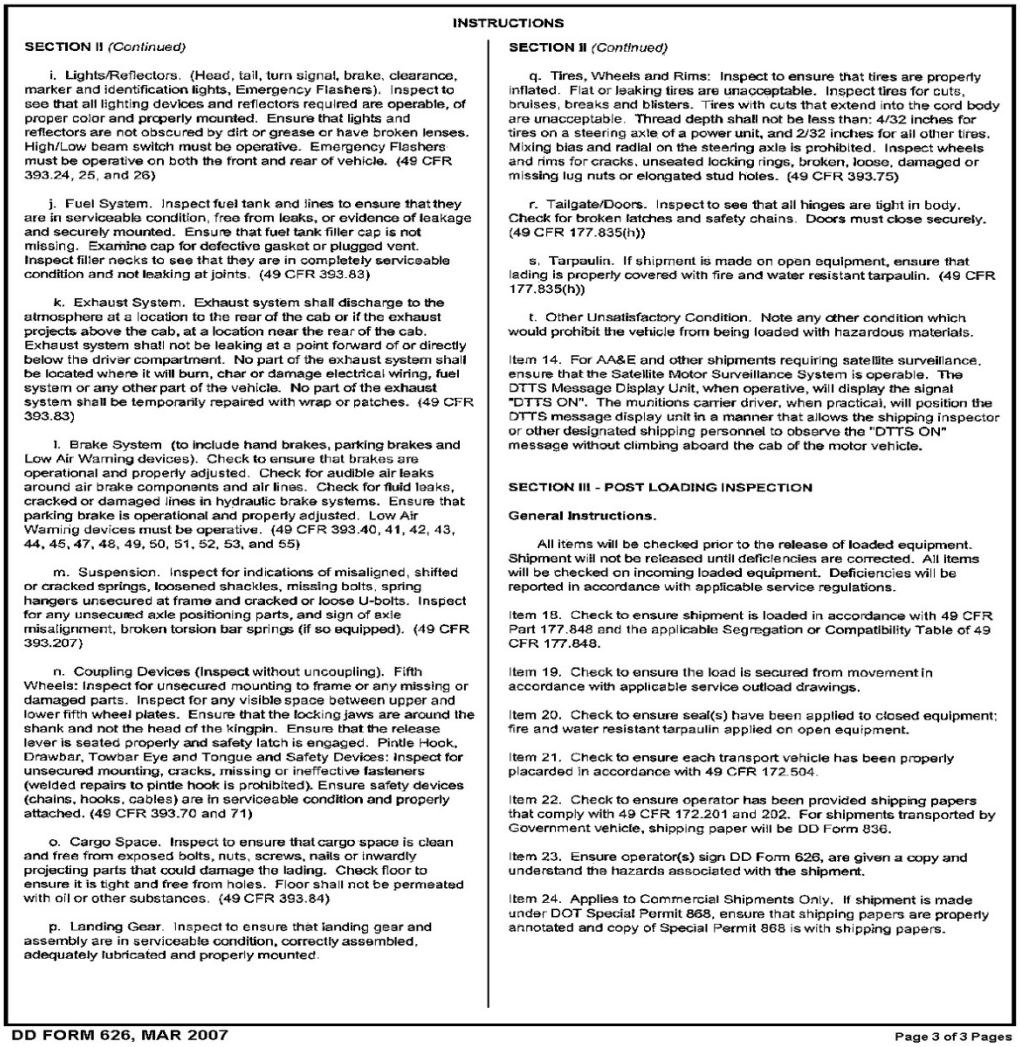
g. Fire Extinguisher. Military vehicles must be equipped with two serviceable fire extinguishers with an Underwriters Laboratories rating of 10 BC or more. (Commercial motor vehicles must be equipped with one serviceable 10 BC Fire Extinguisher). Fire extinguisher(s) must be located so that it is readily accessible for use and securely mounted on the vehicle. The fire extinguisher must be designed, constructed and maintained to permit visual determination of whether it is fully charged. (49 CFR 393.95)

h. Electrical Wiring: Electrical wiring must be clean and properly secured. Insulation must not be frayed, cracked or otherwise in poor condition. There shall be no uninsulated wires, improper splices or connections. Wires and electrical fixtures inside the cargo area must be protected from the lading. (49 CFR 393.28, 393.32, 393.33)

DD FORM 626, MAR 2007 Page 2 of 3 Pages

Figure 3-171

Sample of DD Form 626 (continued)



INSTRUCTIONS

SECTION II *(Continued)*

i. Lights/Reflectors. (Head, tail, turn signal, brake, clearance, marker and identification lights, Emergency Flashers). Inspect to see that all lighting devices and reflectors required are operable, of proper color and properly mounted. Ensure that lights and reflectors are not obscured by dirt or grease or have broken lenses. High/Low beam switch must be operative. Emergency Flashers must be operative on both the front and rear of vehicle. (49 CFR 393.24, 25, and 26)

j. Fuel System. Inspect fuel tank and lines to ensure that they are in serviceable condition, free from leaks, or evidence of leakage and securely mounted. Ensure that fuel tank filler cap is not missing. Examine cap for defective gasket or plugged vent. Inspect filler necks to see that they are in completely serviceable condition and not leaking at joints. (49 CFR 393.83)

k. Exhaust System. Exhaust system shall discharge to the atmosphere at a location to the rear of the cab or if the exhaust projects above the cab, at a location near the rear of the cab. Exhaust system shall not be leaking at a point forward of or directly below the driver compartment. No part of the exhaust system shall be located where it will burn, char or damage electrical wiring, fuel system or any other part of the vehicle. No part of the exhaust system shall be temporarily repaired with wrap or patches. (49 CFR 393.83)

l. Brake System (to include hand brakes, parking brakes and Low Air Warning devices). Check to ensure that brakes are operational and properly adjusted. Check for audible air leaks around air brake components and air lines. Check for fluid leaks, cracked or damaged lines in hydraulic brake systems. Ensure that parking brake is operational and properly adjusted. Low Air Warning devices must be operative. (49 CFR 393.40, 41, 42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, and 55)

m. Suspension. Inspect for indications of misaligned, shifted or cracked springs, loosened shackles, missing bolts, spring hangers unsecured at frame and cracked or loose U-bolts. Inspect for any unsecured axle positioning parts, and sign of axle misalignment, broken torsion bar springs (if so equipped). (49 CFR 393.207)

n. Coupling Devices (Inspect without uncoupling). Fifth Wheels: Inspect for unsecured mounting to frame or any missing or damaged parts. Inspect for any visible space between upper and lower fifth wheel plates. Ensure that the locking jaws are around the shank and not the head of the kingpin. Ensure that the release lever is seated properly and safety latch is engaged. Pintle Hook, Drawbar, Towbar Eye and Tongue and Safety Devices: Inspect for unsecured mounting, cracks, missing or ineffective fasteners (welded repairs to pintle hook is prohibited). Ensure safety devices (chains, hooks, cables) are in serviceable condition and properly attached. (49 CFR 393.70 and 71)

o. Cargo Space. Inspect to ensure that cargo space is clean and free from exposed bolts, nuts, screws, nails or inwardly projecting parts that could damage the lading. Check floor to ensure it is tight and free from holes. Floor shall not be permeated with oil or other substances. (49 CFR 393.84)

p. Landing Gear. Inspect to ensure that landing gear and assembly are in serviceable condition, correctly assembled, adequately lubricated and properly mounted.

SECTION II *(Continued)*

q. Tires, Wheels and Rims: Inspect to ensure that tires are properly inflated. Flat or leaking tires are unacceptable. Inspect tires for cuts, bruises, breaks and blisters. Tires with cuts that extend into the cord body are unacceptable. Thread depth shall not be less than: 4/32 inches for tires on a steering axle of a power unit, and 2/32 inches for all other tires. Mixing bias and radial on the steering axle is prohibited. Inspect wheels and rims for cracks, unseated locking rings, broken, loose, damaged or missing lug nuts or elongated stud holes. (49 CFR 393.75)

r. Tailgate/Doors. Inspect to see that all hinges are tight in body. Check for broken latches and safety chains. Doors must close securely. (49 CFR 177.835(h))

s. Tarpaulin. If shipment is made on open equipment, ensure that lading is properly covered with fire and water resistant tarpaulin. (49 CFR 177.835(h))

t. Other Unsatisfactory Condition. Note any other condition which would prohibit the vehicle from being loaded with hazardous materials.

Item 14. For AA&E and other shipments requiring satellite surveillance, ensure that the Satellite Motor Surveillance System is operable. The DTTS Message Display Unit, when operative, will display the signal "DTTS ON". The munitions carrier driver, when practical, will position the DTTS message display unit in a manner that allows the shipping inspector or other designated shipping personnel to observe the "DTTS ON" message without climbing aboard the cab of the motor vehicle.

SECTION III - POST LOADING INSPECTION

General Instructions.

All items will be checked prior to the release of loaded equipment. Shipment will not be released until deficiencies are corrected. All items will be checked on incoming loaded equipment. Deficiencies will be reported in accordance with applicable service regulations.

Item 18. Check to ensure shipment is loaded in accordance with 49 CFR Part 177.848 and the applicable Segregation or Compatibility Table of 49 CFR 177.848.

Item 19. Check to ensure the load is secured from movement in accordance with applicable service outload drawings.

Item 20. Check to ensure seal(s) have been applied to closed equipment; fire and water resistant tarpaulin applied on open equipment.

Item 21. Check to ensure each transport vehicle has been properly placarded in accordance with 49 CFR 172.504.

Item 22. Check to ensure operator has been provided shipping papers that comply with 49 CFR 172.201 and 202. For shipments transported by Government vehicle, shipping paper will be DD Form 836.

Item 23. Ensure operator(s) sign DD Form 626, are given a copy and understand the hazards associated with the shipment.

Item 24. Applies to Commercial Shipments Only. If shipment is made under DOT Special Permit 868, ensure that shipping papers are properly annotated and copy of Special Permit 868 is with shipping papers.

DD FORM 626, MAR 2007 **Page 3 of 3 Pages**

Figure 3-171

Sample of DD Form 626 (continued)

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing dangerous or hazardous cargo operations for motor transport movement.

Performance Measures	**GO**	**NO GO**
1. Reviewed DD Form 626 for completeness.	_____	_____
2. Ensured firefighting equipment was available and readily accessible.	_____	_____
3. Ensured that NO SMOKING signs were posted 50 feet from the loading area.	_____	_____
4. Directed truck drivers to turn motors off while explosives and flammables were being loaded	_____	_____
5. Ensured that gasoline-operated forklifts were equipped with spark arrestors.	_____	_____

Performance Measures	GO	NO GO
6. Ensured cargo labels matched cargo being loaded.	_____	_____
7. Directed the loading of cargo.	_____	_____
8. Checked vehicles for proper labels and markings, taking classified issues into consideration.	_____	_____
9. Ensured that cargo on the trucks had been properly blocked and braced to prevent movement during transport.	_____	_____
10. Directed the load team to correct any discrepancies immediately.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
ATP 4-11 Army Motor Transport Operations

CFR Title 49 Transportation Part 177

DD FORM 626 Motor Vehicle Inspection (Transporting Hazardous Materials)

TC 4-13.17 Cargo Specialist's Handbook

Primary
ATP 4-11 Army Motor Transport Operations

Subject Area 28: Basic Cargo Documentation

551-88H-3527
Determine Compatibility of Dangerous or Hazardous Cargo

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a load planner with the requirement to determine compatibility of dangerous or hazardous cargo in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, and dangerous or hazardous cargo.

Standards: Determine compatibility of dangerous or hazardous cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a load planner tasked to determine compatibility of dangerous or hazardous cargo.

Note: None

Performance Steps

1. Locate the United States Coast Guard (USCG) class and Department of Transportation (DOT) class on the cargo shipping label of the commodities to be stowed.

2. Locate the DOT class of the other commodity to be stowed on the left side of the compatibility chart (see Figure 3-172).

3. Draw an imaginary line on the compatibility chart horizontally and vertically from the two classes of commodities to be stowed.

4. Determine from looking at the point where the two lines intersect, whether the two commodities may be stowed together.

CARGO COMPATIBILITY / CARGO GROUPS	REACTIVE GROUPS	1. NON-OXIDIZING MINERAL ACIDS	2. SULFURIC ACID	3. NITRIC ACID	4. ORGANIC ACIDS	5. CAUSTICS	6. AMMONIA	7. ALIPHATIC AMINES	8. ALKANOL AMINES	9. AROMATIC AMINES	10. AMIDES	11. ORGANIC ANHYDRIDES	12. ISOCYANATES	13. VINYL ACETATE	14. ACRYLATES	15. SUBSTITUTED ALLYLS	16. ALKYLENE OXIDES	17. EPICHLOROHYDRIN	18. KETONES	19. ALDEHYDES	20. ALCOHOLS, GLYCOLS	21. PHENOLS, CRESOLS			
1. NON-OXIDIZING MINERAL ACIDS			X			X	X	X	X	X	X	X	X	X			X	X							1
2. SULFURIC ACID		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		2
3. NITRIC ACID			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			3
4. ORGANIC ACIDS			X			X	X	X	X				X				X	X							4
5. CAUSTICS		X	X	X	X							X	X				X	X		X	X	X	X		5
6. AMMONIA		X	X	X	X						X	X	X	X			X	X		X					6
7. ALIPHATIC AMINES		X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X		7
8. ALKANOL AMINES		X	X	X	X							X	X	X	X	X	X	X		X					8
9. AROMATIC AMINES		X	X	X								X	X							X					9
10. AMIDES		X	X	X			X						X									X			10
11. ORGANIC ANHYDRIDES		X	X	X		X	X	X	X	X															11
12. ISOCYANATES		X	X	X	X	X	X	X	X	X	X										X		X		12
13. VINYL ACETATE		X	X	X			X	X	X																13
14. ACRYLATES			X	X				X	X																14
15. SUBSTITUTED ALLYLS			X	X				X	X																15
16. ALKYLENE OXIDES		X	X	X	X	X	X	X	X																16
17. EPICHLOROHYDRIN		X	X	X	X	X	X	X	X																17
18. KETONES			X	X				X																	18
19. ALDEHYDES			X	X		X	X	X	X	X															19
20. ALCOHOLS, GLYCOLS			X	X		X		X					X												20
21. PHENOLS, CRESOLS			X	X		X		X			X														21
22. CAPROLACTAM SOLUTION			X			X		X					X												22
30. OLEFINS			X	X																					30
31. PARAFFINS																									31
32. AROMATIC HYDROCARBONS				X																					32
33. MISCELLANEOUS HYDROCARBON MIXTURES				X																					33
34. ESTERS			X	X																					34
35. VINYL HALIDES				X																			X		35
36. HALOGENATED HYDROCARBONS																									36
37. NITRILES			X																						37
38. CARBON DISULFIDE								X	X																38
39. SULFOLANE																									39
40. GLYCOL ETHERS			X										X												40
41. ETHERS			X	X																					41
42. NITROCOMPOUNDS						X	X	X	X	X															42
43. MISCELLANEOUS WATER SOLUTIONS			X										X												43
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		

Figure 3-172

Cargo Compatibility Chart

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on determining compatibility of dangerous or hazardous cargo.

Performance Measures	**GO**	**NO GO**
1. Located the USCG and DOT classes on the cargo shipping label of the commodities to be stowed.	_____	_____
2. Located the DOT class of the other commodity to be stowed on the left side of the compatibility chart.	_____	_____

Performance Measures	GO	NO GO
3. Drew an imaginary line on the compatibility chart horizontally and vertically from the two classes of commodities to be stowed.	_____	_____
4. Determined from looking at the point where the two lines intersected, whether the two commodities could be stowed together.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
CFR Title 46 Shipping Parts 146 to 150.160 and Volume 2	
CFR Title 49 Transportation Parts 100 to 185	

551-88H-3509
Review Ocean Cargo Documentation for Loading or Discharge

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a load planner with the requirement to review ocean cargo documentation for loading or discharge in an operational environment at a terminal or an outport, during the day or night, in normal weather conditions, a completed risk assessment, DD Form 1386 (Ocean Cargo Manifest Recapitulation or Summary), stowage plan, tally sheet, and dunnage.

Standards: Review ocean cargo documentation for loading or discharge without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a load planner tasked with reviewing the cargo documentation for the loading or discharge of a vessel.

Note: None

Performance Steps

1. Read the manifest and stowage plan for outsize or special handling cargo (see Figure 3-173 and Figure 3-174).

a. Locate port code to determine cargo of outsize dimensions.

b. Locate port code to determine cargo that will because of weight or configuration require heavy lift or special handling.

[X] RECAPITULATION (Line a applicable) [ ] SUMMARY (Line b applicable)

OCEAN CARGO MANIFEST RECAPITULATION OR SUMMARY

[X] ORIGINAL [ ] REVISED

1. VESSEL NAME	2. STATUS	3. VOY DOC NO.	4. DATE (YYYYMMDD)	5. LOADING PORT	6. HEAVY LIFTS	7. OUTSIZE DIMENSION	PAGE NO.	NO. OF PAGES
USS Fort LEE	13	P1109	20070528	571MJ, Norfolk	1	8	1	1

8. DESCRIPTION AND LOCATION OF HEAVY LIFTS AND OTHER SPECIAL DATA

9. TOTAL CARGO LOADED

	(1) DESTINATION PORT	(2) DESCRIPTION	(3) LENGTH-WIDTH-HEIGHT	(4) SELF SUS	(5) NON S.S.	(6) VES	(7) CGO	(8) STOW LOCATION	(9) LONG TONS	(1) DESTINATION PORT	(2) SVC	(3) LONG TONS	(4) MEASUREMENT TONS	(5) SQUARE FEET
a.	Kuwait	Crane	420L 120W 120H		X		X	30DP	S	BRI Bahrain	N	810	1650	
										KLF Arab Emirates	A	175	610	
										PN3 Kuwait	N	110	310	
										Total		1095	2570	
b.	(1) DESTINATION PORT	(2) COMMODITY CATEGORY	(3) FOR MSC USE					(4) TRANSPORTATION ACCT CODE	(5) ON DECK	(1) NO. OF UNITS POV'S/MAIL OR OTHER				

SAMPLE

10. I HEREBY CERTIFY THAT THE ARTICLES LISTED HEREON HAVE BEEN PLACED ABOARD IN APPARENT GOOD ORDER AND CONDITION.

11. I HEREBY ACKNOWLEDGE having received the cargo manifestd hereon in apparent good order and condition for delivery as indicated, except as otherwise specifically noted.

a. SIGNATURE	b. GRADE OR RANK	c. TITLE	MASTER OF VESSEL (Signature)
Claude Williams	GS-12	DOC SUPV	Tom O'Day

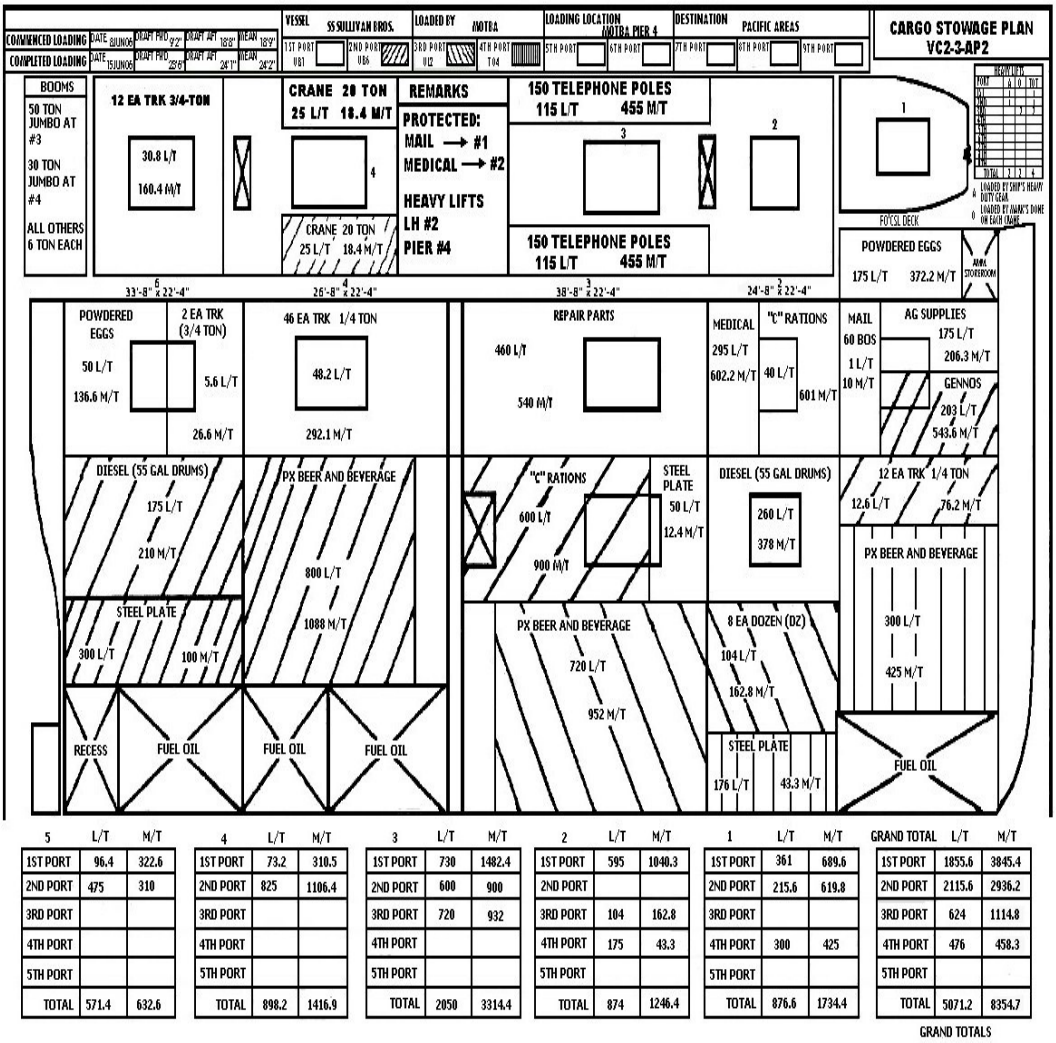
12. NAME AND MAILING ADDRESS OF PREPARING ACTIVITY

Military Ocean Terminal, Little Creek, Norfolk, VA 23564

DD FORM 1386, APR 2006 PREVIOUS EDITION IS OBSOLETE Adobe Professional 7.0

Figure 3-173

Sample of DD Form 1386 (Ocean Manifest Recapitulation or Summary)



5	L/T	M/T
1ST PORT	96.4	322.6
2ND PORT	475	310
3RD PORT		
4TH PORT		
5TH PORT		
TOTAL	571.4	632.6

4	L/T	M/T
1ST PORT	73.2	310.5
2ND PORT	825	1106.4
3RD PORT		
4TH PORT		
5TH PORT		
TOTAL	898.2	1416.9

3	L/T	M/T
1ST PORT	730	1482.4
2ND PORT	600	900
3RD PORT	720	932
4TH PORT		
5TH PORT		
TOTAL	2050	3314.4

2	L/T	M/T
1ST PORT	595	1040.3
2ND PORT		
3RD PORT	104	162.8
4TH PORT	175	43.3
5TH PORT		
TOTAL	874	1246.4

1	L/T	M/T
1ST PORT	361	689.6
2ND PORT	215.6	619.8
3RD PORT		
4TH PORT	300	425
5TH PORT		
TOTAL	876.6	1734.4

GRAND TOTAL	L/T	M/T
1ST PORT	1855.6	3845.4
2ND PORT	2115.6	2936.2
3RD PORT	624	1114.8
4TH PORT	476	458.3
5TH PORT		
TOTAL	5071.2	8354.7

Figure 3-174

Stowage Plan

2. Read the manifest and stowage plan for remarks on special cargo items.

   a. Locate quantity and location of mail.

   b. Locate quantity and location of cargo of unusual value.

   c. Locate quantity and location of protected, controlled, pilferable, and sensitive cargo.

