

STP 55-88H14-SM-TG

**Soldier's Manual
and
Trainer's Guide**

**Cargo Specialist
MOS 88H
Skill Levels 1, 2, 3, and 4**

December 2007

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SOLDIER'S MANUAL and TRAINER'S GUIDE

MOS 88H

Cargo Specialist, Skill Levels 1, 2, 3, and 4

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Preface

This Soldier Training Publication (STP) is intended for Soldiers holding Military Occupational Specialty (MOS) 88H, Skill Levels (SLs) 1, 2, 3, and 4, their supervisors, trainers, and commanders. It contains an MOS Training Plan providing information needed to plan, conduct, and evaluate unit training, one of the most important jobs of military leaders. It includes standardized training objectives in the form of task summaries that can be used to train and evaluate Soldiers on critical tasks supporting unit missions during wartime.

Soldiers holding MOS 88H should have access to this publication. Trainers and first line supervisors should actively plan for Soldiers' access, making it available in work areas, unit learning centers, and unit libraries. However, it is not intended for an individual copy to be provided to each MOS holder. The STP is obtainable on line from the Reimer Digital Library at: <http://www.adtdl.army.mil/atdls.htm>

Tasks in this manual apply to the Active Army, the Army National Guard/Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

The proponent of this publication is Headquarters (HQ) Training and Doctrine Command (TRADOC). Submit comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Department of the Army, Training Directorate, Move Division, ATTN: ATCL-TDM, 401 First Street, Fort Lee, VA 23801-1511.

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Chapter 1

Introduction

1-1. General. This Soldier Training Publication (STP) identifies individual MOS training requirements for Soldiers holding MOS 88H. Commanders, trainers, and Soldiers should use it to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference for supporting self-development, evaluating MOS proficiency, and training of 88H Soldiers. Commanders employ two primary methods to evaluate Soldiers' proficiency:

- Commander's evaluation. Commander's evaluations are local tests or assessments of Soldiers' performance of MOS-specific and common tasks critical to the unit mission. They may be conducted year-round.
- Common task test (CTT). CTTs are hands-on tests used to evaluate proficiency on common tasks. Alternate written tests are provided if equipment is not available for hands-on testing.

This publication is the Soldier's primary reference to prepare for a commander's evaluation of MOS-specific tasks. It contains task summaries for all critical tasks specific to the MOS and skill level (SL). Commanders and trainers will use this Soldier's Manual/Trainer's Guide (SM/TG) to plan and conduct training and commander's evaluations.

Chapter 2, Trainer's Guide, contains information needed to plan training requirements for this MOS. The trainer's guide

- Identifies subject areas in which Soldiers must be trained.
- Identifies critical tasks for each subject area.
- Specifies where Soldiers are initially trained on each task.
- Recommends how often each task should be trained to sustain proficiency.
- Recommends a strategy for cross-training Soldiers.
- Recommends a strategy for training Soldiers to perform higher-level tasks.

Use this STP along with STP 21-1-SMCT (Soldier's Manual of Common Tasks, Skill Level 1), STP 21-24-SMCT (Soldier's Manual of Common Tasks, Skill Levels 2-4), Army training and evaluation programs (ARTEPs), FM 25-4 (How to Conduct Training Exercises), FM 25-5 (Training for Mobilization and War), FM 7-0 (Training the Force), and FM 7-1 (Battle Focused Training) to establish effective training plans and programs that integrate Soldier, leader, and collective tasks.

1-2. Task Summaries. Task summaries outline wartime performance requirements for each critical task in the STP. They provide both Soldier and trainer with the information necessary to prepare, conduct, and evaluate critical task training. As a minimum, task summaries include information Soldiers must know and skills they must perform to standard for each task. Following is the task summary format:

- Task number. The task number is a 10-digit number that identifies the task and skill level. Include the task number and title in any correspondence relating to the task.
- Task title. The task title identifies the action to be performed.