3. Determine capacity and location of ship's booms.

   a. Determine if the ship is self-sustaining or non-self-sustaining.

   b. Locate the capacity of the ship's boom.

   c. Determine location of the booms.

4. Prepare for rigging of cargo boom for loading different types of cargo and heavy lifts.

5. Coordinate for temporary storage areas, as needed, to segregate cargo (outsize/special) before onward movement.

6. Locate cargo designated to be deck stowed.

7. Prepare to lay dunnage or build special construction.

8. Determine areas for stowage of hazardous cargo.

9. Prepare for construction of magazine, if required.

10. Determine requirement for materials handling equipment (MHE), container-handling equipment, and cargo-handling gear.

11. Coordinate requirements for transport modes for terminal clearance.

a. Determine the transport mode to be used.

b. Determine if rail, truck, air, or inland barge is to be used.

c. Expedite cargo from terminal as quickly as possible by loading cargo directly onto trailers and railway equipment.

12. Prepare for cargo documentation (hatch tallies), identifying personnel to tally the cargo.

13. Determine the number of hatch gangs needed (based on storage area available and terminal clearance capability).

14. Plan to discharge priority cargo and expedite its clearance.

a. Ensure all priority cargo is unloaded first.

b. Expedite the shipment by unloading it directly on the waiting mode of transportation.

15. Determine the need for lighterage to:

a. Permit simultaneous discharge on both sides of the vessel.

b. Prevent handling of cargo designated for clearance by inland waterway.

c. Receive heavy lifts discharged by floating cranes.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on reviewing ocean cargo documentation for loading or discharge.

Performance Measures	**GO**	**NO GO**
1. Read the manifest and stowage plan for outsize or special handling cargo.	_____	_____
2. Read the manifest and stowage plan for remarks on special cargo items.	_____	_____
3. Determined capacity and location of ship's booms.	_____	_____

Performance Measures		GO	NO GO
4.	Prepared for rigging of cargo boom for loading different types of cargo and heavy lifts.	_____	_____
5.	Coordinated for temporary storage areas, as needed, to segregate cargo (outsize/special) before onward movement.	_____	_____
6.	Located cargo designated to be deck stowed.	_____	_____
7.	Prepared to lay dunnage or build special construction.	_____	_____
8.	Determined areas for stowage of hazardous cargo.	_____	_____
9.	Prepared for construction of magazine, if required.	_____	_____
10.	Determined requirement for MHE, container-handling equipment, and cargo-handling gear.	_____	_____
11.	Coordinated requirements for transport modes for terminal clearance.	_____	_____
12.	Prepared for cargo documentation (hatch tallies), identifying personnel to tally the cargo.	_____	_____
13.	Determined the number of hatch gangs needed (based on storage area available and terminal clearance capability).	_____	_____
14.	Planned to discharge priority cargo and expedite its clearance.	_____	_____
15.	Determined the need for lighterage.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-12 Army Container Operations	
ATP 4-13 Army Expeditionary Intermodal Operations	
DD FORM 1386 Ocean Cargo Manifest Recapitulation or Summary	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3525
Locate Cargo Designated for Discharge

DANGER

Adhere to all DANGER statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a load planner with the requirement to locate cargo designated for discharge in an operational environment, during the day or night, in normal weather conditions, given safety equipment, cargo, and cargo stowage plan.

Standards: Locate cargo designated for discharge without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a load planner tasked to locate cargo designated for discharge.

Note: None

Performance Steps

1. Locate the ship's data section at the top of the stowage plan to gather information concerning the ship.

    a. Loading dates

    b. Draft measurements

    c. Vessel

    d. Loading location

    e. Destination

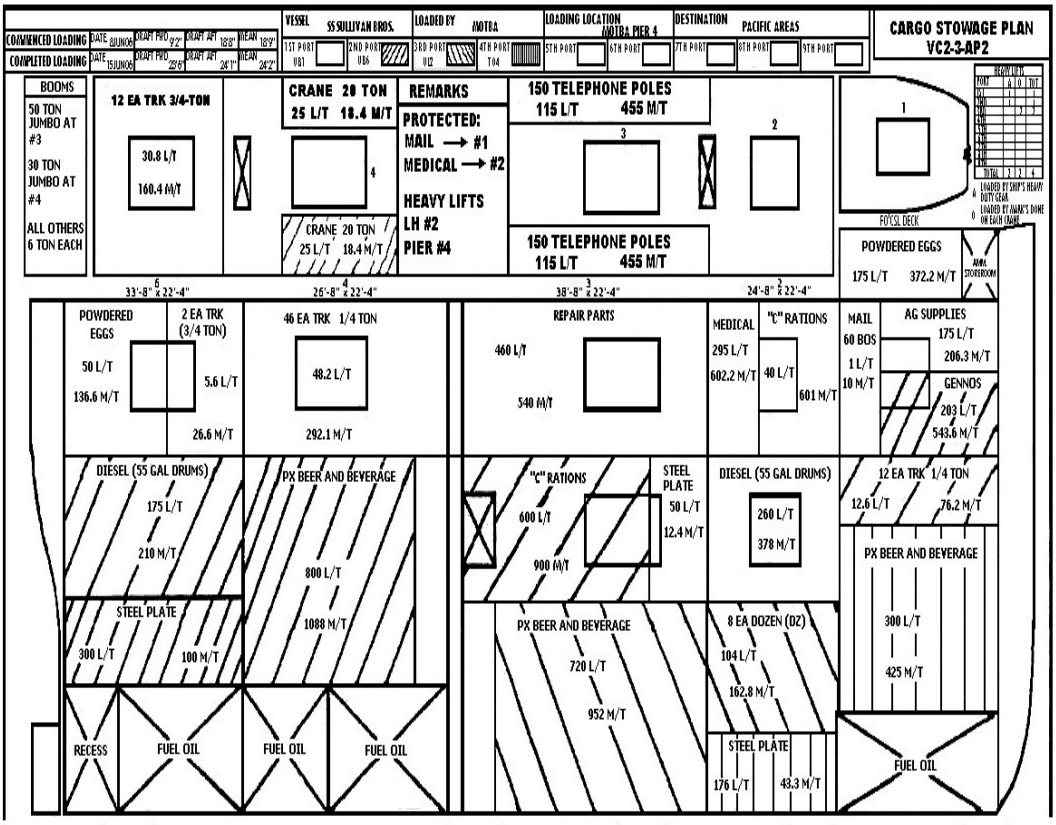
f. Port of discharge code

2. Execute the procedures required to locate cargo designated for discharge.

a. Find the port code.

b. Find the diagram on the stowage plan (see Figure 3-175) for the hatch to which assigned.

c. Compare codes shown in the hatch diagram with the code for the port.



5	L/T	M/T
1ST PORT	96.4	322.6
2ND PORT	475	310
3RD PORT		
4TH PORT		
5TH PORT		
TOTAL	571.4	632.6

4	L/T	M/T
1ST PORT	73.2	310.5
2ND PORT	825	1106.4
3RD PORT		
4TH PORT		
5TH PORT		
TOTAL	898.2	1416.9

3	L/T	M/T
1ST PORT	730	1482.4
2ND PORT	600	900
3RD PORT	720	932
4TH PORT		
5TH PORT		
TOTAL	2050	3314.4

2	L/T	M/T
1ST PORT	595	1040.3
2ND PORT		
3RD PORT	104	162.8
4TH PORT	175	43.3
5TH PORT		
TOTAL	874	1246.4

1	L/T	M/T
1ST PORT	361	689.6
2ND PORT	215.6	619.8
3RD PORT		
4TH PORT	300	425
5TH PORT		
TOTAL	876.6	1734.4

GRAND TOTAL	L/T	M/T
1ST PORT	1855.6	3845.4
2ND PORT	2115.6	2936.2
3RD PORT	624	1114.8
4TH PORT	476	458.3
5TH PORT		
TOTAL	5071.2	8354.7

Figure 3-175

Stowage Plan

3. Ensure all cargo scheduled for discharge is unloaded.

NOTE: During loading and discharging operations, personnel will maintain an hourly tonnage report and keep the stowage plan current by indicating the amount of cargo handled (hourly) and the amount remaining to be loaded or discharged.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on locating cargo desiginated for discharge.

Performance Measures	**GO**	**NO GO**
1. Located the ship's data section at the top of the stowage plan to gather information concerning the ship.	_____	_____
2. Executed the procedures required to locate cargo designated for discharge.	_____	_____
3. Ensured all cargo scheduled for discharge was unloaded.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3530
Interpret Data on Manifest

DANGER

Adhere to all DANGER statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a section chief with the requirement to interpret data on a manifest in an operational environment, during the day or night, in normal weather conditions, given cargo, and a manifest.

Standards: Interpret data on a manifest without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked with interpreting data on a manifest.

Note: None

Performance Steps

1. Locate POE and POD codes to find the loading port and decide whether cargo is scheduled for discharge.

2. Locate date the vessel sailed and voyage number to record on the situation report.

3. Locate vessel status code to determine the terms of shipping and responsibility for loading and discharge.

4. Locate vessel name to determine data and requirements for berthing space.

5. Locate vessel sustaining codes to determine if vessel is self-sustaining.

6. Determine type of MHE and transport equipment needed to discharge the vessel.

7. Coordinate requirements for equipment based on the cargo.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on interpreting data on a manifest.

Performance Measures	**GO**	**NO GO**
1. Located POE and POD codes to find the loading port and decided whether cargo was scheduled for discharge.	_____	_____
2. Located date the vessel sailed and voyage number to record on the situation report.	_____	_____
3. Located vessel status code to determine the terms of shipping and responsibility for loading and discharge.	_____	_____
4. Located vessel name to determine data and requirements for berthing space.	_____	_____
5. Located vessel sustaining codes to determine if vessel was self-sustaining.	_____	_____
6. Determined type of MHE and transport equipment needed to discharge the vessel.	_____	_____
7. Coordinated requirements for equipment based on the cargo.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DTR 4500.9-R-Part II Defense Transportation Regulation, Cargo Movement	

Subject Area 29: Basic Cargo Operations (Ship)

551-88H-3521
Supervise Loading of Flatracks Aboard a Cargo Vessel

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to supervise loading of flatracks aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo handlers, a signalman, Hagglunds crane, crane operator, safety clothing, flatracks, and taglines.

Standards: Supervise loading of flatracks aboard a cargo vessel without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked to supervise the loading of flatracks aboard a cargo vessel.

Note: None

Performance Steps

1. Ensure personnel follow directions for attaching the spreader to the hook.

2. Ensure that the spreader is positioned over the flatrack (load) or hatch (discharge).

3. Ensure personnel receive direction in placement of the folding flap of the flatrack back onto the flatracks.

4. Ensure that taglines are attached to the flatrack.

5. Ensure personnel receive direction for lowering the spreader onto the flatrack.

6. Ensure that the spreader is secured to the flatrack.

7. Ensure that the operator slowly lifts the flatrack until it clears the side of the vessel (loading) or the hatch (discharging).

8. Ensure personnel position the flatrack over the hatch to be loaded or over the side of the vessel.

9. Ensure personnel lower the flatrack onto hold (loading) or the dock or landing craft.

10. Ensure personnel disconnect the spreader from the flatrack.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising the loading of flatracks aboard a cargo vessel.

Performance Measures		**GO**	**NO GO**
1.	Ensured personnel followed directions on attaching the spreader to the hook.	_____	_____
2.	Ensured that the spreader was positioned over the flatrack or hatch.	_____	_____
3.	Ensured personnel received direction in placement of the folding flap of the flatrack back onto the flatracks.	_____	_____
4.	Ensured that taglines were attached to the flatrack.	_____	_____
5.	Ensured personnel received direction for lowering the spreader onto the flatrack.	_____	_____
6.	Ensured that the spreader was secured to the flatrack.	_____	_____
7.	Ensured that the operator slowly lifted the flatrack until it cleared the side of the vessel or the hatch.	_____	_____
8.	Ensured personnel positioned the flatrack over the hatch to be loaded or over the side of the vessel.	_____	_____
9.	Ensured personnel lowered the flatrack onto hold (loading) or the dock or landing craft.	_____	_____
10.	Ensured personnel disconnected the spreader from the flatrack.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3507
Direct Cargo Operations (Breakbulk)

DANGER

Adhere to all DANGER statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result serious in injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the equipment or vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a section chief aboard a breakbulk cargo vessel with the requirement to direct breakbulk cargo operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, ship's gear, cargo, vehicles, dunnage, and tie-down equipment.

Standards: Direct breakbulk cargo operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked with directing breakbulk cargo operations.

Note: None

Performance Steps

1. Direct adherence to the rules for stowing general cargo.

NOTE: Breakbulk cargo covers a wide array of products and a variety of packaging formats, from individual pieces like steel slabs to unitized, bundled, flat, bagged, crated, and palletized commodities.

a. Issue guidance directing that cargo arrives at its destination undamaged.

b. Issue guidance directing that as much cargo as possible is stowed in the compartment of the ship.

c. Issue guidance directing that the hold is clean before storing cargo.

NOTE: If hatches are not cleared, pieces of wood from broken crates may get under the pallets when they are put into stowage position. A lopsided pallet may cause the whole shipment of cargo to shift when the ship is at sea.

d. Direct the use of dunnage only in required quantities.

e. Direct the avoidance of cargo damage by following the instructions on labels.

NOTE: If it is necessary to walk on top of land drafts (loads) of cargo such as cardboard cartons, lightly-constructed cases, bags, and crates, place a layer of dunnage over cargo to protect it from damage.

2. Direct the maximized use of the hold's carry capacity.

a. Issue guidance directing that cargo is loaded so as to minimize broken stowage.

b. Issue guidance directing that pre-stowage planning is conducted to ensure that cargo will fill the hold without leaving large empty spaces.

c. Issue guidance directing the loading of cargo so as to ensure correct stowage and fit of irregularly shaped packages.

d. Issue guidance directing the use of filler cargo where empty spaces occur.

e. Issue guidance directing that cargo is nested to ensure the use of space that would otherwise be wasted.

f. Issue guidance directing the avoidance of excess use of dunnage.

3. Direct that all cargo is secured according to prescribed procedures.

NOTE: The shifting of cargo during voyage results in considerable damage to the ship and cargo. To prevent this damage, cargo handlers must use proper stowage practices including the use of lashing and dunnage. Other means of securing cargo include shoring, tie-down, blocking, and bracing.

a. Issue guidance directing that all deck cargo is lashed, in addition to being shored, blocked, and braced.

b. Issue guidance directing that cargo stored below deck is secured with timbers firmly wedged, nailed, or lashed (chains or wire rope material).

c. Issue guidance directing that cargo is secured when a vessel is sailing in convoy and the master is not permitted to alter course or speed to avoid rough seas or foul weather.

d. Issue guidance directing the use of the correct type, strength, and number of lashings (see Figure 3-176).

e. Issue guidance directing that general cargo, drummed cargo, and barreled cargo are loaded in the wings and end of the hatch.

f. Ensure that shipment date is shown clearly on all containers.

g. Ensure that all doors have been closed and are watertight.

h. Ensure that a seal has been placed on each container.

i. Ensure that liquids and other wet commodities are bottom-stowed to prevent leaking containers from damaging other cargo.

j. Ensure that cargo is segregated when needed to prevent damage by contamination.

4. Direct the use of lashing as a means for securing (see Figure 3-176).

NOTE: Lashing is the means of securing vehicles and other cargo by using wire rope, chain, steel bars, and turnbuckles.

a. Issue guidance directing that lashing materials are selected based on their availability and the type of cargo to be secured.

b. Issue guidance directing that all component parts of the lashing materials are of approximately equal strength.

5. Direct the proper use of dunnage.

NOTE: Dunnage consists of planks and pieces of wood used to protect a vessel and its cargo. Proper stowage is impossible without carefully applied dunnage. The following standards apply:

a. Ensure cargo does not shift or chafe.

b. Chock off and secure containers.

c. Block off broken stowage.

d. Fill void spaces that cannot be filled with cargo.

e. Protect cargo from contact with water or liquids that may get into holds.

f. Place the bottom layer of dunnage in the direction of the drains.

g. Provide air passage for effective ventilation.

h. Distribute weight.

i. Separate cargo.

6. Direct the securing of wheeled vehicles on deck.

a. Ensure that each vehicle is placed with the engine facing forward when possible.

b. Ensure that each vehicle is lashed with at least four lashings.

c. Ensure that the chassis is shored up to take the pressure off balloon-sized tires.

d. Ensure that both sides and both ends of the vehicle are blocked and braced and all wheel chocks are braced.

For Other Ships Only

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 5,260 lb	5,000 lb	4
Up to 10,530 lb	10,000 lb	4
Up to 14,850 lb	14,100 lb	4
Up to 17,900 lb	17,000 lb	4
Up to 36,860 lb	35,000 lb	4
Up to 73,720 lb	70,000 lb	4
Up to 147,450 lb	70,000 lb	8

For Other Ships Only "Metric"

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 2,390 kg	2,250 kg	4
Up to 4,780 kg	4,550 kg	4
Up to 6,740 kg	6,400 kg	4
Up to 8,120 kg	7,700 kg	4
Up to 16,720 kg	15,900 kg	4
Up to 33,440 kg	31,750 kg	4
Up to 66,880 kg	31,750 kg	8

Note: "Other" ships are all ships except fast sealift ships.

Figure 3-176

Load Factor Lashing Requirements for Other Ships

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing breakbulk cargo operations.

Performance Measures	**GO**	**NO GO**
1. Directed adherence to the rules for stowing general cargo.	_____	_____
2. Directed the maximized use of the hold's carry capacity.	_____	_____
3. Directed that all cargo was secured according to prescribed procedures.	_____	_____
4. Directed the use of lashing as a means for securing.	_____	_____
5. Directed the proper use of dunnage.	_____	_____
6. Directed the securing of wheeled vehicles on deck.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 4-13.17 Cargo Specialist's Handbook

Primary
TC 4-13.17 Cargo Specialist's Handbook

551-88H-3526
Supervise Stowage of Wheeled and Tracked Vehicles Aboard a Cargo Vessel (Breakbulk)

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a load planner with the requirement to supervise stowage of wheeled and tracked vehicles aboard a breakbulk cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a hatch gang, prestowage plan, breakbulk cargo vessel, wheeled and tracked vehicles, coopering and shoring cargo set, dunnage, and lashing materials.

Standards: Supervise stowage of wheeled and tracked vehicles aboard a cargo vessel without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a load planner tasked to supervise the stowage of wheeled and tracked vehicles aboard a breakbulk cargo vessel.

Note: None

Performance Steps

1. Ensure each wheeled vehicle lands in the hold so that it is headed in the direction of stowage.

2. Ensure members of a hatch gang release the brake and steer while the rest of the gang pushes or uses a drag line to spot the wheeled vehicle.

3. Ensure wheeled vehicles are stowed in a fore-and-aft direction and handbrakes are set, unless the foreman specifies an athwartship direction.

4. Ensure both sides, the fronts, and the backs of the wheeled vehicles are blocked.

5. Ensure wheeled vehicles are braced to the bulkhead, stanchions, or other blocked vehicles.

6. Ensure blocking is used to shore up the bumper or chassis of each wheeled vehicle to relieve tension.

7. Ensure each wheeled vehicle is restrained using lashing equipment.

8. Ensure members lay a solid floor or planking not less than 2 inches thick for the tracked vehicles.

9. Ensure members land each tracked vehicle in the hold so that it is headed in the direction of stowage.

10. Ensure tracked vehicles move from the square of the hatch to the stow location.

NOTE: If a vehicle is inoperable, a dragline must be used.

11. Ensure tracked vehicles are stowed in a fore-and-aft direction, controlling the direction of vehicles by breaking or releasing the tracks.

12. Ensure tracked vehicles are secure by placing gear lever in neutral (multifuel) and engaging the handbrake.

13. Ensure movable turrets are locked or lashed.

14. Ensure tracked vehicles weighing less than 18 tons are secured with at least 4- x 6-inch lumber and vehicles weighing 18 tons or more are secured with at least 6- x 8-inch lumber.

15. Ensure tracked vehicles are lashed with at least four wire turnbuckles or with a quick-release chain lashing.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising the stowage of wheeled and tracked vehicles aboard a breakbulk cargo vessel.

Performance Measures		**GO**	**NO GO**
1.	Ensured each wheeled vehicle landed in the hold so that it was headed in the direction of stowage.	_____	_____
2.	Ensured members of a hatch gang released the brake and steered while the rest of the gang pushed or used a drag line to spot the wheeled vehicle.	_____	_____
3.	Ensured wheeled vehicles were stowed in a fore-and-aft direction and handbrakes were set, unless the foreman specified an athwartship direction.	_____	_____
4.	Ensured both sides, the fronts, and the backs of the wheeled vehicles were blocked.	_____	_____
5.	Ensured wheeled vehicles were braced to the bulkhead, stanchions, or other blocked vehicles.	_____	_____

Performance Measures		GO	NO GO
6.	Ensured blocking was used to shore up the bumper or chassis of each wheeled vehicle.	_____	_____
7.	Ensured each wheeled vehicle wss restrained using lashing equipment.	_____	_____
8.	Ensured members laid a solid floor or planking not less than 2 inches thick for the tracked vehicles.	_____	_____
9.	Ensured members landed each tracked vehicle in the hold so that it was headed in the direction of stowage.	_____	_____
10.	Ensured tracked vehicles moved from the square of the hatch to the stow location.	_____	_____
11.	Ensured tracked vehicles were stowed in a fore-and-aft direction, controlling the direction of vehicles by breaking or releasing the tracks.	_____	_____
12.	Ensured tracked vehicles were secured by placing gear lever in neutral (multifuel) and engaging the handbrake.	_____	_____
13.	Ensured movable turrets were locked or lashed.	_____	_____
14.	Ensured tracked vehicles weighing less than 18 tons were secured with at least 4- x 6-inch lumber and vehicles weighing 18 tons or more were secured with at least 6- x 8-inch lumber.	_____	_____
15.	Ensured tracked vehicles were lashed with at least four wire turnbuckles or with a quick-release chain lashing.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3528
Supervise Donning Crew Work Vest

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to supervise the donning of the crew work vest and life jacket in an operational environment, during the day or night, in normal weather conditions, given a crew work vest, life jacket, and crewman.

Standards: Supervise the donning of the crew work vest and life jacket until personnel are able to don and secure the life jacket within 2 minutes.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked to supervise the donning of the crew work vest and life jacket.

Note: None

Performance Steps

WARNING

The work vest is buoyant enough to keep the wearer afloat in calm conditions. However, it has no self-righting capability and it will not keep an unconscious wearer's head out of the water while awaiting rescue. The work vest is to be worn when the water temperature exceeds 60º F.

1. Supervise the donning of the crew work vest.

    a. Buckle top clasp.

b. Place arms through the straps connecting the body sections. Make sure that the reflective tape/material is visible on the outside.

c. Adjust webbing belt for comfort.

d. Buckle webbing belt clasp.

e. Check operation of distress signal light and whistle.

2. Supervise the donning of the life jacket.

a. Ensure the white tag located on the lower back of the work vest is placed inside next to the body.

b. Ensure arms are put through the arm holes.

c. Ensure the neck straps are put through the D-ring on each side of the vest and tie the straps in a bow knot.

d. Ensure the chest straps are tied in a bow knot.

e. Ensure the waist strap is tied in a bow knot.

f. Ensure the belly strap is snapped.

g. Ensure the belly strap is adjusted if required.

h. Ensure the leg strap is pulled up between the legs.

i. Ensure the end of the strap is threaded through the double D-rings and pulled snug.

j. Ensure steps h and i are repeated for the other leg.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising the donning of the crew work vest and life jacket.

Performance Measures	**GO**	**NO GO**
1. Supervised the donning of the crew work vest.	_____	_____
2. Supervised the donning of the life jacket.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 4-01.502 Army Watercraft Safety	
TC 4-15.51 Marine Crewman’s Handbook	

Required **Primary**

551-88H-3508
Direct Cargo Operations (RO/RO)

DANGER

Adhere to all DANGER statements listed in the vehicles techincal operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicles techincal operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicles techincal operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman aboard a fast sealift ship/large medium speed roll-on/roll-off (FSS/LMSR) vessel with the requirement to direct RO/RO cargo operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, traffic control plan, RO/RO flow plan, stowage plan, wheeled and tracked vehicles, and lashing materials.

Standards: Direct RO/RO cargo operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman aboard a FSS/LMSR tasked with directing RO/RO cargo operations.

Note: None

Performance Steps

1. Execute the procedures to direct roll-on operations.

    a. Direct the stowage of vehicles on the lower decks.

    b. Direct the stowage of vehicles on the upper decks.

    c. Direct the stowage of vehicles within fire lanes.

    d. Ensure proper securing of wheeled vehicles.

e. Ensure proper securing of tracked vehicles.

2. Ensure the execution of the proper roll-on loading sequence according to the RO/RO flow plan.

3. Ensure execution of coordinated traffic control plan with the following designated control points.

a. Call forward areas

b. Bottom of portable vehicle ramp (PVR)

c. Top of PVR

d. Exit point at each internal ramp

4. Ensure the assignment of stowage area guides to guide vehicles into final position.

NOTE: 1. Select experienced personnel to man traffic control points. These personnel must ensure the expeditious movement of vehicular traffic in the loading and off-loading process. 2. Tracked vehicles are typically classified as high density loads. Therefore, they are usually stowed below the weather deck to help optimize the ship's trim and stability by keeping the ship's overall center of gravity low.

5. Execute the procedures to direct tracked and wheeled vehicles to be secured using lashing/tie-downs.

a. Issue guidance directing the use of the correct type, strength, and number of lashings (see Figure 3-177).

b. Issue guidance that the number of lashings for tracked vehicles will depend on the weight and the number of lashings could range from four to eight (see Figure 3-178).

c. Issue guidance that the lashing requirements for wheeled vehicles are based on a universal four-lashing pattern (two fore and two aft) (see Figure 3-179).

d. Issue guidance to leave multi-fuel vehicles in neutral gear with the brakes engaged.

e. Issue guidance to leave gasoline-driven vehicles in gear with the brakes engaged.

f. Issue guidance to lock turrets on tanks and cabs on cranes, or lash them in position.

Fast Sealift Ships

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 8,930 lb	5,000 lb	4
Up to 17,860 lb	10,000 lb	4
Up to 25,180 lb	14,100 lb	4
Up to 30,360 lb	17,000 lb	4
Up to 62,510 lb	35,000 lb	4
Up to 125,020 lb	70,000 lb	4
Up to 250,040 lb	70,000 lb	8

Other Ships

Vehicle Weight	Lashing Strength	Total Number of Lashings Required
Up to 5,260 lb	5,000 lb	4
Up to 10,530 lb	10,000 lb	4
Up to 14,850 lb	14,100 lb	4
Up to 17,900 lb	17,000 lb	4
Up to 36,860 lb	35,000 lb	4
Up to 73,720 lb	70,000 lb	4
Up to 147,450 lb	70,000 lb	8

Figure 3-177

Load Factor Lashing Requirements for FSS/LMSR Ships

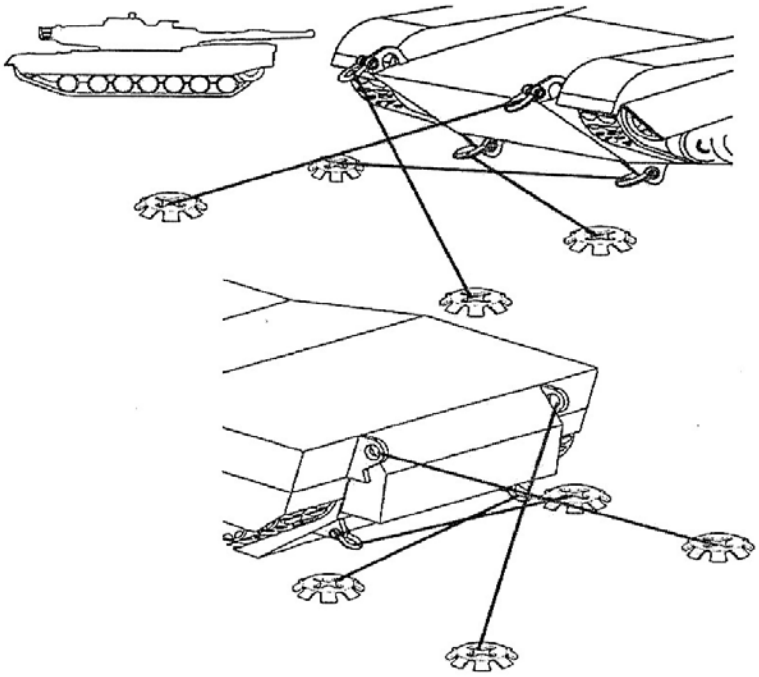


Figure 3-178

Required Lashing Points for an M1 Tank

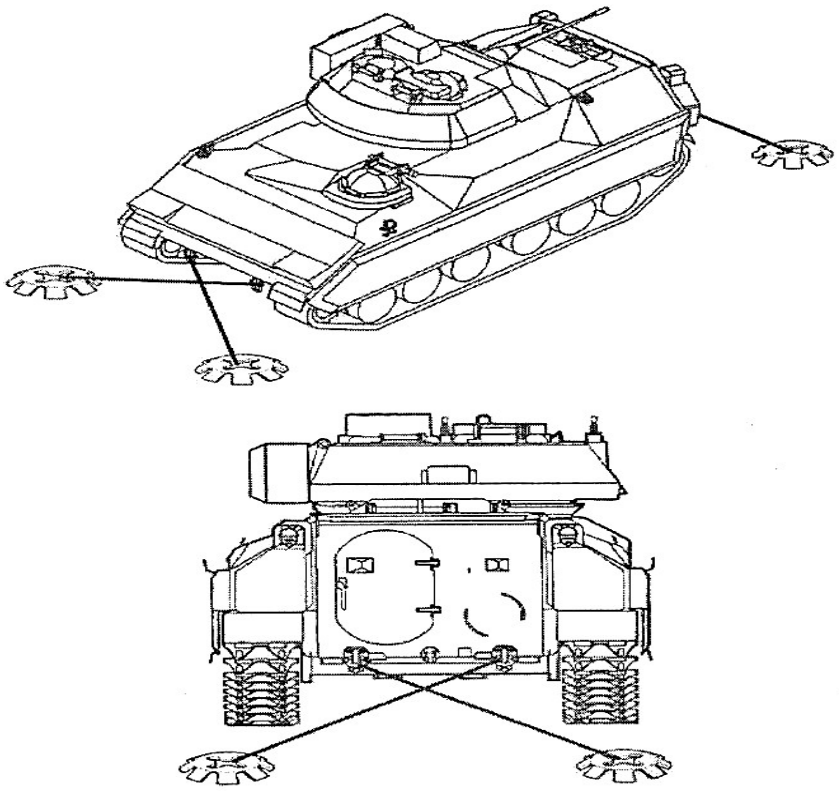


Figure 3-179

Front and Rear Points for Bradley Fighting Vehicle (BFV)

6. Execute the procedures to direct roll-off operations.

a. Ensure the execution of the proper roll-off loading sequence according to the RO/RO flow plan.

b. Ensure traffic control points are designated and manned.

WARNING

Vehicle lashing assemblies (VLA) on the deck present a serious hazard for the equipment being loaded or unloaded and the work crew performing the operation.

c. Ensure that vehicle lashing assemblies (VLA) are placed on holding racks as soon as they are disconnected from vehicles to prevent vehicles from driving over VLA and damaging them.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing RO/RO cargo operations.

Performance Measures	**GO**	**NO GO**
1. Executed the procedures to direct roll-on operations.	_____	_____
2. Ensured the execution of the proper roll-on loading sequence according to the RO/RO flow plan.	_____	_____

Performance Measures	GO	NO GO
3. Ensured execution of coordinated traffic control plan with designated control points.	_____	_____
4. Ensured the assignment of stowage area guides to guide vehicles into final position.	_____	_____
5. Executed the procedures to direct tracked and wheeled vehicles to be secured using lashing/tie-downs.	_____	_____
6. Executed the procedures to direct roll-off operations.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3511
Direct Lashing Containers on the Deck of a Landing Craft

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a cargo checker with the requirement to direct lashing containers on the deck of a landing craft in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, hatch gang, tools, containers, lashing material, and landing craft.

Standards: Direct lashing containers on the deck of a landing craft, ensuring that containers are properly lashed to the deck to prevent movement during transit without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a cargo checker tasked with directing the lashing of containers on the deck of a landing craft.

Note: None

Performance Steps

1. Direct personnel lashing containers with chassis (see Figure 3-180 and Figure 3-181).

    a. Ensure lashing is attached to all four bottom corner fittings of the container.

    b. Ensure the use of the crisscross or side-to-side lashing technique when attaching lashing to deck fittings in the well deck.

2. Direct personnel lashing containers without chassis (see Figure 3-180 and Figure 3-181).

a. Ensure lashing is attached to all four top corner fittings of the container.

b. Ensure the use of the crisscross or side-to-side lashing technique when attaching lashing to deck fittings in the well deck.

3. Inspect completed work.

4. Make on-the-spot corrections (as required).

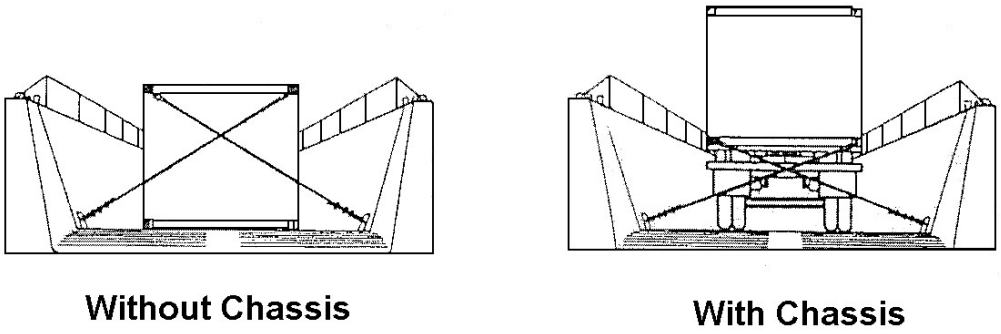


Figure 3-180

Crisscross Lashing

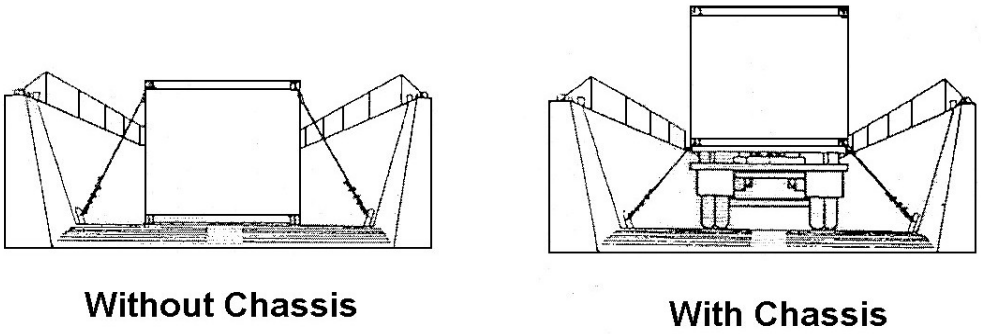


Figure 3-181

Side-to-Side Lashing

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing lashing containers on the deck of a landing craft.

Performance Measures	**GO**	**NO GO**
1. Directed personnel lashing containers with chassis.	_____	_____
2. Directed personnel lashing containers without chassis.	_____	_____
3. Inspected completed work.	_____	_____
4. Made on-the-spot corrections (as required).	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	
TC 4-15.51 Marine Crewman’s Handbook	

551-88H-3513
Direct Loading Lighters at Shipside During Logistics Over-the-Shore Operations

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to direct loading lighters at shipside during logistics-over-the-shore operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo vessel, ship's gear, general cargo set, hatch gang, tools, containers, lashings, and lighterage.

Standards: Direct loading lighters at shipside during logistics over-the-shore (LOTS) operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked with directing the loading of lighters at shipside during LOTS operations.

Note: None

Performance Steps

1. Direct personnel to work the vessel on the lee side whenever possible.

NOTE: The lee side of a ship is sheltered from the wind.

2. Direct personnel to rig the spring lines and mooring lines so that lighters are positioned directly below the ship's outboard booms.

3. Direct personnel that small items will be made up into unitized loads that can be unhooked and left in the lighter.

4. Ensure that two or more taglines are attached to each draft of cargo to reduce swinging.

5. Check that drafts of cargo are landed at the crest of the wave in rough seas.

6. Ensure personnel stand clear of cargo when landing drafts in small amphibians or small landing craft.

7. Ensure personnel do not drop loads onto a lighter deck.

8. Ensure that personnel perform the following actions prior to loading cargo aboard the lighter.

a. Reband damaged palletized cargo

b. Plug leaky barrels

c. Reverse the ends of the leaky barrels

9. Ensure personnel do not stand beneath a draft of cargo or get between the draft of cargo and the bulkhead of other cargo.

10. Ensure personnel push the cargo draft into position.

NOTE: Never pull the cargo draft into position. Pulling a cargo draft into position could result in slipping and falling underneath the draft.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing loading lighters at shipside during LOTS operations.

Performance Measures		**GO**	**NO GO**
1.	Directed personnel to work the vessel on the lee side whenever possible.	_____	_____
2.	Directed personnel to rig the spring lines and mooring lines so that lighters were positioned directly below the ship's outboard booms.	_____	_____
3.	Directed personnel that small items would be made up into unitized loads that could be unhooked and left in the lighter.	_____	_____
4.	Ensured that two or more taglines were attached to each draft of cargo to reduce swinging.	_____	_____
5.	Checked that drafts of cargo were landed at the crest of the wave in rough seas.	_____	_____
6.	Ensured personnel stood clear of cargo when landing drafts in small amphibians or small landing craft.	_____	_____
7.	Ensured personnel did not drop loads onto a lighter deck.	_____	_____
8.	Ensured personnel rebanded damaged palletized cargo, plugged leaky barrels,	_____	_____

Performance Measures	GO	NO GO
and reversed the ends of the leaky barrels prior to loading the cargo aboard the lighter.		
9. Ensured personnel did not stand beneath a draft of cargo or get between the draft of cargo and the bulkhead of other cargo.	_____	_____
10. Ensured personnel pushed, not pulled, a cargo draft into position.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	
TC 4-15.51 Marine Cewman's Handbook	

Subject Area 30: Basic Cargo Operations (Ship and Shore)

551-88H-3506
Inspect Cargo Checker's Tally for Correctness

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a section chief with the requirement to inspect the cargo checker’s tally for correctness in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, cargo, tally sheet, DD Form 1384 (Transportation Control and Movement Document), clipboard, and pen or pencil.

Standards: Inspect the cargo checker's DD Form 1384 for correctness, legibility, and completeness.

Special Condition: None

Special Standards: None

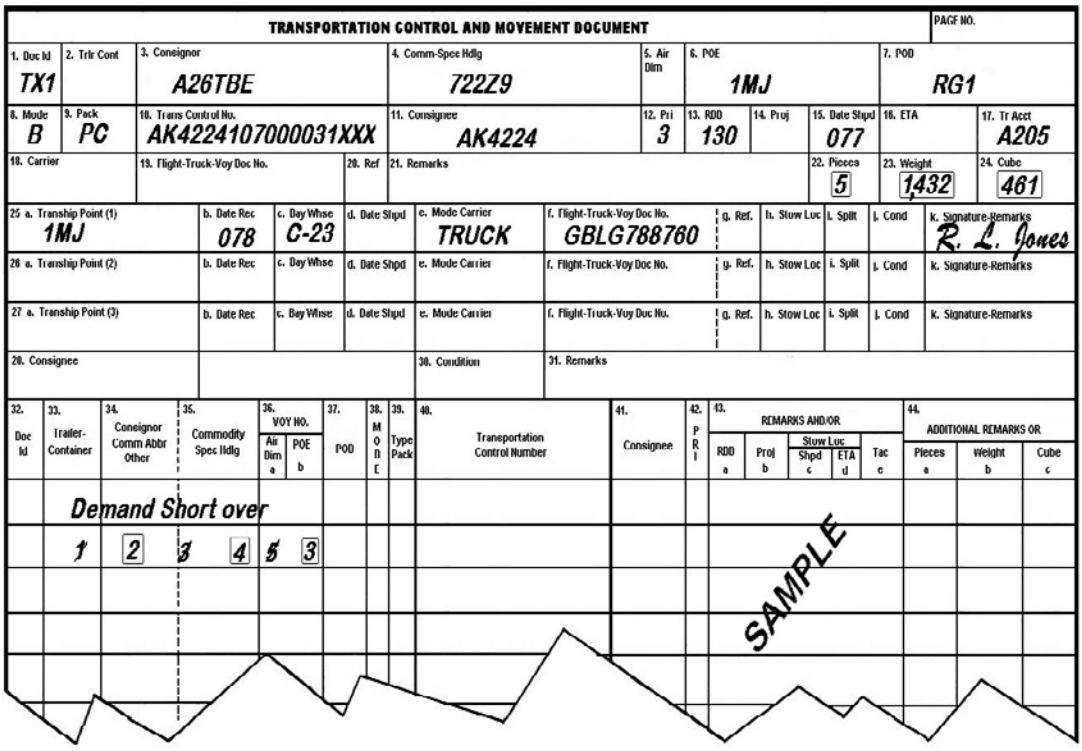
Special Equipment: None

Cue: You are assigned as a section chief tasked with inspecting the cargo checker's tally for correctness.