- **Conditions.** The task conditions statement describes the field or garrison conditions under which the task will be performed and identifies the equipment, tools, references, job aids, and supporting personnel that the Soldier needs to perform the task in wartime.
- **Standards.** The task standards describe how well and to what level of proficiency the Soldier must perform the task under wartime conditions. Standards are typically expressed in terms of accuracy, completeness, duration, sequence, speed, and tolerance.
- **Performance steps.** This section provides, in detail, what is required on how to perform the task.
- **Performance measures.** This section identifies specific actions that the Soldier must accomplish to complete the task successfully. Performance measures appear in a GO/NO-GO rating format for easy evaluation. Some tasks may also include detailed training information in a Training Information Outline and an Evaluation Preparation Section. The Evaluation Preparation Section 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.
- **References.** This section identifies references that provide more detailed explanations of task performance requirements than are given in the task summary.
- **Warnings.** Warnings alert users to the possibility of immediate personal injury or equipment damage.
- **Notes.** Notes provide additional supportive explanations or tips relating to task performance.

1-3. **Soldier's Responsibilities.** 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. 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 performance of all common tasks listed in the SMCTs at their current skill level and below.

Periodically, Soldiers should ask their supervisor or another soldier to check their performance to ensure that they can perform the tasks.

1-4. **NCO Self-Development and the STP.** Self-development is a key component of leader development. Leaders follow planned, progressive, sequential self-development programs developed by the individual NCO and his or her first-line supervisor to enhance and sustain military competencies. Self-development consists of individual study, research, professional reading, practice, and self-assessment. The self-development concept requires NCOs, as Army professionals, to take responsibility for remaining current in all phases of their MOS. The STP is the NCO's primary source for maintaining MOS proficiency. Another important resource for self-development is the Army Correspondence Course Program (ACCP). For enrollment information in this program, visit on line through the Army Institute for Professional Development (AIPD) website at <http://www.atsc.army.mil/accp/aipdnew.asp>.

1-5. Commander's Responsibilities. Commanders must ensure that their unit training plans prepare the unit for war by enabling Soldiers to develop and sustain proficiency in their MOS and skill level tasks. Commanders should design unit training programs to provide individual training for all Soldiers assigned to the unit and to evaluate Soldier proficiency routinely as part of the commander's evaluation program. The unit training program should also integrate individual training with crew drills and other collective training. The MOS training plan provides information on which to base integration, cross-train, train-up, and sustainment training programs. Commanders should use the MOS training plan when developing unit training plans.

1-6. Trainer's Responsibilities. Training is the business of all unit leaders. First-line leaders are the principal trainers in the unit because they directly supervise Soldiers and lead crews, squads, sections, and teams.

a. Trainers can use the MOS training plan to determine the critical tasks each Soldier is responsible for. They should tell each Soldier which tasks he or she must be able to perform. Trainers should evaluate task performance to determine which tasks each Soldier can or cannot perform to standard. Soldiers who cannot perform a task to standard need further training. Developing effective training is explained in detail in FM 7-0 and FM 7-1.

b. Every task summary in this STP includes performance measures, which trainers may use year-round to determine if Soldiers can perform critical tasks to the specified standards. The performance measures identify what the trainer needs to observe to score a Soldier's performance. A blank space is provided for the trainer to check either the GO or NO-GO column for each performance measure. Some tasks require the trainer to watch the Soldier perform them (evaluate the process). Other tasks call for the trainer to focus on the results of the Soldier's performance (evaluate the product). Comments should not be written on the task summary.

c. Trainers can monitor the progress of their Soldiers by recording task GO/NO-GO results. Trainers may use DA Form 5164-R (Hands-On Evaluation) to record the performance measures a Soldier passed or failed. The form, which may be locally reproduced, applies to all tasks in this STP. Trainers may have DA Form 5164-R overprinted with information unique to their training requirements before reproducing it. See Appendix A for instructions on how to obtain and fill out a copy of a DA Form 5164-R.