Note: None

Performance Steps

1. Ensure the correct tally method (package, block, straight or unit) is used (see Figures 3-182 through 3-185).



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX1		A26TBE	722Z9		1MJ	RG1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
B	PC	AK4224107000031XXX	AK4224	3	130		077		A205

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				5	1,432	461

25 a. Tranship Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
1MJ	078	C-23		TRUCK	GBLG788760					R. L. Jones
26 a. Tranship Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Tranship Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

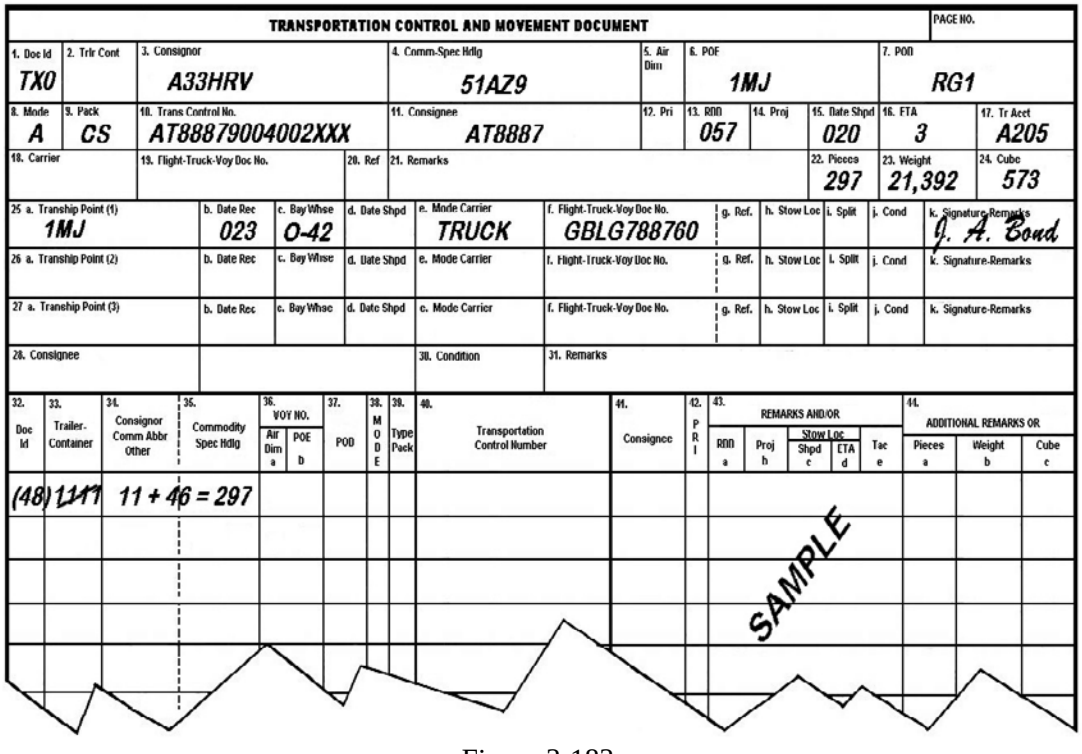
28. Consignee	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
	Demand Short over																		
	1	2	3	4	5	3													

SAMPLE

Figure 3-182

Package Tally Method



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX0		A33HRV	51AZ9		1MJ	RG1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
A	CS	AT88879004002XXX	AT8887		057		020	3	A205

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				297	21,392	573

25 a. Tranship Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
1MJ	023	O-42		TRUCK	GBLG788760					J. A. Bond
26 a. Tranship Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Tranship Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
(48) 1111		11 + 46 = 297																	

SAMPLE

Figure 3-183

Block Tally Method

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX1		A33HRV	733ZZ9		2DC	KF1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
B	CS	AK73212026003XXX	AK9321		071		030	3	A205

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				81	9,372	1,281

25 a. Tranship Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
2DC	033	A-19		TRUCK	GBLG788760					T. M. Cox
26 a. Tranship Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Tranship Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
	24 + 30 + 27 = 81																		

SAMPLE

Figure 3-184

Straight Tally Method

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TV0		A25TBB	867ZZ		1GC	JF1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
D	VO	AK43349209001XXX	AK4334	3	253		221	2	A205

18. Carrier	19. Flight Truck Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				1	12,880	1,690

25 a. Tranship Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
S.S. NEVERSAIL	260				GBLG788760					G. R. Miller
26 a. Tranship Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
JF1	261	YARD								C. L. Ruff
27 a. Tranship Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TV5			M35267271GC	JF1	3	VO	AK43349209001XXX	AK4334	3	00253LO96W111N						USA	4L7671		
			NOTE: Left side of windshield broken																
			Left headlight broken																
			Hood dented - C. L. Ruff																

SAMPLE

Figure 3-185

Unit Tally Method

2. Ensure discrepancies are properly recorded on DD Form 1384 and the tally sheet.

3. Ensure legibility of all entries on DD Form 1384 and the tally sheet.

4. Ensure Line 25 (blocks a through k) on DD Form 1384 is filled out completely.

5. Ensure the hatch checker pulls one copy of DD Form 1384 and attaches the remainder of the copies to the shipment.

6. Ensure container seal numbers are checked and properly annotated on DD Form 1384 and the tally sheet.

NOTE: Seal number is recorded in Block 43.

7. Ensure the chief checker has prepared a consolidated tally list and turned it in to the documentation section.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on inspecting the cargo checker's tally for correctness.

Performance Measures	**GO**	**NO GO**
1. Ensured the correct tally method was used.	_____	_____
2. Ensured discrepancies were properly recorded on DD Form 1384 and the tally sheet.	_____	_____
3. Ensured legibility of all entries on DD Form 1384 and the tally sheet.	_____	_____
4. Ensured Line 25 on DD Form 1384 was filled out completely.	_____	_____
5. Ensured the hatch checker pulled one copy of DD Form 1384 and attached the remainder of the copies to the shipment.	_____	_____
6. Ensured container seal numbers were checked and properly annotated on DD Form 1384 and the tally sheet.	_____	_____
7. Ensured the chief checker prepared a consolidated tally list and turned it in to the documentation section.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
DD FORM 1384 Transportation Control and Movement Document	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3520
Direct the Preparation of a Hatch for Handling Military Explosives

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to direct the preparation of a hatch for handling military explosives in an operational environment aboard a cargo vessel, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, hatch gang, safety equipment, military explosives, and tarpaulins.

Standards: Direct the preparation of a hatch for handling military explosives without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a foreman tasked with directing the preparation of a hatch for the handling and stowage of military explosives.

Note: None

Performance Steps

1. Inform hatch members what magazines and holds are to be broom-cleaned and free of cargo residue.

2. Inspect the bilges, overhead deck beams, and hatch beams, ensuring that hatch gang members understand the necessity for cleanliness.

3. Direct the cleaning of all decks, gangways, and hatches over or through which military explosives are to be passed or handled.

4. Direct the closing of all hatches, cargo ports, and hatch openings into a compartment of explosives, except during loading or unloading, or for short periods.

5. Ensure wooden covers are covered with tarpaulins.

6. Check hatches for fire hazards and conditions that may injure personnel or damage cargo, ensuring that there are no loose materials.

7. Direct hatch gang members to stow hatch beams and hatch covers on the non-working side of the hatch whenever possible.

8. Ensure that the location of the cargo vessel officer on duty is known at all times during the handling of explosives.

9. Ensure on-the-spot correction of any deficiencies.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on directing the preparation of a hatch for handling military explosives.

Performance Measures	**GO**	**NO GO**
1. Informed hatch members what magazines and holds were to be broom-cleaned and free of cargo residue.	_____	_____
2. Inspected the bilges, overhead deck beams, and hatch beams, ensuring that hatch gang members understood the necessity for cleanliness.	_____	_____
3. Directed the cleaning of all decks, gangways, and hatches over or through which military explosives were to be passed or handled.	_____	_____
4. Directed the closing of all hatches, cargo ports, and hatch openings into a compartment of explosives, except during loading or unloading, or for short periods.	_____	_____
5. Ensured wooden covers were covered with tarpaulins.	_____	_____
6. Checked hatches for fire hazards and conditions that could injure personnel or damage cargo, ensuring that there were no loose materials.	_____	_____
7. Directed hatch gang members to stow hatch beams and hatch covers on the non-working side of the hatch whenever possible.	_____	_____
8. Ensured that the location of the cargo vessel officer on duty was known at all times during the handling of explosives.	_____	_____
9. Ensured on-the-spot correction of any deficiencies.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
CFR Title 46 Shipping	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-3529
Supervise Safety Procedures in the Handling of Dangerous or Hazardous Cargo

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a foreman with the requirement to supervise safety procedures in the handling of dangerous or hazardous cargo in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing, and dangerous or hazardous cargo.

Standards: Supervise safety procedures in the handling of dangerous or hazardous cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Assigned as a foreman tasked to supervise safety procedures in the handling of dangerous or hazardous cargo.

Note: None

Performance Steps

1. Supervise dangerous or hazardous cargo safety procedures.

    a. Inspect the cargo working area for fire hazards.

    b. Check to ensure that fire fighting equipment is available.

    c. Check to ensure that NO SMOKING signs are posted and that personnel comply with the signs.

d. Remove persons under the influence of alcohol or drugs from the work area.

e. Inspect lights, tools, and portable equipment.

f. Inform hatch gang members on the safe handling and slinging of cargo.

g. Inform all hatch gang members on how to stow and secure cargo.

h. Inspect gasoline-operated forklifts for spark arrestors and fire extinguisher.

2. Correct any deficiencies found in the procedures stated in step number 1.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising safety procedures in the handling of dangerous or hazardous cargo.

Performance Measures	**GO**	**NO GO**
1. Supervised dangerous or hazardous cargo safety procedures.	_____	_____
2. Corrected any deficiencies found in the procedures stated in step number 1.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
CFR Title 46, Shipping, Part 146 and Volume 2	
CFR Title 49, Transportation, Parts 100 to 199	

Subject Area 31: Basic Cargo Operations (Kalmar-RTCH)

551-88H-2609
Attach Forklift Kit to RT240 Rough Terrain Container Handler

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a senior crane operator with the requirement to attach a forklift kit to a RT240 rough terrain container handler in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a RT240 rough terrain container handler (RTCH), and forklift kit.

Standards: Attach forklift kit to the RT240 RTCH without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a senior crane operator tasked with attaching the forklift kit onto the RT240 RTCH.

Note: None

Performance Steps

1. Conduct preventive maintenance checks and services (PMCS) before installing the forklift kit.

   a. Ensure all retaining and locking pins are present and properly secured.

   b. Inspect hydraulic hoses and quick disconnects for dirt, damage, and proper operation.

   c. Check for damaged gages, switches, indicator, and warning lights.

d. Check for missing or damaged fire extinguisher.

e. Check gage for proper pressure reading.

f. Check for damaged or missing seal.

g. Check seat and seat belt for damage and proper operation.

h. Check steering wheel and column for damage and proper operation (tilt and height adjustments).

i. Start engine and verify that all indicator and warning lights operate properly on the electronic control system (ECS) display screen.

j. Check air cleaner restriction indicator.

k. Check operating lights (brake lights, turn signals, and so on).

l. Perform a functional check of all lifting boom and tophandler operations.

2. Position tophandler directly over and level with forklift kit (see Figure 3-186).

NOTE: 1. The forklift kit attaches to the tophandler twistlocks and hydraulic system. The forklift is attached with the kit in a folded configuration. 2. The procedure requires two people: one person in the cab operating the joystick controls; one person installing/ removing retaining pins, connecting the hydraulic quick disconnect hoses, and ground guiding the operator.

3. Lower tophandler onto forklift kit and secure with twistlocks.

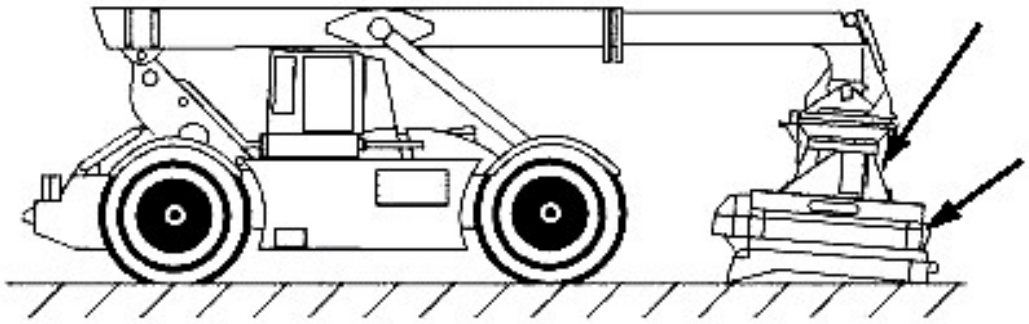


Figure 3-186

Positioning Tophandler Over Forklift Kit

4. Release locking rings to disconnect two hydraulic hose quick disconnects, located on top left side of the tophandler and install protective caps on connectors (see Figure 3-187).

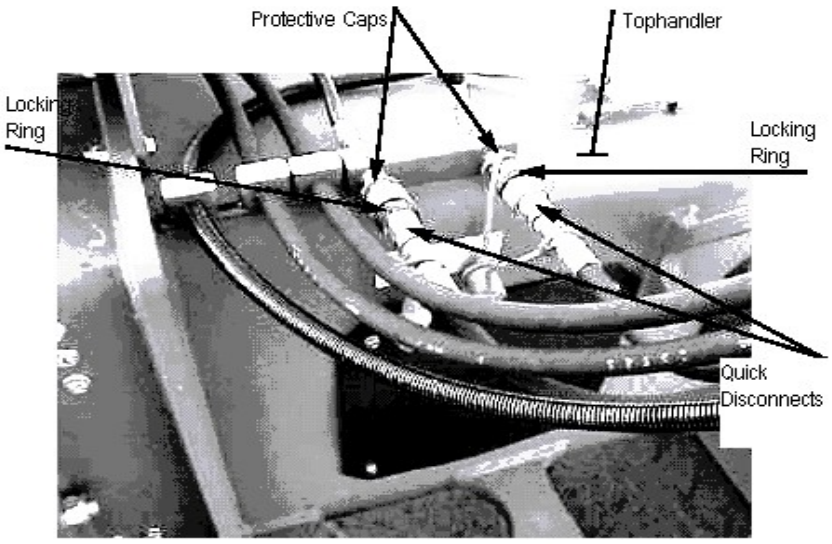


Figure 3-187

Releasing Locking Rings

5. Remove protective caps from forklift kit hydraulic hose connectors and connect the two forklift kit hydraulic hose quick disconnects to the hydraulic hose quick disconnects that were disconnected from the tophandler (see Figure 3-188).

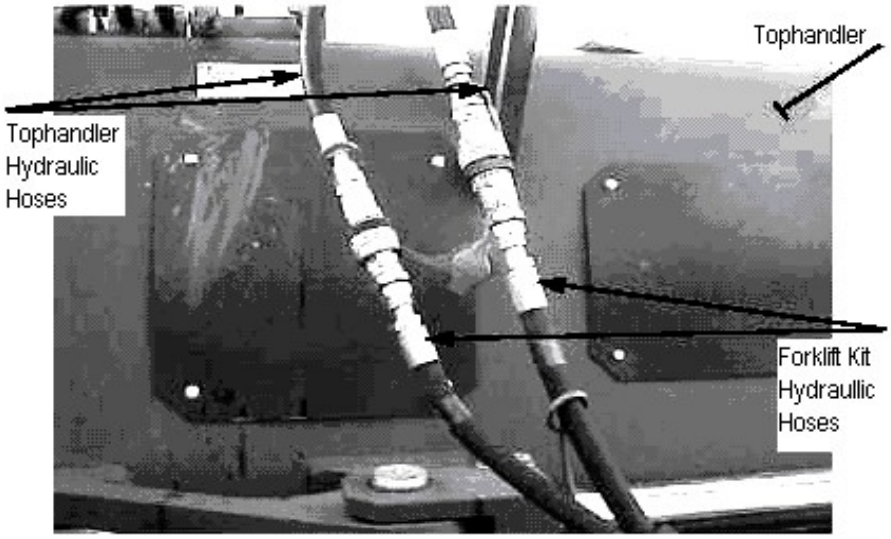


Figure 3-188

Removing Protective Caps From Forklift Kit Hydraulic Hose Connectors

6. Remove two locking pins and retaining pins that secure upper fork arms to the top frame.

7. Stow retaining pins on forklift kit top frame.

8. Slowly tilt the tophandler/forklift kit to the full rearward position while raising the boom so the upper fork arms will unfold downward (see Figure 3-189).

NOTE: The following step requires a structure such as an ISO container or a loading dock to complete the unfolding of the lower forks.

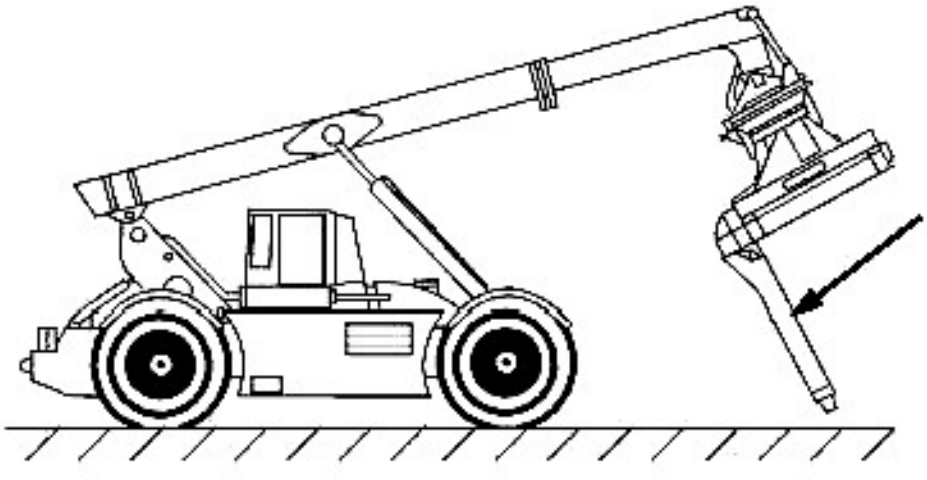


Figure 3-189

Tilting Tophandler/Forklift Kit to the Full Rearward Position

9. Retract the boom and position the truck in front of an ISO container or loading dock (see Figure 3-190).

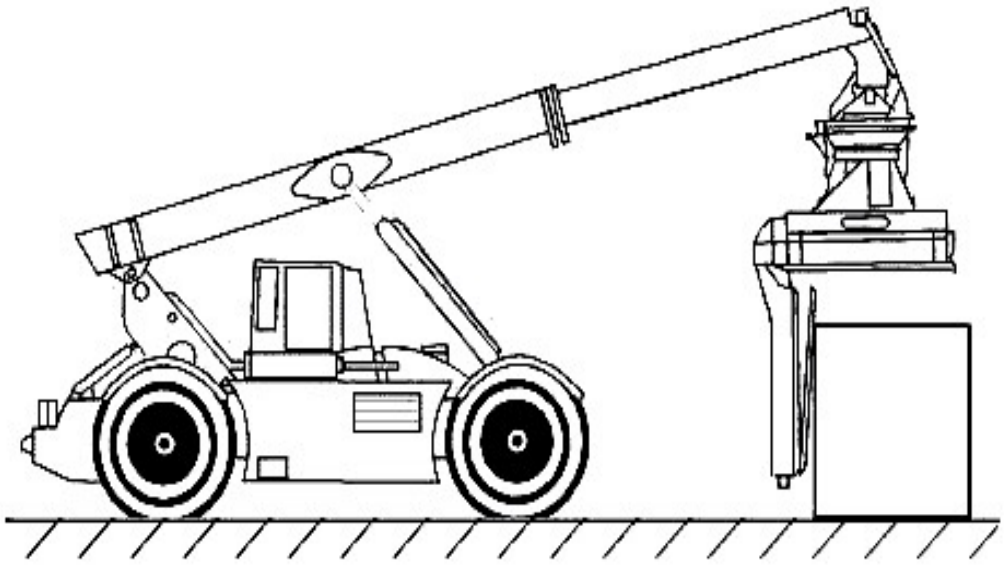


Figure 3-190

Retracting the Boom

10. Remove two locking pins and retaining pins that secure forks to upper fork arms.

11. Raise the boom until the forks are even with sides of the container or vertical wall of the loading dock.

12. Extend the boom until the forks are close to the vertical surface.

13. Place transmission in neutral (N).

14. Retract the boom and level the forklift kit using the joystick tilt control.

NOTE: Retaining pins should be installed from the outside.

15. Slowly tilt the tophandler/forklift kit forward, then raise the boom so the RTCH will move rearward and the forks will fold out to the horizontal position.

16. Install retaining pins and locking pins to secure forks to upper fork arms (see Figure 3-191).

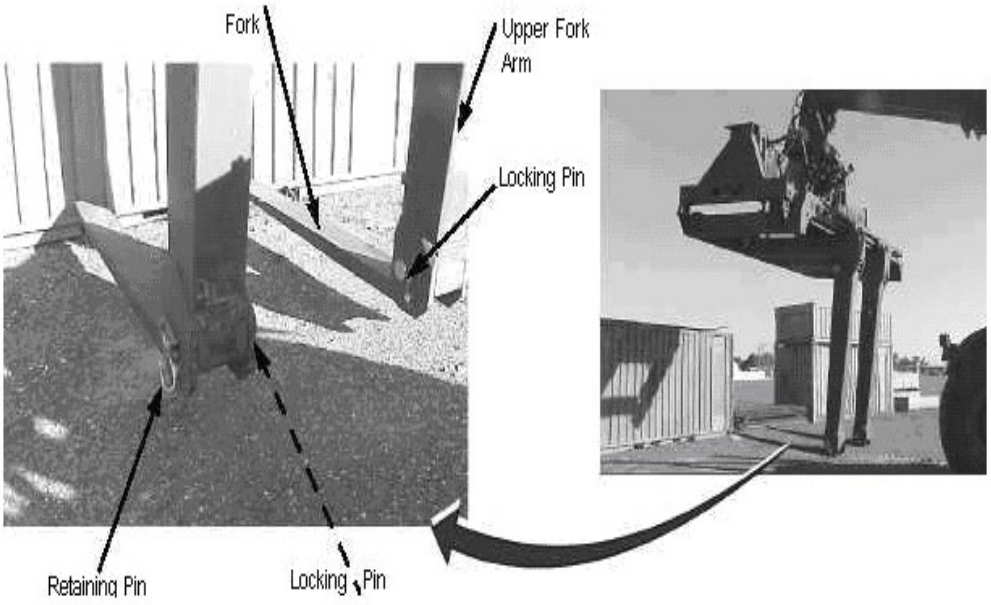


Figure 3-191

Installing Retaining Pins and Locking Pins

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on attaching a forklift kit to the RT240 RTCH.

Performance Measures		**GO**	**NO GO**
1.	Conducted PMCS before installing the forklift kit.	_____	_____
2.	Positioned tophandler directly over and level with forklift kit.	_____	_____
3.	Lowered tophandler onto forklift kit and secured with twistlocks.	_____	_____
4.	Released locking rings to disconnect two hydraulic hose quick disconnects, located on top left side of the tophandler, and installed protective caps on connectors.	_____	_____
5.	Removed protective caps from forklift kit hydraulic hose connectors and connected the two forklift kit hydraulic hose quick disconnects to the	_____	_____

Performance Measures	GO	NO GO
hydraulic hose quick disconnects that were disconnected from the tophandler.		
6. Removed two locking pins and retaining pins that secured upper fork arms to the top frame.	_____	_____
7. Stowed retaining pins on forklift kit top frame.	_____	_____
8. Slowly tilted the tophandler/forklift kit to the full rearward position while raising the boom so the upper fork arms unfolded downward.	_____	_____
9. Retracted the boom and positioned the truck in front of an ISO container or loading dock.	_____	_____
10. Removed two locking pins and retaining pins that secured forks to upper fork arms.	_____	_____
11. Raised the boom until the forks were even with sides of the container or vertical wall of the loading dock.	_____	_____
12. Extended the boom until the forks were close to the vertical surface.	_____	_____
13. Placed transmission in neutral (N).	_____	_____
14. Retracted the boom and leveled the forklift kit using the joystick tilt control.	_____	_____
15. Slowly tilted the tophandler/forklift kit forward, then raised the boom so the RTCH moved rearward and the forks folded out to the horizontal position.	_____	_____
16. Installed retaining pins and locking pins to secure forks to upper fork arms.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}	

551-88H-2608
Prepare RT240 Rough Terrain Container Handler for Air Movement

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a container handler with the requirement to prepare a RT240 rough terrain container handler for air movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a RT240 rough terrain container handler (RTCH) with attached forklift kit, and aircraft.

Standards: Prepare RT240 RTCH for air movement without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a container handler tasked with preparing the RT240 RTCH for air movement.

Note: None

Performance Steps

1. Prepare RT240 RTCH for air movement.

    a. Place the cab in transport position (to the left and fully lowered).

    b. Lower the boom support.

NOTE: The RTCH may be deployed with the forklift kit attached only when moving between remote areas, not on highways or streets. The forklift kit may also only be deployed with tophandler oriented in normal operational position, not longitudinal position. With forklift kit attached, overall lowered height of vehicle is increased by 3 feet (0.9 meters). This makes the lowered height (with clearance under forklift

kit) approximately 193 inches (490 centimeters). This height is acceptable for movement between remote areas, but not for highway and/or street movement, due to overhead wires and structures.

c. Drain fuel tank to a ¼ tank or less.

2. Load RT240 RTCH on an aircraft.

DANGER

Always use a ground guide and do not exceed 1 MPH (1.6 KPH) when driving the RTCH up ramps in preparation for air transport. Failure to use a ground guide may result in an accident, causing death or serious injury to personnel and damage to equipment.

NOTE: Ensure RTCH is properly aligned with the aircraft. Once dolly wheels are installed on the tophandler, the RTCH is difficult to steer.

a. Start RT240 RTCH, select 2-wheel steering and ensure twistlocks are lined up.

b. Position RT240 RTCH in line with and facing aircraft loading ramp, as close as possible to aircraft.

c. Make sure cab is moved to transport position.

CAUTION

To ensure tophandler does not contact underside of boom, exercise tilt function and lock tophandler in tilted position while rotating tophandler. Failure to do so may damage tophandler and/or boom.

d. Raise boom to 19 degrees and extend boom to 110 inches (279 centimeters).

e. Rotate tophandler 90 degrees clockwise to longitudinal position and ensure tophandler is aligned with RTCH.

f. Fold boom support.

WARNING

Ensure that tabs on ramp are engaged into ramp seat holes in dolly wheels storage compartment. Failure to secure ramp properly may cause ramp to fall under weight of dolly wheel, causing injury to personnel.

g. Lower tophandler until approximately 18 inches (46 centimeters) off the ground.

h. Open dolly wheels storage compartment and remove ramp from stowage and then position against storage compartment. When installed, front and rear dolly wheels are turned toward each other (see Figure 3-192).

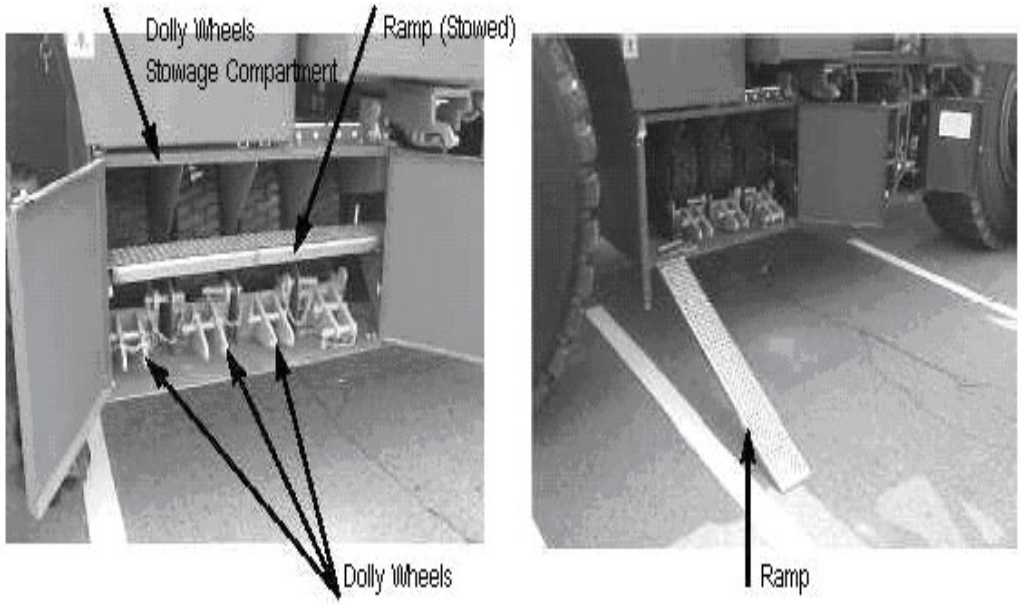


Figure 3-192

Dolly Wheel Storage Compartment

i. Remove dolly wheels from storage compartment, using ramp.

j. Install each dolly wheel to tophandler (see Figure 3-193).

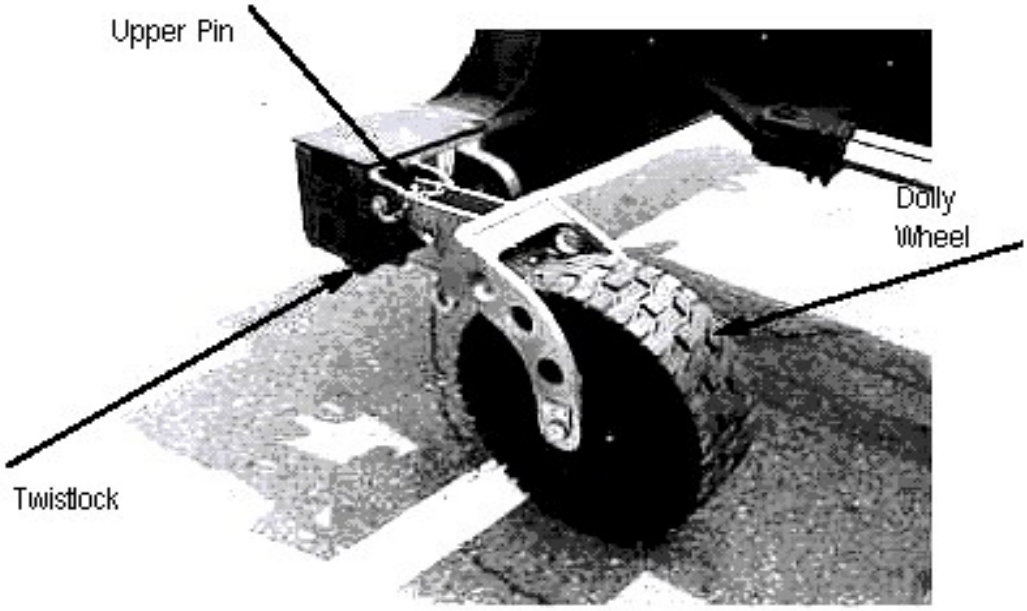


Figure 3-193

Installing Dolly Wheel to Tophandler

(1) Place dolly wheel so that tire will be under the twistlock when wheel is lifted.

(2) Install upper pin from outside of tophandler. Lock pin in position with retaining pin (see Figure 3-194).

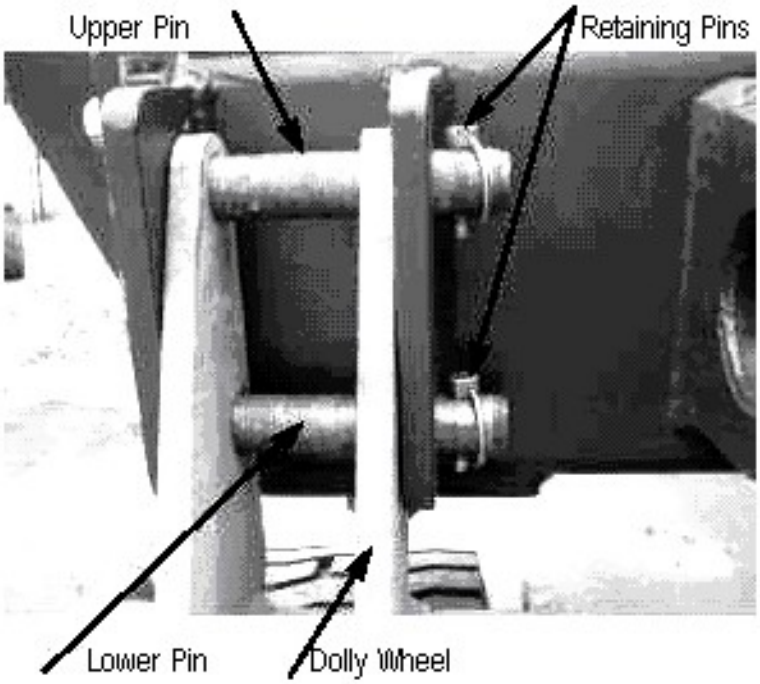


Figure 3-194

Installing Upper Pin From Outside of Tophandler

(3) Remove lower pin from dolly wheel and set aside.

k. Stow ramp in dolly wheels storage compartment and secure ramp with straps.

l. Raise tophandler so that dolly wheels are off the ground approximately 2 feet (61 centimeters).

m. Install lower pin in lower hole of each dolly wheel and lock pin in position with retaining pin.

n. Lower tophandler until all four dolly wheels are resting on ground.

o. At side of locking valve at base of each lift cylinder, loosen float valve jam nut and turn float valve screw five turns counterclockwise and retighten jam nut to prevent loss (see Figure 3-195).

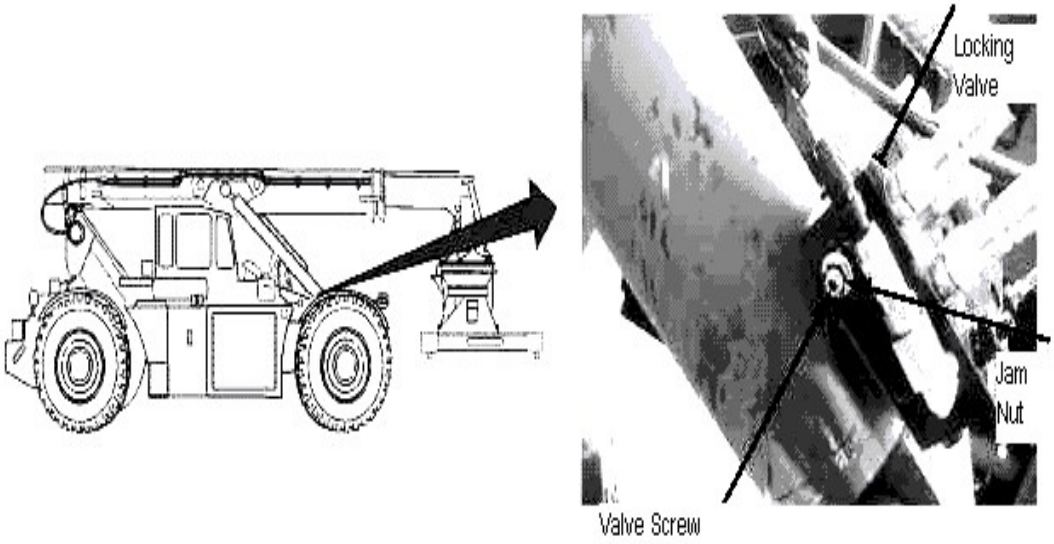


Figure 3-195

Turning Float Value Screw

p. At front of vehicle, open both #6 shutoff valves slowly and at the same time the tophandler should now be resting on dolly wheels in floating position (see Figure 3-196).

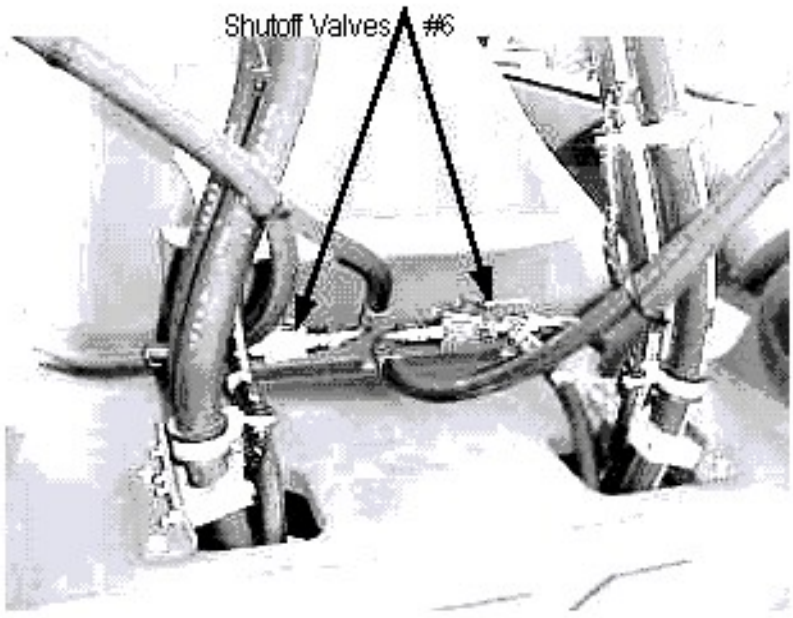


Figure 3-196

Opening Both #6 Shutoff Valves

q. Open remote hydraulic control compartment (see Figure 3-197).

NOTE: Raise bogie wheels only enough to allow bogie wheels retaining collar to be unlocked.

Figure 3-197

Opening Remote Hydraulic Control Compartment

r. Slowly pull bogie wheels lever to raise bogie wheels.

s. Turn bogie wheels retaining collar ¼ turn clockwise to unlock bogie wheels, and if retaining collar is still tight, use handle stowed forward of bogie wheels to rotate shaft (see Figure 3-198).

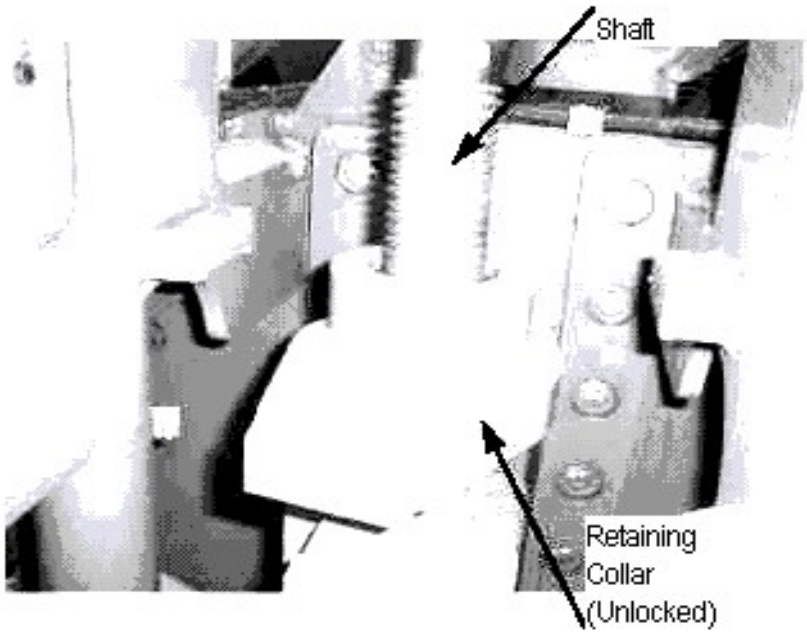


Figure 3-198

Turning Bogie Wheels Retaining Collar

t. Push bogie wheels lever to lower bogie wheels and ensure wheels are lowered sufficiently to apply ground pressure.

CAUTION

Over steering will damage dolly and bogie wheels.

u. Open shutoff valve #5 inside remote hydraulic control compartment by turning handle 90 degrees counterclockwise and bogie wheels will lower further and apply correct amount of ground pressure (see Figure 3-199).

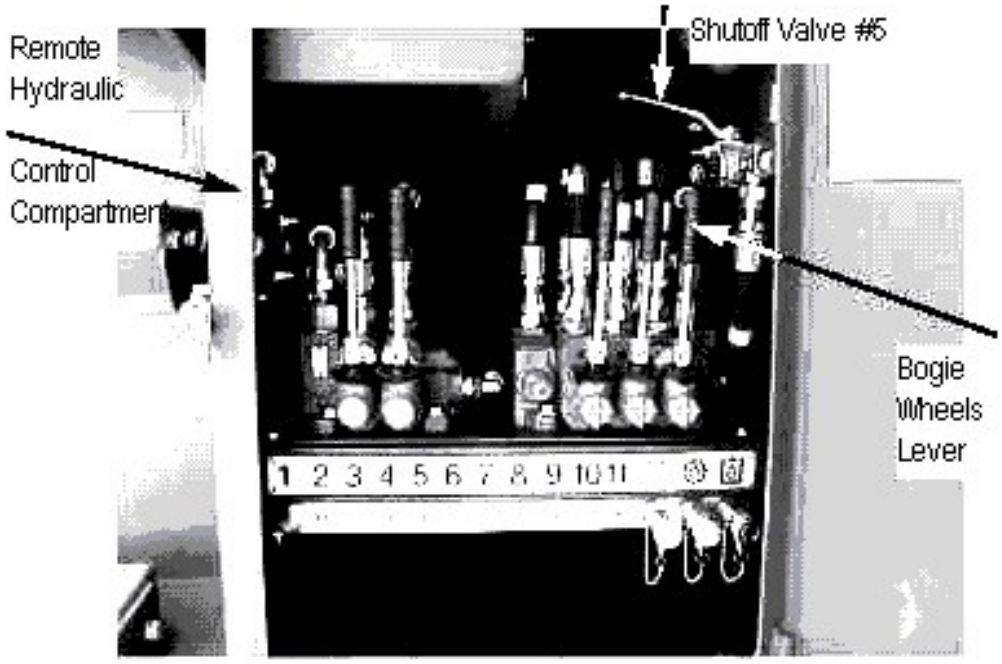


Figure 3-199

Opening Shutoff Value #5

v. Using first gear and two-wheel steering mode slowly drive RTCH forward up ramps and position inside aircraft. Do not exceed 1 MPH (1.6 KPH) speed. Only slight steering corrections are allowed during loading.

w. Lower boom support to the maximum onto the frame.

x. Rotate bogie wheels retaining collar ¼ turn clockwise to lock bogie wheels in position, and it may be necessary to screw shaft down to take up slack in bogie wheels lock (see Figure 3-200).

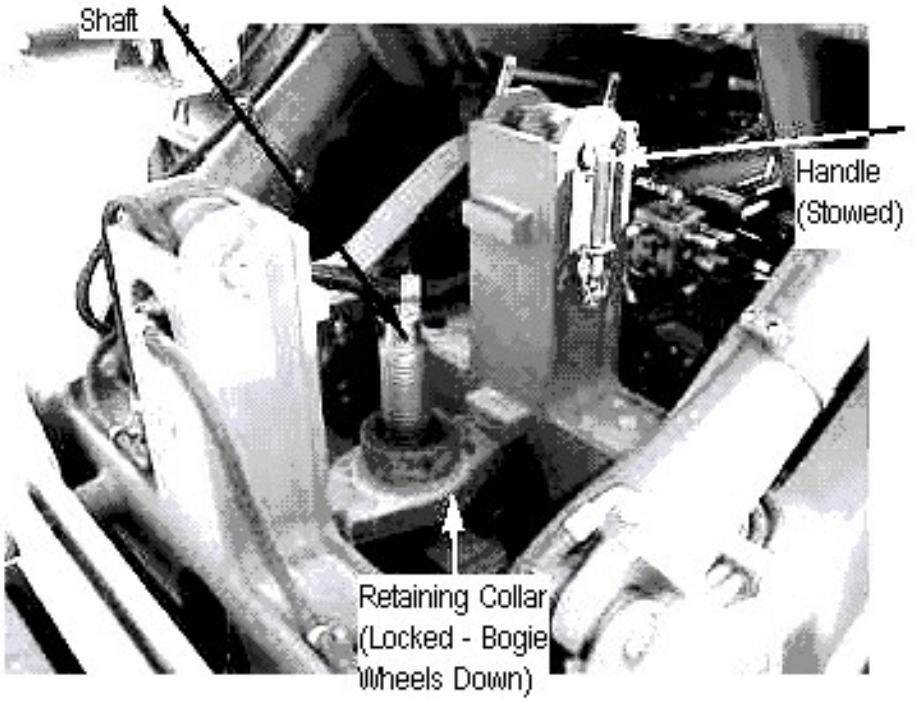


Figure 3-200

Rotating Bogie Wheels Retaining Collar

y. Shut down RTCH engine.

(1) Tie boom to RTCH frame.

(2) Secure RTCH to tie-down locations inside aircraft per the tie-down instructions on RTCH data plate and on aircraft

3. Unload RT240 RTCH forklift from aircraft.

a. Remove all tie downs.

b. Open shutoff valve #5 inside remote hydraulic control compartment by turning handle 90 degrees counterclockwise.

c. Rotate bogie wheels retaining collar ¼ turn clockwise to unlock bogie wheels.

d. Raise boom support to 30 degree mark on frame.

e. Using two-wheel steering mode, slowly back RTCH down ramps. Do not exceed 1 MPH (1.6 KPH) speed. Only slight steering corrections are allowed during unloading.

f. Inside the remote hydraulic control compartment, close shutoff valve #5.

g. Inside the remote hydraulic control compartment, pull bogie wheels lever to fully raise bogie wheels.

h. Turn bogie wheels retaining collar ¼ turn clockwise to lock bogie wheels in stowed position.

i. At front of vehicle, close both #6 shutoff valves.

j. At side of locking valve at base of each lift cylinder, loosen float valve jam nut and turn float valve clockwise until tight and retighten jam nut.

k. Remove dolly wheels from tophandler:

(1) Remove two retaining pins and lower and upper pins from each dolly wheel and remove dolly wheel from tophandler.

WARNING

Ensure that tabs on ramp are engaged into ramp seat holes in dolly wheels storage compartment. Failure to secure ramp properly may cause ramp to fall under weight of dolly wheel, causing injury to personnel.

(2) Reinstall lower and upper pin in dolly wheel and secure with retaining pins.

l. Using ramp, stow dolly wheels in dolly wheels storage compartment. Stow ramp inside storage compartment and secure with straps.

m. Raise boom to approximately 13 feet (4 meters) height.

n. Raise boom support.

CAUTION

To ensure tophandler does not contact underside of boom, exercise tilt function and lock tophandler in tilted position while rotating tophandler. Failure to do so may damage tophandler and/or boom.

o. Retract and lower boom.

p. Rotate tophandler 90 degrees counterclockwise to operational position.

q. Return cab to operational position.

r. Shut down RTCH engine.

s. Fill fuel tank.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on preparing the RT240 RTCH for air movement.

Performance Measures	**GO**	**NO GO**
1. Prepared RT240 RTCH forklift for air movement.	_____	_____

Performance Measures	GO	NO GO
2. Loaded RT240 RTCH forklift onto aircraft.	_____	_____
3. Unloaded RT240 RTCH forklift from the aircraft.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly

References

Required	Primary
TM 10-3930-675-10 Operator's Manual for Rough Terrain Container Handler (RTCH): RT240; 53,000 lb Capacity; 4 X 4, NSN 3930-01-473-3998, NSN 3930-01-522-7364 {Marine Corps TM 11078A-OR/1}	

551-88H-3510
Supervise Materials Handling Equipment (MHE) Operations

DANGER

Adhere to all DANGER statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to equipment.

WARNING

Adhere to all WARNING statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to equipment.