d. Trainers may use DA Form 5165-R (Field Expedient Squad Book) to record hands-on GO/NO-GO results for a group of Soldiers (for example, a crew, section, or squad) having the same MOS and skill level. This form supports conduct of commander's evaluations and can be used to record training results gathered in the field during slack time for all MOSs and skill levels. Use of this form is optional. See Appendix B for instructions on how to obtain and fill out a copy of a DA Form 5165-R. Trainers should work with each Soldier until tasks can be performed to specific task summary standards.

1-7. Training Support. References have been identified for each task to assist in planning and conducting training. A consolidated list of references identified by type, publication number, and title and a comprehensive glossary of acronyms, abbreviations, and definitions are included in this STP.

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Chapter 2

Trainer's Guide

2-1. **General.** The MOS Training Plan 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 MOS Training Plan should be used as a guide for conducting unit training and not a rigid standard. The MOS Training Plan 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 MOS Training Plan 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 MOS Training Plan. 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 MOS Training Plan.
- **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 where the task is first trained to Soldier training publications standards. If the task is first trained to standard in the unit, the word "Unit" will be in this column. If the task is first trained to standard in the training base, it will identify, by brevity code (ANCOC, BNCOC, and so on), the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.
- **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.

AIT	Advanced Individual Training
ASI/SD	Additional Skill Identifier/Special Duty
BNCOC	Basic NCO Course
BTC	Basic Technical Course

Figure 2-1. Training Locations

AN	- Annually
BA	- Biannually
BM	- Bimonthly
BW	- Biweekly
MO	- Monthly
QT	- Quarterly
SA	- Semiannually
WK	- Weekly

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. Subject Area Codes.

Skill Level 1

- 1 Initial Cargo Operations (Air)
- 2 Initial Cargo Rigging Operations
- 3 Initial Cargo Checking Operations
- 4 Initial Haggglunds Crane Operations
- 5 4,000 Lbs Rough Terrain Forklift Operation
- 6 10,000 Lbs Rough Terrain Forklift (M10A)
- 7 10,000 Lbs - All Terrain Lifter Army System (ATLAS)
- 8 40-Ton Rough Terrain Container Crane Operations
- 9 50,000 Lbs - Rough Terrain Container Handler Operations
- 10 53,000 Lbs - Rough Terrain Container Handler Operations (KALMAR)
- 11 Initial Shipboard Fire Fighting/Damage Control
- 12 Initial Cargo Operation (Shore and Ship)
- 13 Initial Cargo Operations (Rail)
- 14 Initial Cargo Operation (Ship)
- 15 Initial Seamanship Maintenance
- 16 Initial Drill and Survival Measures
- 34 Basic Cargo Operations (KALMAR-RTCH)

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 Hagglands Crane Operations
- 22 Primary 40-Ton Crane Operations
- 23 Primary Cargo Operations (Ship)
- 25 Primary Cargo Operations (Rail)

Skill Level 3

- 3 Initial Cargo Checking Operations
- 26 Basic Cargo Operations (Air)
- 27 Basic Cargo Operations (Shore)
- 28 Basic Cargo Documentation
- 30 Basic Cargo Operations (Ship)
- 32 Basic Cargo Operations (Ship and Shore)
- 33 Basic Cargo Operations (Rail)
- 34 Basic Cargo Operations (KALMAR-RTCH)
- 35 Advance Automated Cargo Documentation, Computer Deployment Systems (CODES)

Skill Level 4

- 36 Advanced Cargo Operations (Air)
- 37 Advanced Cargo Operations (Ship)
- 38 Advanced Cargo Documentation
- 41 Advanced Cargo Operations (Shore)
- 42 Advanced Cargo Operations (Ship and Shore)
- 43 Advanced Cargo Operations (Rail)

2-3. Duty Position Training Requirements.