CAUTION

Adhere to all CAUTION statements listed in the vehicle technical operator's manual applicable to this procedure. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: Assigned as a section chief with the requirement to supervise materials handling equipment (MHE) operations aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, cargo, cargo stowage plan, and materials handling equipment (MHE).

Standards: Direct MHE operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a section chief tasked with supervising MHE operations.

Note: None

Performance Steps

1. Identify the purpose and types of MHE.

NOTE: MHE is large, mechanically powered equipment used to lift, transfer, and stack cargo. Types of MHE are: forklifts (gas or electric), tractors with trailers, rough terrain container cranes (RTCC), rough terrain container handlers (RTCH) RT240, and gantry cranes. Some additional non-powered MHE are hand trucks and pallet jacks.

2. Ensure MHE operators are properly trained and licensed if required.

3. Determine the type of MHE to be used based upon the following operational considerations:

a. Type of cargo

b. Weight of cargo

c. Size of cargo

d. Containers, if used

e. Distance cargo is to be moved

f. Type of surface or terrain

g. Stowage plan

4. Ensure the safe operation of MHE during cargo operations.

a. Ensure the use of protective clothing and equipment.

b. Ensure personnel always face the direction of travel.

c. Direct personnel to only back down ramps.

d. Ensure the use of standard signals between crewmen.

e. Ensure adequate clearance from personnel and equipment.

f. Ensure loads are stabilized before moving.

NOTE: Always use ground guides during MHE operations.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on supervising MHE operations.

Performance Measures	**GO**	**NO GO**
1. Identified the purpose and types of MHE.	_____	_____
2. Ensured MHE operators were properly trained and licensed if required.	_____	_____
3. Determined the type of MHE to be used based upon operational considerations.	_____	_____
4. Ensured the safe operation of MHE during cargo operations.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

Skill Level 4
Subject Area 32: Advanced Cargo Operations (Air)

551-88H-4501
Monitor External Sling Load Operations

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as an operations sergeant with the requirment to monitor external sling load operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety clothing and equipment, helicopter, hook up team, external load, cargo hook, static discharge wand, and an air terminal or designated field area.

Standards: Monitor external sling load operation without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as an operations sergeant tasked with monitoring external sling load operations upon receipt of mission orders.

Note: None

Performance Steps

1. Ensure personnel are wearing safety equipment: helmet, dust goggles, earplugs, and gloves (see Figure 3-201).

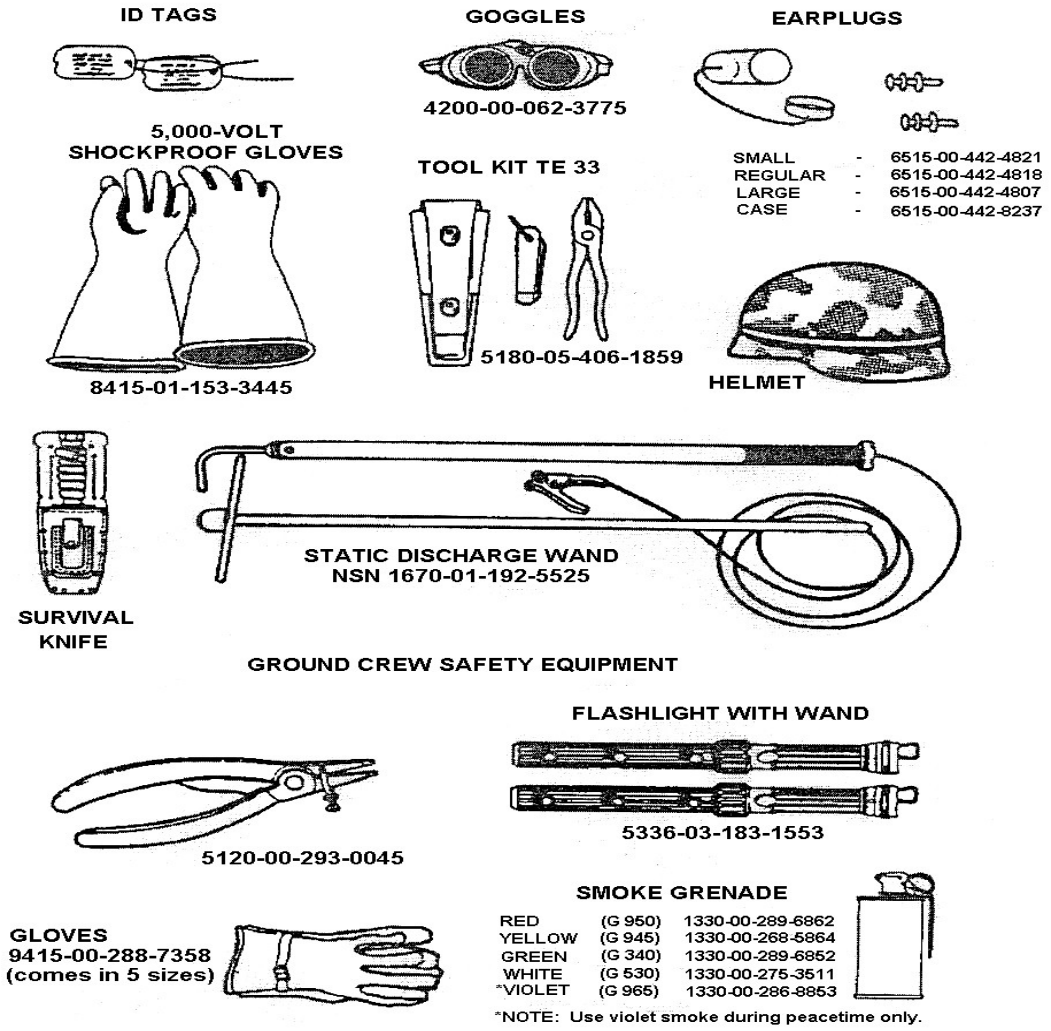


Figure 3-201

Safety Equipment

2. Inspect the static discharge wands, ensuring they are insulated and joined to a length of cable.

NOTE: A static discharge wand is not required when the reach pendant is being used (see Figure 3-202).

Figure 3-202

Reach Pendant

3. Ensure ground rod is driven into the ground on the opposite side of the hookup team rendezvous point.

4. Ensure crewman places and holds the static discharge wand against the cargo hook.

5. Observe the position of the signalman to ensure that he/she is seen by the pilot and that signals given are clear, correct, and safe.

6. Observe external sling loading procedures for rigging loads to ensure the rigging method is correct and personnel are following safety procedures.

7. Make on-the-spot corrections as required.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring external sling load operations.

Performance Measures	**GO**	**NO GO**
1. Ensured personnel were wearing safety equipment.	_____	_____
2. Inspected static discharge wands, ensuring insulation and connection to cable.	_____	_____
3. Ensured ground rod was driven into the ground on the opposite side of the hookup team rendezvous point.	_____	_____
4. Ensured crewman placed and held the static discharge wand against the cargo hook.	_____	_____
5. Observed the position of the signalman to ensure he/she was seen by the pilot and that signals given were clear, correct, and safe.	_____	_____
6. Observed external sling load procedures for rigging loads, ensuring rigging methods were correct and personnel followed safety procedures.	_____	_____

Performance Measures	GO	NO GO
7. Made on-the-spot corrections as required.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TM 4-48.09 Multiservice Helicopter Sling Load: Basic Operations and Equipment {MCRP 4-11.3E, VOL I; NTTP 3-04.11; AFMAN 11-223 (I), VOL I; COMDTINST M13482.2B}	
FM 3-21.38 Pathfinder Operations	

551-88H-4502
Monitor Air Terminal Operations

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as an operations sergeant with the requirement to monitor air terminal operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, safety equipment, aircraft, vehicles, cargo, equipment, military intelligence (MI) support, deploying personnel, emergency plans, communication support, labels and markings, firefighting equipment, tie-downs, load team personnel, ramp NCO, and fuel cans.

Standards: Monitor air terminal operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as an operations sergeant tasked with monitoring air terminal operations.

Note: None

Performance Steps

1. Monitor air cargo operations.

a. Observe personnel that are checking compatibility of cargo to ensure that cargo can be loaded aboard the aircraft.

b. Ensure personnel check the labels and markings to ensure all cargo is marked or labeled as applicable.

c. Ensure personnel observe safety precautions and firefighting equipment is on hand.

d. Ensure personnel use safe handling methods.

e. Ensure personnel load and tie down cargo properly.

f. Perform corrective action as needed.

2. Monitor safety procedures for vehicle operations.

a. Check to see all vehicles and equipment are inspected in the marshaling area for mechanical defects and proper fueling levels.

b. Direct personnel to check each vehicle carefully to ensure all loose or removed items are secured properly within or on vehicle.

c. Direct personnel not to drive a vehicle under any part of the aircraft.

d. Check that personnel observe the 5 MPH speed limit within 50 feet of the aircraft.

e. Check that personnel observe 3 MPH speed limit on the loading ramps and inside the aircraft.

f. Check that unattended vehicles have the engine shut down, that the transmission is in gear for holding the vehicle, and that the hand brake is set. Keys must be left in vehicle.

g. Check that no vehicle other than those loading or off-loading are driven directly toward or parked closer than 25 feet from the aircraft.

h. Ensure vehicle guides are present when:

(1) Backing vehicle in the vicinity of an aircraft.

(2) Loading or off-loading the aircraft.

i. Check that all vehicle and equipment guides stand clear of operating vehicles or equipment.

j. Check that equipment operators install all safety chains and pintle hook pins on vehicles towing trailers.

k. Check that drivers do not leave vehicles on the cargo floor unattended until a minimum forward and aft restraint is provided.

l. Direct drivers and equipment operators to follow the instructions of the loadmaster or load team chief when loading and off-loading aircraft.

m. Ensure escorts show drivers the vehicle access routes to the aircraft.

n. Direct drivers and assistant drivers to correct all discrepancies immediately.

o. Recheck deficient areas to ensure personnel have made corrections.

3. Monitor general flight line safety.

a. Inform personnel that smoking is prohibited on the aircraft parking ramp except in designated smoking areas.

b. Inform personnel not to sit or lie down on the ramp or under vehicles, aircraft, or equipment.

c. Ensure loading team personnel are not wearing rings or watches.

d. Ensure load team does not throw equipment, such as tie-down chains, chocks, or wrenches about in the aircraft.

e. Inform personnel that equipment will not be refueled or serviced within 50 feet of the aircraft.

f. Ensure fire extinguishers are placed on or near all powered equipment used in conjunction with aircraft.

g. Ensure antenna tip caps are placed on vehicles with radio antennas that extend 7 feet above the ground.

h. Conduct a safety briefing for all personnel involved in loading or off-loading operations.

i. Inform personnel they must maintain a 10-foot safety perimeter around the aircraft at all times.

j. Direct ramp NCOIC to correct all discrepancies immediately.

k. Recheck deficient areas to ensure corrections have been made.

4. Monitor air terminal security.

a. Establish liaison with all commands involved to:

(1) Ensure uniformity of the security plan.

(2) Plan for necessary counterintelligence support in and around marshaling areas and airfields.

(3) Ensure communications security has been coordinated and is being enforced by transient parties at departure sites and marshaling areas.

(4) Ensure at the specified time that all participating or supporting units of the operation are restricted to designated areas until the operation is either executed or canceled.

b. Brief all operational personnel on security procedures and requirements.

c. Check that operational briefings are conducted in a secure location.

d. Coordinate with the affiliated airlift control element (ALCE) for the following:

(1) Aircraft will be parked in a secure area for loading and off-loading of unit equipment and/or personnel.

(2) The ALCE will control personnel access to and vehicular movement around the aircraft.

e. Coordinate with deploying forces to maintain adequate dispersion using the following guidelines:

(1) When movement is necessary, move rapidly under cover of darkness, at the latest possible time, and to separate areas in the vicinity of the air facilities.

(2) Make all possible preparations for loading before deploying force arrives to include controlling movement to loading sites so most personnel arrive after the equipment and supplies are loaded on the aircraft.

f. Prepare with deploying force commander to provide augmenting security forces.

g. Monitor all units to ensure they maintain a normal appearance in communications traffic, using the following guidelines:

(1) Use telephones and messengers more often than radios.

(2) Maintain normal appearance in telephonic traffic using civilian circuits and check military circuits thoroughly for security before traffic is increased and at regular intervals thereafter.

(3) Ensure additional messenger traffic uses unmarked vehicles while normal traffic is maintained with marked messenger vehicles.

(4) Maintain communications-electronic silence to the fullest extent possible during the air movement phase.

h. Direct personnel to correct deficiencies immediately.

i. Report all security violations to the security officer immediately.

5. Monitor vehicle loading preparations for air movement.

a. Check that fuel tanks on vehicles being loaded onto aircraft floor follow TM 38-250 guidance.

b. Check that fuel tanks on vehicles being loaded onto aircraft ramp follow TM 38-250 guidance.

c. Check that fuel tanks on trailer-mounted units and units mounted on a single axle (when disconnected from the prime mover with tongue resting on the aircraft floor) being loaded onto aircraft floor follow TM 38-250 guidance.

d. Check that fuel tanks on trailer-mounted units and units mounted on a single axle (when disconnected from the prime mover with tongue resting on the aircraft ramp) being loaded onto aircraft ramp are drained.

e. Check engine-powered ground equipment and support equipment, which may be transported containing fuel when required for immediate use at deployment site, to ensure fuel tanks contain no more than what is specified according to TM 38-250.

f. Check shipment units that are susceptible to fuel spills or leakage to ensure they are drained and capped for movement.

g. Check to see that jerry cans (DOT 5L) are attached securely to self-propelled vehicles.

h. Check to ensure that no bulk fuel is being transported in fuel servicing trucks, trailers, or semitrailers.

i. Direct load team chief to correct all discrepancies immediately.

j. Inform load team chief that all discrepancies will be corrected before loading.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring air terminal operations.

Performance Measures	**GO**	**NO GO**
1. Monitored air cargo operations.	_____	_____
2. Monitored safety procedures for vehicle operations.	_____	_____
3. Monitored general flight line safety.	_____	_____
4. Monitored air terminal security.	_____	_____
5. Monitored vehicle loading preparations for air movement.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly

References

Required	**Primary**
FM 3-35 Army Deployment and Redeployment	
TM 38-250 Preparing Hazardous Materials for Military Air Shipments {AFMAN 24-204; NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24)}	

551-88H-4512
Brief Troop Commander on Flight Safety

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to brief the troop commander on flight safety in an operational environment during an arrival/departure airfield control group (A/DACG) operation, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, and a designated airfield or field area.

Standards: Brief troop commander on flight safety without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with briefing the troop commander on flight safety.

Note: None

Performance Steps

1. Brief troop commander on in-flight safety.

a. Inform troop commander that personnel must keep their seatbelts fastened when taking off or landing and when ordered by the aircraft commander.

b. Inform troop commander that smoking is prohibited.

c. Inform troop commander that no electronic devices will be operated aboard the aircraft.

d. Inform troop commander to follow instructions of the aircraft commander or his designated representative in the event of an emergency.

e. Inform troop commander not to allow personnel to throw any trash or debris on the aircraft floor and to keep the aisles open so that crewmembers can function in case of emergency.

f. Inform troop commander to brief all personnel on the above instructions before lift-off.

g. Inform troop commander to maintain liaison with the Air Force loadmaster at all times.

2. Brief troop commander on off-load safety.

NOTE: The troop commander will direct his personnel to follow all instructions of the aircraft loadmaster and A/DACG.

a. Inform troop commander that the following applies when the engines are running:

(1) Passengers will deplane first.

(2) Vehicles and cargo will off-load last.

b. Inform troop commander to move his troops perpendicular to the aircraft at least 50 feet (150 feet from a C5 aircraft) before turning left or right when deplaning from an aircraft with engines running. Also, move at least 300 feet from the turning point before stopping.

c. Inform troop commander to brief his personnel on the following off-load safety rules:

(1) Smoke only in designated areas.

(2) Do not walk in front of any aircraft when engines are running.

(3) Never walk within the propeller arc.

(4) Walk around the outside of the wing tips.

(5) Comply with the loadmaster's orders regarding the off-loading of the aircraft.

(6) Do not approach within 50 feet of an engine intake or within 200 feet of the blast area to the rear of running jet engines.

(7) Do not let trash or debris be thrown on the flight line.

(8) Do not stand or walk directly in front of or behind vehicles that are being driven or backed into or out of an aircraft.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on briefing the troop commander on flight safety.

Performance Measures	**GO**	**NO GO**
1. Briefed troop commander on in-flight safety.	_____	_____
2. Briefed troop commander on off-load safety.	_____	_____

Performance Measures **GO** **NO GO**

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 33: Advanced Cargo Operations (Ship)

551-88H-4508
Monitor Marine Terminal Operations

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to monitor marine terminal operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a vessel with equipment and supplies, materials handling equipment (MHE), and personnel to conduct ship discharge operations.

Standards: Monitor marine terminal operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked to monitor marine terminal operations.

Note: None

Performance Steps

1. Monitor the marine terminal operations planning phases.

    a. Check initial phase of introducing unit equipment.

    b. Check the tactical resupply phase when terminal facilities are being operated and improved.

    c. Check the sustained resupply phase when receiving ports and the theater transportation net can receive large volumes of containers discharged from large, non-self-sustaining containerships.

2. Monitor the management and operation of the port managers and the port operators.

3. Monitor marine terminal planning steps.

a. Check type or category of existing terminal.

(1) Container terminal

(2) RO/RO terminal

(3) Breakbulk terminal

(4) Special Commodity (ammunition) terminal

(5) Bulk Fuel terminal

(6) Composite capability for multipurpose/combination terminals

b. Estimate existing terminal throughput capacity using estimated total tonnage and number of personnel and containers that can be received, processed, and cleared in a day (two 10-hour shifts plus two 2-hour maintenance periods).

c. Compute terminal workload needed to support operations.

(1) Number of personnel

(2) Number of vehicles

(3) Number of containers

(4) STONs for noncontainerized cargo

4. Monitor marine terminal security.

a. Establish liaison with all commands involved.

(1) Ensure uniformity of the security plan.

(2) Plan for necessary counterintelligence support in and around berths, anchorages, docks, and storage facilities.

(3) Ensure communications security has been coordinated and is being enforced by all personnel.

(4) Ensure that all participating or supporting units of cargo loading/off-loading operations are restricted to designated areas until the operation is either executed or canceled.

b. Brief all operational personnel on security procedures and requirements and check that operational briefings are conducted in a secure location.

c. Ensure video surveillance is maintained throughout the terminal port access points, berths, anchorages, and storage facilities.

d. Ensure terminal restrictions regarding the handling and storage of ammunition/hazardous materials are established and maintained.

e. Ensure high-value and security cargo has secure cage, crib, or vault storage and security personnel.

f. Ensure that strict control and accountability procedures for key control to containers, security areas, and other locked cargo areas have been established and maintained.

g. Direct personnel to correct deficiencies immediately and report all security violations to the security officer immediately.

h. Inform personnel of all the different types of terrorist activities surrounding (all) seaport operations.

5. Monitor marine terminal operational planning.

a. Check point of discharge (wharf or anchorage).

b. Check piloting services.

c. Check types terminal units required.

d. Check tugboat requirements.

e. Check equipment required for special or heavy lifts.

f. Check priorities of discharge, if any.

g. Check arrangements for terminal clearance, including transportation required and the need for temporary holding or further segregation.

h. Check security and safety requirements.

i. Check spill and contingency plans including emergency supplies and equipment for containing and disposing of hazardous material spills.

j. Check estimates of hatch and/or vessel completion times.

k. Check consideration of specific ship characteristics.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring marine terminal operations.

Performance Measures	**GO**	**NO GO**
1. Monitored the marine terminal operations planning phases.	_____	_____
2. Monitored the management and operation of the port managers and the port operators.	_____	_____
3. Monitored marine terminal planning steps.	_____	_____

Performance Measures	GO	NO GO
4. Monitored marine terminal security.	_____	_____
5. Monitored marine terminal operational planning.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-13 Army Expeditionary Intermodal Operations	
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-4510
Monitor the Handling of Dangerous or Hazardous Cargo Aboard a Cargo Vessel

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to monitor the handling of dangerous or hazardous cargo aboard a cargo vessel in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, dangerous or hazardous cargo to load or discharge, a prestowage plan, cargo handling personnel, and access to technical personnel.

Standards: Monitor handling of dangerous or hazardous cargo aboard a cargo vessel without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with monitoring the handling of dangerous or hazardous cargo aboard a cargo vessel.

Note: None

Performance Steps

1. Obtain approval of the prestowage plan from the master of the vessel (the United States Coast Guard [USCG] captain of the port [CONUS] or the port authority [overseas/resolves disagreements]).

2. Ensure that the USCG captain of the port has approved a written request for permission to load dangerous or hazardous cargo, to include loading pier or anchorage.

3. Request the Environmental Protection Agency (EPA) representative of the USCG, the Army Ordnance Corps, the Air Force, and the Chemical Corps be present to advise on safe handling of dangerous or toxic cargo if required.

4. Request technically qualified personnel to be present to advise on safe handling of modern missile components if required.

5. Spot-check labels to ensure they are attached securely to the correct type of cargo.

6. Compare cargo labels and the cargo being loaded to ensure the cargo is compatible.

7. Spot-check to ensure drafts being lifted do not exceed the weight allowed in CFR Title 46.

8. Check to ensure personnel follow regulations regarding handling, stowing, and securing of dangerous or hazardous cargo given in CFR Title 46.

9. Report discrepancies to the platoon leader.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring the handling of dangerous or hazardous cargo aboard a cargo vessel.

Performance Measures	**GO**	**NO GO**
1. Obtained approval of the prestowage plan from the master of the vessel or other port authority.	_____	_____
2. Ensured that the USCG captain of the port approved a written request for permission to load dangerous or hazardous cargo, to include loading pier or anchorage.	_____	_____
3. Requested the EPA representative of the USCG, the Army Ordnance Corps, the Air Force, and the Chemical Corps be present to advise on safe handling of dangerous or toxic cargo if required.	_____	_____
4. Requested technically qualified personnel be present to advise on safe handling of modern missile components if required.	_____	_____
5. Spot-checked labels to ensure they were attached securely to the correct type of cargo.	_____	_____
6. Compared cargo labels and the cargo being loaded to ensure the cargo was compatible.	_____	_____
7. Spot-checked to ensure drafts being lifted did not exceed the weight allowed in CFR Title 46.	_____	_____
8. Checked to ensure personnel followed regulations regarding handling, stowing, and securing of dangerous or hazardous cargo given in CFR Titile 46.	_____	_____
9. Reported discrepancies to the platoon leader.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
CFR Title 46 Shipping	
CFR Title 49 Transportation	

551-88H-4511
Monitor Dangerous or Hazardous Cargo Operations for Motor Transport Movement

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to monitor dangerous or hazardous cargo operations for motor trnasport movement in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, dangerous or hazardous cargo, DD Form 626 [Motor Vehicle Inspection (Transporting Hazardous Materials)], and DD Form 2890 (DOD Multimodal Dangerous Goods Declaration).