88H CAREER FIELD DUTY POSITIONS			
Duty Position	Subject Area	Cross Train	Train-up/Merger
Skill Level 1			
Cargo Specialist	1 through 16 and 34	NA	88H20/Cargo Specialist
Skill Level 2			
Cargo Specialist	17 through 23 and 25	NA	88H30/Cargo Specialist
Skill Level 3			
Cargo Specialist	3, 26, 27, 28, 30, and 32 through 35	NA	88H40/Cargo Specialist
Skill Level 4			
Cargo Specialist	36, 37, 38, 41, 42, and 43	NA	88Z50/Transportation Senior Sergeant

2-4. Critical Tasks List.

**MOS TRAINING PLAN
88H14**

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Skill Level 1				
<i>Subject Area 1. Initial Cargo Operations (Air)</i>				
551-88H-1501	Perform Hookup Team Duties	UNIT	SA	1-2
551-88H-1506	Secure Cargo Aboard Aircraft	AIT	SA	1-2
551-88H-1508	Mark Center of Balance for a Multi-axle or Tracked Vehicle	AIT	AN	1-2
551-88H-1509	Place 463L Pallet System Into Storage	AIT	SA	1-2
551-88H-1511	Escort Passengers and Chalks to Aircraft	AIT	SA	1-2
551-88H-1514	Load Married 463L Pallets	AIT	SA	1-2
551-88H-1515	Build a 463L Pallet	AIT	SA	1-2
<i>Subject Area 2. Initial Cargo Rigging Operations</i>				
551-88H-1502	Prepare Electric Winches for Operation to Load or Discharge Cargo	AIT	SA	1-2
551-88H-1504	Top Standard Booms Equipped With Single-Topping Lift	AIT	SA	1-2
551-88H-1505	Top Standard Booms Equipped with Multiple-Topping Lift (Boom in Cradle)	AIT	SA	1-2
551-88H-1517	Inspect Cargo Handling Gear	AIT	MO	1-2
551-88H-1518	Open Hatches	AIT	SA	1-2
551-88H-1519	Rig the Three Standard Rigs of Cargo Booms	AIT	SA	1-2
551-88H-1520	Reeve Triple-Sheave Blocks	AIT	SA	1-2
<i>Subject Area 3. Initial Cargo Checking Operations</i>				
551-88H-1507	Check Cargo into In-Transit Storage Area	AIT	SA	1-2
551-88H-1510	Record Onward Movement of Cargo on DD Form 1384	AIT	SA	1-2
551-88H-1516	Tally Cargo	AIT	SA	1-2
<i>Subject Area 4. Initial Haggglunds Crane Operations</i>				
551-88H-1403	Prepare Haggglunds Crane for Operation	AIT	AN	1-2
551-88H-1405	Operate Haggglunds Crane in Single Mode	AIT	AN	1-2
551-88H-1406	Place Haggglunds Crane in Twin Mode	AIT	AN	1-2
551-88H-1407	Perform Spreader Operations with Haggglunds Crane Using 20-and 40- foot Spreader	AIT	MO	1-2
551-88H-1413	Load Flatracks Aboard a Cargo Vessel	AIT	AN	1-2
551-88H-1414	Stow General Cargo at Assigned Hatch	AIT	MO	1-2
551-88H-1415	Secure Vehicles or Cargo in Seasheds	AIT	AN	1-2
551-88H-1416	Stow Containers Aboard a Cargo Vessel	AIT	AN	1-2
551-88H-1421	Signal Crane Operator Using Standard Hand Signals	AIT	MO	1-2
<i>Subject Area 5. 4,000 Lbs Rough Terrain Forklift Operation</i>				
551-88H-1533	Operate the 4,000-lb Rough Terrain Forklift	UNIT	AN	1-2

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 6. 10,000 Lbs Rough Terrain Forklift (M10A)				
551-88H-1526	Enter Surf with 10,000-lb Rough Terrain Forklift (M10A)	AIT	SA	1-2
551-88H-1528	Operate 10,000-lb Rough Terrain Forklift (M10A) Under Blackout Drive Conditions	AIT	SA	1-2
551-88H-1531	Operate the 10,000-lb Rough Terrain Forklift (M10A)	AIT	SA	1-2
Subject Area 7. 10,000 Lbs - All Terrain Lifter Army System (ATLAS)				
551-88H-1537	Operate ATLAS Rough Terrain Forklift Without a Load	AIT	AN	1-2
551-88H-1538	Operate ATLAS Rough Terrain Forklift With a Load	AIT	AN	1-2
Subject Area 8. 40-Ton Rough Terrain Container Crane Operations				
551-88H-1424	Perform Emergency Boom Operating Procedures on the Rough Terrain Container Crane (RTCC)	AIT	AN	1-2
551-88H-1425	Perform Emergency Load Lowering Procedures on the Rough Terrain Container Crane (RTCC)	AIT	AN	1-2
551-88H-1602	Perform Rough Terrain Container Crane (RTCC) Operations	AIT	MO	1-2
551-88H-1606	Drive Rough Terrain Container Crane (RTCC) Without a Load	AIT	MO	1-2
Subject Area 9. 50,000 Lbs - Rough Terrain Container Handler Operations				
551-88H-1534	Operate Rough Terrain Container Handler Without a Load (DV-43)	AIT	AN	1-2
551-88H-1535	Operate Rough Terrain Container With a Load (DV-43)	AIT	AN	1-2
Subject Area 10. 53,000 Lbs - Rough Terrain Container Handler Operations (KALMAR)				
551-88H-1401	Perform Preventive Maintenance Checks and Services on Material Handling Equipment	AIT	SA	1-2
551-88H-1539	Operate Kalmar Rough Terrain Container Handler Without a Load (RT 240)	AIT	AN	1-2
551-88H-1540	Operate Kalmar Rough Terrain Container Handler With a Load (RT 240)	AIT	AN	1-2
551-88H-1541	Operate Kalmar Rough Terrain Container Handler Under Unusual Conditions (RT 240)	AIT	AN	1-2
Subject Area 11. Initial Shipboard Fire Fighting/Damage Control				
551-88H-1801	Perform Fire Fighting Techniques	UNIT	SA	1-4
Subject Area 12. Initial Cargo Operation (Shore and Ship)				
551-88H-1422	Signal Winch Operator Using Standard Hand Signals	UNIT	AN	1-2
551-88H-1503	Operate Electric Winches to Load or Discharge Cargo	UNIT	AN	1-2
551-88H-1512	Load Cargo Into Containers	AIT	SA	1-2
Subject Area 13. Initial Cargo Operations (Rail)				
551-88H-1302	Load Vehicles on Flatcar	AIT	AN	1-2
551-88H-1305	Mark Dangerous Cargo for Rail Transport	AIT	SA	1-2