Standards: Monitor dangerous or hazardous cargo operations for motor transport movement without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with monitoring the handling of dangerous or hazardous cargo for motor transport movement.

Note: None

Performance Steps

1. Ensure that all technical and safety procedures are followed when transporting hazardous materials via motor transport movement.

   a. Direct personnel to check the area that contains the hazardous materials and post warning/restrictions signs as required.

   b. Direct personnel to post NO SMOKING signs within 50 feet from the loading area.

NOTE: At origin, the shipper must inspect the vehicle before loading any hazardous or dangerous cargo.

c. Direct personnel to verify that all motor vehicle inspection requirements are inspected on the DD Form 626 (see Figure 3-203).

d. Validate that there are no deficiencies listed on inspection report that will affect the safe operation of the vehicle and its load.

e. Direct personnel to validate that all deficiencies found are corrected before the vehicle is loaded.

f. Direct drivers that each truck hauling explosives must have two (2) fire extinguishers.

g. Direct personnel that gasoline-operated forklifts must be equipped with spark arresters.

h. Inform personnel that fuses and detonating devices must not be loaded in trucks that contain explosives, except for fixed ammunition.

i. Direct truck drivers to turn the motor off while explosives and flammables are being loaded.

j. Direct personnel to ensure that DD Form 626 is properly filled out according to the instructions and the inspector signs the DD Form 626.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)
(Read instructions before completing this form.)

This form applies to all vehicles which must be marked or placarded in accordance with Title 49 CFR. | 1. BILL OF LADING/TRANSPORTATION CONTROL NUMBER

SECTION 1 - DOCUMENTATION	ORIGIN a.	DESTINATION b.
2. CARRIER/GOVERNMENT ORGANIZATION	1-505th Arty Bn	
3. DATE/TIME OF INSPECTION	1 July 2006/1009	
4. LOCATION OF INSPECTION	1-505th Arty Bn	
5. OPERATOR(S) NAME(S)	CPL Walker, SGT Tollen	
6. OPERATOR(S) LICENSE NUMBER(S)	USA# 0748-84/USA 4881-70	
7. MEDICAL EXAMANER'S CERTIFICATE*	N/A	

8. (X if satisfactory at origin)							9. CVSA DECAL DISPLAYED ON COMMERCIAL EQUIPMENT*	YES	NO
a. MILITARY HAZMAT ENDORSEMENT	X	d. ERG OR EQUIVALENT COMMERCIAL:		YES		NO			
b. VALID LEASE*		e. DRIVER'S VEHICLE INSPECTION REPORT*			X		a. TRUCK/TRACTOR	X	
c. ROUTE PLAN							b. TRAILER	X	

SECTION II - MECHANICAL INSPECATION
All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.

10. TYPE OF VEHICLE(S)	11. VEHICLE NUMBER(S)
Truck, cargo, 2 1/2-ton M35A2C	USA 1326547

12. PART INSPECTED (X if applicable)	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT		ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
a. SPARE ELECTRICAL FUSES	X				k. EXHAUST SYSTEM	X				
b. HORN OPERATIVE	X				l. BRAKE SYSTEM*	X				
c. STEERING SYSTEM	X				m. SUSPENSION	X				
d. WINDSHIELD/WIPERS	X				n. COUPLING DEVICES	X				
e. MIRRORS	X				o. CARGO SPACE	X				
f. WARNING EQUIPMENT	X				p. LANDING GEAR*	X				
g. FIRE EXTINGUISHER*	X				q. TIRES, WHEELS, RIMS	X				
h. ELECTRICAL WIRING	X				r. TAILGATE/DOORS*	X				
i. LIGHTS AND REFLECTORS	X				s. TARPAULIN*	X				
j. FUEL SYSTEM*	X				t. OTHER (Specify)					

13. INSPECTION RESULTS (X one) ACCEPTED [ ] REJECTED [ ]
(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)

14. SATELLITE MOTOR SURVEILLANCE SYSTEM: (X one) ACCEPTED [ ] REJECTED [ ]

15. REMARKS

SAMPLE

16. INSPECTOR SIGNATURE (Origin)	17. INSPECTOR SIGNATURE (Destination)
Marvin Lee	

SECTION III - POST LOADING INSPECTION
This section applies to Commercial and Government/Military vehicles. All items will be checked prior to release of loaded equipment and shall be checked on all incoming loaded equipment.

	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR					
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT					
20. SEALS APPLIED TO CLOSED VEHICLE; TARPAULIN APPLIED ON OPEN EQUIPMENT					
21. PROPER PLACARDS APPLIED					
22. SHIPPING PAPERS/DD FORM 836 FOR GOVERNMENT VEHICLE SHIPMENTS					
23. COPY OF DD FORM 626 FOR DRIVER					
24. SHIPPED UNDER DOT SPECIAL PERMIT 868					

25. INSPECTOR SIGNATURE (Origin)	26. DRIVER(S) SIGNATURE (Origin)
Moe Howara	Bud Abbott
27. INSPECTOR SIGNATURE (Destination)	28. DRIVER(S) SIGNATURE (Destination)
Larry Fine	Lou Costello

DD FORM 626, MAR 2007 PREVIOUS EDITION IS OBSOLETE. Page 1 of 3 Pages
Adobe Professional 7.0

Figure 3-203

Sample of DD Form 626

2. Ensure that all hazardous cargo is properly documented on DD Form 2890.

a. Ensure that the hazardous material (HAZMAT) certifying official was trained at a Department of Defense (DOD) approved school within the past 24 months.

b. Ensure that the proper Emergency Response Information for Hazardous Material is submitted along with the unit request for transportation.

c. Ensure that the proper shipping information is input on the DD Form 2890 as follows:

(1) Block 1. Nomenclature

(2) Block 2. Shipper's Name/Address/Phone Number

(3) Block 3. Number of pages

(4) Block 4. Cargo

(5) Block 5. Consignee Name

(6) Block 6. Remarks

(7) Block 7. Emergency Response Guide Numbers

(8) Block 8. Shipper's Certification

d. Ensure the HAZMAT certifying official provides the driver with a signed copy of the DD Form 2890.

e. Ensure personnel retain a copy of the DD Form 626 and the DD Form 2890 with the commercial bill of lading (CBL) as a file copy.

f. Ensure that a qualified individual from the unit coordinates with the freight movement office representative who schedules shipments and selects the carriers being used to move the shipments.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring dangerous or hazardous cargo operations for motor transport movement.

Performance Measures	**GO**	**NO GO**
1. Ensured that all technical and safety procedures were followed when transporting hazardous materials via motor transport movement.	_____	_____
2. Ensured that all hazardous cargo was properly documented on DD Form 2890.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References **Primary**

Required
ATP 4-11 Army Motor Transport Operations

CFR Title 46 Shipping

CFR Title 49 Transportation

DD FORM 2890 DOD Multimodal Dangerous Goods Declaration

DD FORM 626 Motor Vehicle Inspection (Transporting Hazardous Materials)

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

Subject Area 34: Advanced Cargo Documentation

551-88H-4504
Review Pre-stowage Plan

Conditions: Assigned as a platoon sergeant with the requirement to review the pre-stowage plan in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, containerized cargo, vehicles, and breakbulk cargo.

Standards: Ensure the accuracy of all equipment planned for loading onto a vessel by reviewing the automated integrated computerized deployment system (ICODES) pre-stowage plan and confirming the data with the military sealift command (MSC) representative.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked to ensure the accuracy of the pre-stowage plan and confirm the data with the MSC representative.

Note: None

Performance Steps

1. Confirm the accuracy of the vessel characteristics from the MSC representative and ensure they reflect the same on the pre-stowage plan.

    a. Type of vessel

    b. Number of hatches

    c. Capacity of cargo booms

    d. Location of cargo booms

2. Confirm the accuracy of the vessel capacities from the MSC representative and ensure they reflect the same on the pre-stowage plan.

    a. Bale cubic capacity

    b. Deadweight tonnage

    c. Weight of fuel, water, and stores

    d. Cargo deadweight tonnage (vessel deadweight less fuel and stores)

    e. Estimated deck cargo space

    f. Loadline or plimsoll mark of the vessel for the voyage

3. Review the cargo list to include:

a. Amount

b. Supply class

c. Commodity

d. Weight (LTONs)

e. Cubic feet

f. Cubic storage factor

g. Measurement tons

4. Compare the cargo weight data and the vessel capacity.

5. Review the weight distribution plan and the pre-stowage plan.

6. Review the trim and stability report from ICODES.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on reviewing the pre-stowage plan.

Performance Measures	**GO**	**NO GO**
1. Confirmed the accuracy of the vessel characteristics from the MSC representative and ensured they reflected the same on the pre-stowage plan.	_____	_____
2. Confirmed the accuracy of the vessel capacities from the MSC representative and ensured they reflected the same on the pre-stowage plan.	_____	_____
3. Reviewed the cargo list.	_____	_____
4. Compared cargo weight data and vessel capacity.	_____	_____
5. Reviewed the weight distribution plan and the pre-stowage plan.	_____	_____
6. Reviewed the trim and stability report from ICODES.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-4509
Monitor Marine Terminal Operations Productivity and Analysis

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to monitor marine terminal operations productivity and analysis in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, a vessel with equipment and supplies, materials handling equipment (MHE), and personnel to conduct ship discharge operations.

Standards: Monitor marine terminal operations productivity and analysis without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with monitoring marine terminal operations productivity and analysis.

Note: None

Performance Steps

1. Monitor capabilities of terminal service companies.

    a. Monitor marine terminal reception capacity factor.

        (1) Check channel depth.

        (2) Check channel width.

        (3) Check length of berths.

(4) Check type of berths (such as quay, pier, and molo).

(5) Check diameter of anchorages.

(6) Check depth of water at berth.

(7) Check type of terminal at berth.

b. Monitor marine terminal discharge capacity factors.

(1) Check discharge equipment on board.

(2) Check discharge equipment ashore.

(3) Check width of apron.

(4) Check special lift equipment.

(5) Check number of discharge equipment.

c. Monitor marine terminal transfer capacity factors.

(1) Check type of cargo.

(2) Check type of cargo-handling equipment.

(3) Check number of cargo-handling equipment.

(4) Check the round-trip distance.

d. Monitor marine terminal storage capacity factors.

(1) Check intrinsic capacity.

(2) Check average dwell time.

(3) Check operating capacity.

(4) Check terminal facilities.

(5) Check stacking methods.

(6) Check equipment used.

e. Monitor marine terminal clearance capacity factors.

(1) Check clearance conveyance by mode.

(2) Check terminal equipment and personnel.

(3) Check gate capacity.

2. Monitor factors that affect productivity.

a. Check weather conditions.

b. Check sea state.

c. Check visibility (fog and darkness).

d. Check crew for experience.

e. Check lifting gear type (shore crane or ship's gear).

f. Check cargo stow tactical situation.

g. Check terminal congestion.

h. Check packaging that affects discharge production.

3. Monitor daily operation report.

a. Check number of passengers embarked and debarked.

(1) View the number of passengers awaiting embarkation and debarkation.

(2) View the number of passengers to be handled in the next 24 hours.

b. Check the number of tons of cargo by major category.

(1) View category that have been discharged, loaded, cleared and clearances.

(2) View the number of tons booked and expected in the next 24 hours.

c. Check the number of ships that have arrived, departed, remained in port and are expected to arrive and depart during the next 24 hours.

d. Check workload from the previous months and anticipated for the next month.

e. Check summaries of available ship berths.

(1) View the number and capacity of lighters and trucks.

(2) View the number of gangs for ship and pier work.

(3) View covered and open storage space.

(4) View the number of railroad cars that can be accommodated and cleared.

(5) View materials handling equipment availability.

f. Brief staff and commander at least once daily.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring marine terminal operations productivity and analysis.

Performance Measures	GO	NO GO
1. Monitored capabilities of terminal service companies.	_____	_____
2. Monitored factors affecting productivity.	_____	_____
3. Monitored daily operation report.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the Soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-13 Army Expeditionary Intermodal Operations	ATP 4-13 Army Expeditionary Intermodal Operations

Subject Area 35: Advanced Cargo Operations (Shore)

551-88H-4503
Monitor Cargo Stowage and Securing Operations

Conditions: Assigned as a platoon sergeant with the requirement to monitor cargo stowage and securing operations in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, a safety briefing, a cargo vessel, cargo to stow, dunnage, safety clothing, and a hatch gang.

Standards: Monitor cargo stowage and securing operations without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with monitoring cargo stowage and securing operations.

Note: None

Performance Steps

1. Check that the cargo space was used properly.

2. Check that cargo is being stowed considering efficient discharge.

3. Check that cargo is being stowed so that the item's strongest structures bear the greatest pressure and weight.

4. Check that each item is stowed so that it supports and strengthens the entire load.

5. Check that enough dunnage has been used, but not more than needed.

6. Check that stowage and special handling instructions are followed.

7. Direct personnel to correct all discrepancies immediately.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring cargo stowage and securing operations.

Performance Measures	**GO**	**NO GO**
1. Checked that the cargo space was used properly.	_____	_____
2. Checked that cargo was stowed considering efficient discharge.	_____	_____
3. Checked that cargo was stowed so that the item's strongest structures bore the greatest pressure and weight.	_____	_____

Performance Measures	GO	NO GO
4. Checked that each item was stowed so that it supported and strengthened the entire load.	_____	_____
5. Checked that enough dunnage was used, but not more than needed.	_____	_____
6. Checked that stowage and special handling instructions were followed.	_____	_____
7. Directed personnel to correct all discrepancies immediately.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
TC 4-13.17 Cargo Specialist's Handbook	

551-88H-4506
Monitor Cargo Security Procedures

Conditions: Assigned as a platoon sergeant with the requirement to monitor cargo security procedures in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, security personnel, cargo checkers, and DD Form 1384 (Transportation Control and Movement Document).

Standards: Monitor cargo operations security procedures without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as platoon sergeant tasked with monitoring the security procedures applied with the loading and unloading of cargo operations.

Note: None

Performance Steps

1. Notify security personnel that security cargo will be unloaded and/or received and that surveillance and protection are required.

2. Brief personnel involved in cargo operations on security.

NOTE: Inform personnel handling the cargo on how essential it is to maintain control of the documentation flow.

3. Select responsible personnel to receive, account for, and release security cargo.

4. Check that personnel comply with rules to control individuals and vehicles within the storage area.

5. Direct personnel that security cargo/containers cannot be reopened without carrier or security officer's specific authority.

6. Direct security personnel and/or cargo checkers to guard hatches or the warehouse during the following periods:

a. Before opening the hatch or warehouse.

b. During breaks or lunch hour.

c. During discharge operations.

d. While cargo is in the terminal area.

7. Direct personnel to secure cargo in a secure cage, unit, or vault for intransit storage and to store loaded containers door to door.

8. Direct personnel to inspect cargo and container seals carefully and regularly and note discrepancies on DD Form 1384 (see Figure 3-204).

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO. 1

1. DOC ID	2. TRLR CTR	3. CONSIGNOR	4. COMMODITY SPECIAL HANDLING	5. AIR DIM	6. POE	7. POD
TXJ		N00604 PEARL HARBOR	594Z9 PUMPS		XE2 PEARL HARBOR	UM4 NSD YOKOSUKA

8. MODE	9. PACK	10. TRANSPORTATION CONTROL NO.	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT
9	CR	N6264922060149XXX	N6249 NSD YOKOSUKA	3	141		123	0	N125

18. CARRIER	19. FLIGHT-TRUCK-VOY-DOC NO.	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE
				2	810	36

a. Transship Point	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc-No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25. XE2	123	H12	130		P7680		2LTF			Ryan Miller
26. UM4	124	A 17								Lindy Ruff
27.										

28. CONSIGNEE	29. DATE RECEIVED/OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAIL FR - CON-TAINER	34. CONSIGOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a.	36. VOY NO POE b.	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD a.	43. Proj b.	43. Stow Loc Shpd c.	43. Stow Loc FTA d.	43. Tac e.	44. ADDITIONAL REMARKS OR Pieces a.	Weight b.	Cube c.

SAMPLE

DD FORM 1384, OCT 2000 PREVIOUS EDITIONS MAY BE USED.

Figure 3-204

Sample of DD Form 1384

9. Restrict privately owned vehicles from entering the cargo handling or intransit storage area.

10. Direct security personnel to inspect terminal lighting and fences for defects and forward discrepancies and suggested corrections to the security officer.

11. Direct personnel shipping or receiving cargo to maintain a record of each shipment leaving the security area. This record should include:

a. Date, time, description of cargo, and seal number, if applicable.

b. Identification number of trucks or other equipment picking up cargo.

c. Name, rank, and organization of equipment operator picking up cargo.

12. Monitor gatehouse personnel at vehicle entrances and exits to ensure that the following procedures are performed:

a. Ensure objects are removed that might obscure or restrict guard's field of vision in the operations area or vicinity.

b. Set up a truck control system by using gate passes.

c. Security personnel inspect all vehicles entering or leaving the security area for unauthorized cargo or other items.

d. Maintain separate gates for personnel and vehicular traffic.

e. Spot-check the DD Form 1384 or other document against the loaded cargo.

13. Change padlocks on security lockers, units, and vaults periodically, and immediately if a key is reported missing.

14. Report any loss or pilferage to the nearest military police element or cargo security officer.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring cargo security procedures.

Performance Measures		**GO**	**NO GO**
1.	Notified security personnel that security cargo will be unloaded and/or received and that surveillance and protection are required.	_____	_____
2.	Briefed personnel involved in cargo operations on security.	_____	_____
3.	Selected responsible personnel to receive, account for, and release security cargo.	_____	_____
4.	Checked that personnel complied with rules to control individuals and vehicles within the storage area.	_____	_____
5.	Directed personnel that security cargo/containers could not be reopened without carrier or security officer's specific authority.	_____	_____
6.	Directed security personnel and/or cargo checkers to guard hatches or the warehouse.	_____	_____
7.	Directed personnel to secure cargo in a secure cage, unit, or vault for intransit storage and to store loaded containers door to door.	_____	_____
8.	Directed personnel to inspect cargo and container seals carefully and regularly and to note discrepancies on DD Form 1384.	_____	_____
9.	Restricted privately owned vehicles from entering the cargo handling or intransit storage area.	_____	_____
10.	Directed security personnel to inspect terminal lighting and fences for defects and forward discrepancies and suggested corrections to the security officer.	_____	_____

Performance Measures	GO	NO GO
11. Directed personnel shipping or receiving cargo to maintain a record of each shipment leaving the security area.	_____	_____
12. Monitored gatehouse personnel at vehicle entrances and exits.	_____	_____
13. Changed padlocks on security lockers, units, and vaults periodically, and immediately when a key was reported missing.	_____	_____
14. Reported any loss or pilferage to the nearest military police element or cargo security officer.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
ATP 4-13 Army Expeditionary Intermodal Operations	
DD FORM 1384 Transportation Control and Movement Document	
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 36: Advanced Cargo Operations (Ship and Shore)

551-88H-4507
Monitor Handling of Refrigerated Cargo

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to monitor handling of refrigerated cargo in an operational environment, during the day or night, in normal weather conditions, given a completed risk assessment, safety briefing, port veterinarian, cargo handlers, refrigerated cargo, and storage compartments.

Standards: Monitor handling of refrigerated cargo without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with monitoring the handling of refrigerated cargo.

Note: None

Performance Steps

1. Coordinate with the port veterinarian or his representative and ensure he/she is present before and during operations.

2. Check to ensure cargo with a strong odor is not stowed with cargo likely to absorb odors.

3. Spot-check temperatures in the compartment during loading to ensure that temperatures do not rise too rapidly.

4. Spot-check temperatures after loading to ensure the cargo compartment is within range (0 degrees F to 32 degrees F if frozen, 33 degrees F to 60 degrees F if chilled).

5. Ensure that fans are working in the air-cooled compartments.

6. Direct personnel to load cargo carefully to prevent bruising but with enough speed to prevent spoilage.

7. Ensure that the cargo handling gear chosen will not crush cargo during the lift.

8. Pre-inspect stowage and monitor securing operations.

9. Observe the inspection of the hatch by the ship's officer, cargo loading officer, and port veterinarian or his representative, taking notes on any needed corrections.

10. Make on-the-spot corrections as needed.

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on monitoring handling of refrigerated cargo.

Performance Measures		**GO**	**NO GO**
1.	Coordinated with the port veterinarian or his representative and ensured he/she was present before and during operations.	_____	_____
2.	Checked to ensure cargo with a strong odor was not stowed with cargo likely to absorb odors.	_____	_____
3.	Spot-checked temperatures in the compartment during loading and ensured that temperatures did not rise too rapidly.	_____	_____
4.	Spot-checked temperatures after loading and ensured the cargo compartment was within range (0 degrees F to 32 degrees F if frozen, 33 degrees F to 60 degrees F if chilled).	_____	_____
5.	Ensured that fans were working in the air-cooled compartments.	_____	_____
6.	Directed personnel to load cargo carefully to prevent bruising but with enough speed to prevent spoilage.	_____	_____
7.	Ensured that the cargo handling gear chosen would not crush cargo during the lift.	_____	_____
8.	Pre-inspected stowage and monitored securing operations.	_____	_____
9.	Observed the inspection of the hatch by the ship's officer, cargo loading officer, and port veterinarian or his representative, and took notes on any needed corrections.	_____	_____
10.	Made on-the-spot corrections as needed.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Primary**
TC 4-13.17 Cargo Specialist's Handbook	

Subject Area 37: Advanced Cargo Operations (Rail)

551-88H-4301
Review Rail Plan for Loading/Unloading Cargo

DANGER

Adhere to all DANGER statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in death or permanent injury to personnel and damage to the equipment.

WARNING

Adhere to all WARNING statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in serious injury to personnel or damage to the equipment.

CAUTION

Adhere to all CAUTION statements listed in the technical manuals and field manuals applicable to this procedure. Failure to comply may result in injury to personnel or damage to the equipment.

Conditions: Assigned as a platoon sergeant with the requirement to review the rail plan for loading and unloading cargo in an operational environment, during the day or night, given palletized cargo loads, vehicles, materials handling equipment (MHE), and rail load plan.

Standards: Review the rail loading and unloading cargo plan for completeness per FM 3-35 and TC 4-13.17.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a platoon sergeant tasked with reviewing the rail plan for loading and unloading cargo.