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
<i>Subject Area 14. Initial Cargo Operation (Ship)</i>				
551-88H-1417	Stow Wheeled and Tracked Vehicles Aboard Cargo Vessel	AIT	SA	1-2
551-88H-1513	Stow General Cargo for Protection in Transit	AIT	SA	1-2
551-88H-1524	Perform Vehicle Guide Duties During RO/RO Operations	AIT	AN	1-2
551-88H-1525	Stow Wheeled and Tracked Vehicles on RO/RO Deck	AIT	AN	1-2
<i>Subject Area 15. Initial Seamanship Maintenance</i>				
551-88H-1703	Tie Basic Seamanship Knots	AIT	SA	1-2
<i>Subject Area 16. Initial Drill and Survival Measures</i>				
551-88H-1701	Perform Water Survival Techniques	UNIT	AN	1-2
551-88H-1702	Don Crew Work Vest	AIT	AN	1-2
<i>Subject Area 34. Basic Cargo Operations (KALMAR-RTCH)</i>				
551-88H-1527	Communicate with Hand and Arm Signals When Operating Rough Terrain Container Handler	AIT	AN	1-2
Skill Level 2				
<i>Subject Area 17. Primary Cargo Operations (Air)</i>				
551-88H-2501	Supervise Hook-up Team Duties	UNIT	AN	2-3
551-88H-2502	Signal Helicopter Pilot During Hookup	UNIT	MO	2-3
551-88H-2504	Supervise Securing of Cargo Aboard Aircraft	UNIT	SA	2-3
551-88H-2505	Rig a Single Point Load for External Air Transport	UNIT	AN	2-3
551-88H-2506	Rig a Cargo Net (Helicopter)	UNIT	AN	2-3
551-88H-2507	Inspect Vehicles for Air Movement	UNIT	SA	2-3
551-88H-2508	Supervise Marking Center of Balance for a Multi-axle or Tracked Vehicle	UNIT	SA	2-3
551-88H-2510	Supervise Storage of 463L Pallet System	BNCOC	SA	2-3
551-88H-2512	Supervise Building a 463L Pallet	BNCOC	SA	2-3
<i>Subject Area 18. Primary Maintenance & Rigging Operations</i>				
551-88H-2517	Rig Yard-and-Stay With a Double Purchase	UNIT	SA	2-3
551-88H-2518	Supervise the Preparation of the Three Standard Rigs of Cargo Booms	UNIT	AN	2-3
551-88H-2519	Supervise the Rigging of Four Booms with a Block-in-Bight	UNIT	AN	2-3
551-88H-2521	Supervise the Rigging of Four Booms Doubled Up on a Double-Rig Hatch	UNIT	AN	2-3
551-88H-2522	Supervise Application of Wire Rope Clips Needed for Lashing Cargo	UNIT	SA	2-3
551-88H-2523	Supervise Inspection of Cargo Handling Gear	UNIT	MO	2-3
551-88H-2526	Supervise Topping Booms Equipped with Multiple-Topping Lifts (Boom in Cradle)	UNIT	AN	2-3

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 19. Primary Cargo Documentation				
551-88H-2520	Perform Cargo Planning Calculations	BNCOC	SA	2-3
551-88H-2524	Locate Cargo Designated for Discharge	BNCOC	SA	2-3
551-88H-2525	Review Cargo Markings to Facilitate Handling	BNCOC	SA	2-3
Subject Area 20. Primary Cargo Operations (Ship and Shore)				
551-88H-2503	Determine Materials-Handling Equipment Required for Operations	BNCOC	SA	2-3
Subject Area 21. Primary Hagglands Crane Operations				
551-88H-2402	Supervise Preventive Maintenance Checks and Services	BNCOC	MO	2-3
551-88H-2403	Supervise Preparation of Hagglands Crane for Operations	BNCOC	AN	2-3
551-88H-2404	Supervise Stowing and Unstowing Hagglands Crane in Parking Support	BNCOC	AN	2-3
551-88H-2405	Supervise Setup Procedures on Hagglands Crane for Single Mode Operations	BNCOC	MO	2-3
551-88H-2406	Supervise Setup Procedures on Hagglands Crane for Twin Mode Operations	BNCOC	MO	2-3
551-88H-2407	Supervise Spreader Operations with Hagglands Crane using 20-and 40-foot Spreader	BNCOC	MO	2-3
551-88H-2408	Supervise Opening of Hatch Covers	BNCOC	MO	2-3
551-88H-2409	Supervise Loading of Flatracks Aboard a Cargo Vessel	BNCOC	MO	2-3
551-88H-2412	Supervise Stowage of Containers Aboard a Cargo Vessel	BNCOC	MO	2-3
Subject Area 22. Primary 40-Ton Crane Operations				
551-88H-2601	Signal Crane Operator Using Standard Hand Signals	UNIT	SA	2-3
551-88H-2607	Supervise Rough Terrain Container Crane (RTCC) Operations	BNCOC	AN	2-3
Subject Area 23. Primary Cargo Operations (Ship)				
551-88H-2509	Supervise Stowage of General Cargo as Assigned Hatch	UNIT	SA	2-3
551-88H-2513	Supervise Stowage of Wheeled and Tracked Vehicles on RO/RO Deck	BNCOC	AN	2-3
551-88H-2516	Attach Semiautomatic Toplift Spreader Devices to Container	UNIT	AN	2-3
551-88H-2528	Supervise Winch Operations	UNIT	SA	2-3
551-88H-2529	Supervise Stowage of Wheeled and Tracked Vehicles Aboard a Cargo Vessel (Breakbulk)	UNIT	SA	2-3
551-88H-2530	Supervise Donning Crew Work Vest	UNIT	AN	2-3
551-88H-2531	Supervise Safety Procedures in the Handling of Dangerous or Hazardous Cargo	BNCOC	SA	2-3
551-88H-2532	Determine Compatibility of Dangerous or Hazardous Cargo	BNCOC	SA	2-3