Note: None

Performance Steps

1. Review the unit rail development responsibilities using TC-AIMS II for loading and unloading cargo.

a. Verify that the deploying unit submits the manual rail load plan to identify all cargo and equipment or MHE designated to be transported by rail as shown below.

Block 1. Unit Name. Name of the unit preparing the rail plan.

Block 2. UIC. Unit Identification Code.
Block 3. Date. Date rail plan is filled out.
Block 4. Type Plan. Enter deployment or reason for submission.
Block 5. Unit Load No. Sequence number of the load, unit specific.
Block 6. Rail Car No. The number of the railcar represented, if there are identical loads, indicate that here.
Block 7. Type/Size of Rail Car. For example: 60-foot wood deck, chain tie down car, DODX car, and so forth.
Block 8. Load Site. Fort Eustis, railhead, and so forth.
Block 9. Destinations. JRTC, Fort Polk, LA, and so forth.
Block 10. Show diagrams of loaded items; M1 tank, M2 Bradley Fight Vehicle, M109 Howitzer, and so on.
Block 11. Fill in blanks with requested information; Bumper No. and Shipment No. are mandatory and must agree (for example, B16 should agree with TCN).
Block 12. Name, Rank, Title, and Unit of Preparer.
Block 13. Date Approved.
Block 14. Name, Rank, Title, and Unit of Approver.
Block 15. Approval authorities signature: normally the unit movement assistant from ITO fills this in.

b. Check manual rail load plan to identify dunnage requirements needed to conduct the unit movement by rail as shown below.

Block 16. Dunnage Requirements. Fill in the appropriate information identified in a through h.
Block 17. Totals. For items b through h.

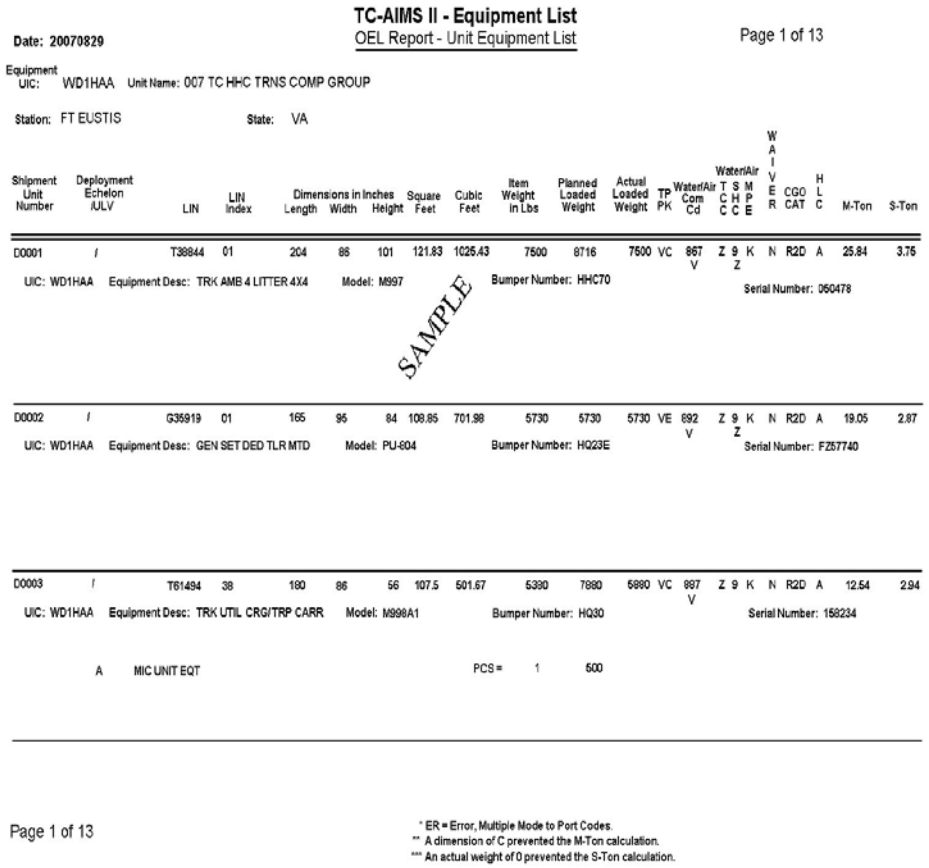
c. Check for completeness of the manual rail load plan.

2. Review the automated output reports generated by TC-AIMS II and TC-ACCIS.

NOTE: The persons responsible for generating the automated output reports are the unit movement coordinator (UMC) or unit movement officer (UMO).

a. Review the TC-AIMS II automated output report organizational equipment list (OEL) to verify that the unit's equipment has been placed on the manifest (if applicable) (see Figure 3-205).

NOTE: The OEL and the unit deployment list (UDL) are synonymous.



TC-AIMS II - Equipment List
OEL Report - Unit Equipment List

Date: 20070829 Page 1 of 13

Equipment UIC: WD1HAA Unit Name: 007 TC HHC TRNS COMP GROUP

Station: FT EUSTIS State: VA

Shipment Unit Number	Deployment Echelon /ULV	LIN	LIN Index	Dimensions in Inches Length	Width	Height	Square Feet	Cubic Feet	Item Weight in Lbs	Planned Loaded Weight	Actual Loaded Weight	TP PK	Water/Air Com Cd	Water/Air T C H C	S M P E	W A I V E R	CGO CAT	H L C	M-Ton	$-Ton
D0001	/	T38844	01	204	86	101	121.83	1025.43	7500	8716	7500	VC	867 V	Z	9 Z	K	N	R2D	A	25.84	3.75
UIC: WD1HAA Equipment Desc: TRK AMB 4 LITTER 4X4 Model: M997 Bumper Number: HHC70 Serial Number: 060478																				
D0002	/	G35919	01	165	95	84	108.85	701.98	5730	5730	5730	VE	692 V	Z	9 Z	K	N	R2D	A	19.05	2.87
UIC: WD1HAA Equipment Desc: GEN SET DED TLR MTD Model: PU-804 Bumper Number: HQ23E Serial Number: FZ57740																				
D0003	/	T61494	38	180	86	56	107.5	501.67	5390	7980	5980	VC	867 V	Z	9	K	N	R2D	A	12.54	2.94
UIC: WD1HAA Equipment Desc: TRK UTIL CRG/TRP CARR Model: M998A1 Bumper Number: HQ30 Serial Number: 158234																				
A MIC UNIT EQT PCS = 1 500																				

SAMPLE

Page 1 of 13

* ER = Error, Multiple Mode to Port Codes.
** A dimension of C prevented the M-Ton calculation.
*** An actual weight of 0 prevented the S-Ton calculation.

Figure 3-205

TC-AIMS II Organizational Equipment List Report

b. Review the TC-ACCIS automated output report (automated unit equipment list [AUEL]) to verify that the unit's equipment has been placed on the manifest (if applicable) (see Figure 3-206).

NOTE: The AUEL and the deployment equipment list (DEL) are synonymous.

```
Date: 29Aug07                                          TC ACCIS - Equipment List
PCN FICEUR01                          SAMPLE

Time: 08:36                                        AUEL REPORT - UNIT EQUIPMENT
LIST                                    Page: 1

UIC: WD1HAA          TYPE DATA: E7          UNIT NAME: 0007 SUSTAINMENT BDE HHC
STATION: FORT EUSTIS           STATE: VA


SHIPMT
PLANNED   ACTUAL            T S M WA
UNIT                         DIMENSIONS IN INCHES                      ITEM WT.
LOADED    LOADED    TP      C H P IV CGO
NUMB. ECH/ULN LIN-INDEX   LENGTH   WIDTH    HEIGHT   SQFT  CUBE FT.    IN LBS.
WEIGHT    WEIGHT    PK WCC C C E ER CAT    S-TON      M-TON
-------------------------------------------------------------------------------
-------------------------------------------------------
D0002 TPC8 01 G12034 02    162.0     93.0     96.0    105        837       7060
7060       7060 VE 892 Z 9 9     R2DA      3.6         21
 EQUIPMENT DESC: GEN SET DED SKID MTD                      MODEL: MEP-806A
BUMPER NUMBER: B213G     SERIAL NUMBER: T-97-300-298
         VEHICLE MATCH [ SUN:           BUMPER NUMBER:            ]

D0003 TPC8 01 G42238 01    147.0     84.0     76.0     86        544       2320
2320       2320 VE 892 Z 9 9     R2BA      1.2         14
 EQUIPMENT DESC: GEN SET DED TRL MTD                       MODEL: PU-797
BUMPER NUMBER: B221G     SERIAL NUMBER: T-01-205-124
         VEHICLE MATCH [ SUN:           BUMPER NUMBER:            ]

D0004 TPC8 01 G42170 01    147.0     84.0     76.0     86        544       2570
2570       2570 VE 892 Z 9 9     R2BA      1.3         14
 EQUIPMENT DESC: GEN SET DED TRL MTD                       MODEL: PU-798
BUMPER NUMBER: HQ 35G    SERIAL NUMBER: T-01-191-175
         VEHICLE MATCH [ SUN:           BUMPER NUMBER:            ]

D0005 TPC8 01 G42170 01    147.0     84.0     76.0     86        544       2570
2570       2570 VE 892 Z 9 9     R2BA      1.3         14
 EQUIPMENT DESC: GEN SET DED TRL MTD                       MODEL: PU-798
BUMPER NUMBER: HQ 34G    SERIAL NUMBER: T-01-194-198
         VEHICLE MATCH [ SUN:           BUMPER NUMBER:            ]

D0006 TPC8 01 G53778 01    165.0     95.0     84.0    109        762       4920
4920       4920 VE 892 Z 9 9     R2DA      2.5         20
 EQUIPMENT DESC: GEN SET DED TLR MTD                       MODEL: PU-802
BUMPER NUMBER: HQ 33G    SERIAL NUMBER: FZA 57739
         VEHICLE MATCH [ SUN:           BUMPER NUMBER:            ]

D0007 TPC8 01 T07679 58    191.0     86.0     95.0    115        904       9300
13700      9300 VO 867 Z 9 9     R2DA      4.7         23
```

Figure 3-206

TC-ACCIS Automated Unit Equipment List Report

c. Review the summary and detail (AUEL/OEL) reports to determine if the unit movement plan is included.

d. Review the TC-ACCIS/TC-AIMS II output reports (AUEL/OEL) to determine work requirements in relation to secondary loads on vehicles (such as tie-down, blocking and bracing, and so forth).

3. Review the unit manual load plan procedures for loading and unloading cargo (see FM 3-35).

Evaluation Preparation: Ensure that all materials required to perform the task are available. Tell the soldier that he/she will be evaluated on reviewing the rail plan for loading and unloading cargo.

Performance Measures	**GO**	**NO GO**
1. Reviewed the unit rail development responsibilities using TC-AIMS II for loading and unloading cargo.	_____	_____
2. Reviewed the automated output reports generated by TC-AIMS II and TC-ACCIS.	_____	_____

Performance Measures	GO	NO GO
3. Reviewed the unit manual load plan procedures for loading and unloading cargo.	_____	_____

Evaluation Guidance: Score the soldier GO if all performance steps are passed (P). Score the soldier NO GO if any performance step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Primary
FM 3-35 Army Deployment and Redeployment	
TC 4-13.17 Cargo Specialist's Handbook	

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CHAPTER 4

Duty Position Description

1. **MOSC 88H10**. Check, tally, and document cargo utilizing both manual and automated data processing systems. Rig ships' gear as part of a team. Load and unload supplies and equipment from ships, docks, beaches, railheads, boxcars, warehouses, motor vehicles, and aircraft (to include internal and external helicopter loading). Operate and maintain all types and sizes of winches, cranes, and forklifts. Master lashing procedures using various vehicle lashing assemblies per DOT and other regulations.

2. **MOSC 88H20**. Assign cargo handlers, signal operators and winch operators to duty stations. Provide technical guidance to subordinates. Inspect cargo, supervise cargo checking and hatch operations, control aircraft loading and unloading (to include helicopter external sling loading operations), oversee railhead tie-down crews, direct container stuffing and unstuffing, plan warehouse storage, and manage crane operations. Supervise operator maintenance for cargo handling equipment such as cranes and forklifts. Enforce safety practices and documentation procedures.

3. **MOSC 88H30**. Plan work schedules for terminal operations, airfield arrival/departure control groups (A/DACG) to include passengers, and container/trailer transfer points. Prepare and utilize stowage plans, aircraft load plans and other documentation to conduct cargo operations. Issue materials handling equipment, nets, slings, ropes, cables, wire, rope and other cargo operations gear. Enforce safety practices. Prepare, consolidate, and review administrative, personnel, and technical reports covering unit activities.

4. **MOSC 88H40**. Supervise and manage work force. Coordinate administrative matters, communication activities and training programs. Prepare tactical plans and training materials. Provide staff supervision, policy, and guidance for personnel and cargo movement by air, rail, motor and water transport. Plan and supervise Central Receiving and Shipping Point and A/DACG operations. Evaluate sites for depots, truck terminals, railheads, beachheads, air terminals and water ports/terminals.

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APPENDIX A

HANDS-ON EVAULATION (DA FORM 5164-R) INSTRUCTIONS

DA Form 5164-R (Hands-On Evaluation) allows the trainer to keep a record of the performance measures a soldier passes or fails on each task.

Before evaluation:

1. Obtain a blank copy of DA Form 5164-R at http://www.apd.army.mil, which you may locally reproduce on 8 ½ x 11-inch paper.
2. Enter the task title and 10-digit number from the STP task summary.
3. In Column a, enter the performance measure numbers from the task summary.
4. In Column b, enter the performance measure corresponding to the number in Column a (you may abbreviate this information, if necessary).
5. Locally reproduce the partially completed form when evaluating more than one soldier on the task or when evaluating the same soldier more than once.

During evaluation:

1. Enter the date just before evaluating the soldier's task performance.
2. Enter the evaluator's name, the soldier's name, and the unit.
3. For each performance measure in Column b, enter a check in Column c (PASS) or Column d (FAIL), as appropriate.
4. Compare the number of performance measures the soldier passes (and, if applicable, which ones) against the task standards specified in the task summary. If the standards are met or exceeded, check the GO block under STATUS; otherwise, check the NO GO block.

APPENDIX B

FIELD EXPEDIENT SQUAD BOOK (DA FORM 5165-R) INSTRUCTIONS

DA Form 5165-R (Field Expedient Squad Book) allows the trainer to keep a record of task proficiency for a group of soldiers.

Before evaluation:

1. Obtain a blank copy of DA Form 5165-R at http://www.apd.army.mil, which you may locally reproduce on 8 ½ x 11-inch paper.
2. Locally reproduce the partially completed form if you are evaluating more than nine soldiers.

During evaluation:

1. Enter the names of the soldiers you are evaluating, one name per column, at the top of the form.
2. Under STATUS, record (in pencil) the date in the GO block if the soldier demonstrated task proficiency to soldier's manual standards. Keep this information current by always recording the most recent date on which the soldier demonstrated task proficiency. Record the date in the NO GO block if the soldier failed to demonstrate task proficiency to soldier's manual standards. Soldier who failed to perform the task should be retrained and reevaluated until he/she can meet the standard. When the standards are met, enter the date in the appropriate GO block and erase the previous entry from the NO GO block.

After evaluation:

1. Read down each column (GO/NO GO) to determine the training status of an individual. This will give you a quick indication of which tasks a soldier needs training on.
2. Read across the rows for each task to determine the training status of all soldiers. You can readily see which tasks to focus training on.
3. Line through the STATUS column of any soldier who leaves the unit.

GLOSSARY

Section I
Acronyms & Abbreviations

AAR	after action report
AC	active component
ACCP	The Army Correspondence Course Program
ACS	Army Community Service
A/DACG	arrival/departure airfield control group
ADRP	Army Doctrine Reference Publication
AFMAN	Air Force Manual
AIPD	Army Institute for Professional Development
AIT	advanced individual training
ALC	Advanced Leaders Course
ALCE	airlift control element
AMEDD	Army Medical Department
AN	annually
AOAP	Army Oil Analysis Program
ARTEP	Army Training and Evaluation Program
ASI	additional skill identifier
ATLAS	all terrain lifter, army system
ATP	Army Techniques Publication
AUEL	automated unit equipment list
BA	biannually
BFV	Bradley Fighting Vehicle
BII	basic issue items
BM	bimonthly
BW	biweekly
C	celsius
CASCOM	Combined Arms Support Command
CB	center of balance
CBL	commercial bill of lading
CBRN	chemical, biological, radiological, and nuclear
CBRNE	chemical, biological, radiological, nuclear and high-yield explosive
CFR	Code of Federal Regulations
CONUS	Continental United States
CONUSA	Continental United States Army
CSM	command sergeant major
CTC	Combat Training Center
CTT	common task test
DA	Department of the Army
DEL	deployment equipment list
DLAI	Defense Logistics Agency Instruction
DOD	Department of Defense
DODX	Department of Defense-owned rail cars
DOT	Department of Transportation
EIC	end item code
EPA	Environmental Protection Agency
F	fahrenheit

FAW	front axle weight
FFE	front forward edge
FM	Field Manual
FOH	front overhang
FORSCOM	United States Army Forces Command
FSS	fast sealift ship
G3	Assistant Chief of Staff, Operations
GW	gross weight
HAZMAT	hazardous material
HR	hourly
HST	helicopter support team
IAW	intermediate axle weight
ICODES	Integrated Computerized Deployment System
INST	institutional
IR	infrared
ISO	International Organization for Standardization
ITEP	Individual Training Evaluation Program
ITO	installation transportation officer
JRTC	Joint Readiness Training Center
KG	kilogram
KPH	kilometers per hour
L	liter
LCRTF	light capacity rough terrain forklift
LMI	load movement indicator
LMSR	large, medium speed roll-on/roll-off
LO/LO	lift-on/lift-off
LOTS	logistics over-the-shore
LTON	long ton
MAC	maintenance allocation chart
MACOM	major command
MCO	marine corps order
MCRP	Marine Corps Reference Publication
METL	mission essential task list
MHE	materials handling equipment
MI	military intelligence
MILVAN	military-owned demountable container
MO	monthly
MOOTW	military operations other than war
MOS	military occupational specialty
MOSC	military occupational specialty code
MPH	miles per hour
MSC	Military Sealift Command
MTP	mission training plan
N	north
NAVSUP	naval support
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NMC	non-mission capable
OEL	organizational equipment list

OP	operational
OT	one time
PFD	personal flotation device
PLL	prescribed load list
PMCS	preventive maintenance checks and services
POD	port of debarkation
POE	port of embarkation
PSI	pounds per square inch
PUB	publication
PVR	portable vehicle ramp
QT	quarterly
R	reverse
RAW	rear axle weight
RC	reserve component
RDD	required delivery date
RDL	reference datum line
ROH	rear overhang
RO/RO	roll-on/roll-off
RPM	revolutions per minute
RTCC	rough terrain container crane
RTCH	rough terrain container handler
SA	semiannual
SCoE	Sustainment Center of Excellence
SD	self-development
SEAVAN	shipping container commercial or government-owned or leased
SEC	second
SEL	select
SF	standard form
SL	skill level
SLC	Senior Leaders Course
SM	Soldier's Manual
SMCT	Soldier's Manual of Common Tasks
SM/TG	Soldier's Manual/Trainer's Guide
SOMARPI	supplemental maintenance and repair parts instruction
SOP	standing operating procedure
STON	short ton
STP	Soldier Training Publication
SWC	safe working capacity
SWL	safeworking load
TADSS	training aids, devices, simulators and simulations
TAMMS	The Army Maintenance Management System
TC-ACCIS	Transportation Coordinator’s Automated Command and Control Information System
TC-AIMS II	Transportation Coordinator’s Automated Information for Movement System II
TCMD	transportation control movement document
TCN	transportation control number
TEC	Training Extension Course
TG	Trainer’s Guide
TM	Technical Manual
TRADOC	US Army Training and Doctrine Command
TTP	tactics, techniques and procedures
UDL	unit deployment list

UMC	unit movement coordinator
UMO	unit movement officer
USCG	United States Coast Guard
VLA	vehicle lashing assembly
VOL	volume
VRRTFL	variable-reach, rough-terrain forklift
WB	wheel base
WK	weekly
WTF	work-through floor

Section II
Terms

Army Training and Evaluation Program (ARTEP)
The cornerstone of unit training, it is the umbrella program to be used by the trainer and training manager in the training and evaluation of units. The ARTEP is a complete program enabling commanders to evaluate and develop collective training based on unit weaknesses, and then to train the unit to overcome those weaknesses and to reevaluate. Success on the battlefield depends on the coordinated performance of collective and individual skills that are taught through the ARTEP mission training plan (MTP).

Collective training
Training that prepares cohesive teams and units to accomplish their missions on the battlefield and in operations other than war, either in institutions or units.

Common task
A critical task for which all soldiers at a given skill level are accountable, regardless of their MOS.

Critical task
A task which is essential for accomplishment of successful individual skill performance.

Cross training
The systematic training of soldiers on tasks related to another duty position.

Individual training
Training which the officer, NCO, or soldier receives in the training base, units, on the job, or by self-study. This training prepares the individual to perform specified duties or tasks related to the assigned or next higher specialty code of MOS skill level and duty position.

Individual Training Evaluation Program (ITEP)
A program which requires commanders to routinely evaluate soldier's ability to perform nonspecific tasks critical to the unit mission.

Integration training
The completion of initial entry training in skill level 1 tasks for an individual newly arrived in a unit, but limited specifically to tasks associated with the mission, organization, and equipment of the unit to which the individual is assigned. It may be conducted by the unit using training materials supplied by TRADOC, by troop schools, or by in-service or contract mobile training teams. In all cases, this training is supported by the TRADOC school proponent.

Merger training

Training that prepares an NCO to supervise one or more different MOSs at lower skill levels when the soldier advances in skill level in his career management field.

MILVAN
A military-owned demountable container, conforming to US and international standards, operated in a centrally controlled fleet for the movement of military cargo.

Mission essential task list (METL)
A compilation of collective mission essential tasks which must be successfully performed if an organization is to accomplish its wartime mission(s).

Sustainment training
The provision of training required to maintain the minimum acceptable level of proficiency required accomplishing a critical task.

Task summary
A statement of the task in an action-verb format plus all essential performance measures. A standard format fully describes the task for the soldier in the field. It will accommodate any product or process task whether it is in fixed sequence, alternate sequence, or combination. The task summary is used both to train the soldier to perform the task and to evaluate the soldier's ability to perform the task (within testing constraints).

Train up
The process of increasing the skills and knowledge of an individual to a higher skill level in the appropriate MOS. It may involve certification.

Unit training
Training (individual, collective, and joint or combined) that takes place outside the Army's institutional base.

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