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
<i>Subject Area 25. Primary Cargo Operations (Rail)</i>				
551-88H-2305	Compute Blocking and Bracing Materials Required for Rail Movement	BNCOC	MO	2-3
551-88H-2306	Supervise Rail Loading Operations	BNCOC	MO	2-3
551-88H-2527	Supervise Loading of Cargo In and Out of Containers	UNIT	MO	2-3
Skill Level 3				
<i>Subject Area 3. Initial Cargo Checking Operations</i>				
551-88H-3505	Protect Cargo Against Pilferage	UNIT	SA	2-4
<i>Subject Area 26. Basic Cargo Operations (Air)</i>				
551-88H-3501	Supervise Helicopter External Sling Load Operations	UNIT	AN	3-4
551-88H-3504	Prepare 463L Pallet/Net Report	UNIT	SA	3-4
551-88H-3512	Supervise Aircraft Load Teams	UNIT	SA	3-4
551-88H-3519	Direct Dangerous or Hazardous Cargo Operations for Air Movement	UNIT	MO	3-4
<i>Subject Area 27. Basic Cargo Operations (Shore)</i>				
551-88H-3517	Direct Dangerous or Hazardous Cargo Operations for Motor Transport Movement	BNCOC	SA	3-4
551-88H-3518	Direct Temporary Storage of Dangerous or Hazardous Cargo (Missile Components)	BNCOC	SA	3-4
<i>Subject Area 28. Basic Cargo Documentation</i>				
551-88H-3509	Review Ocean Cargo Documentation for Loading or Discharge	BNCOC	SA	3-4
<i>Subject Area 30. Basic Cargo Operations (Ship)</i>				
551-88H-3507	Direct Cargo Operations (Breakbulk)	UNIT	AN	3-4
551-88H-3508	Direct Cargo Operations (RO/RO)	BNCOC	AN	3-4
551-88H-3511	Direct Lashing Containers on the Deck of a Landing Craft	UNIT	AN	3-4
551-88H-3513	Direct Loading Lighters at Shiplside During Logistics-Over-the-Shore Operations	UNIT	AN	3-4
<i>Subject Area 32. Basic Cargo Operations (Ship and Shore)</i>				
551-88H-3506	Inspect Cargo Checker's Tally for Correctness	UNIT	MO	3-4
551-88H-3516	Perform Inspection of Containers in Preparation for Loading Cargo	UNIT	SA	3-4
551-88H-3520	Direct the Preparation of a Hatch for Handling Military Explosives	BNCOC	SA	3-4
<i>Subject Area 33. Basic Cargo Operations (Rail)</i>				
551-88H-3301	Direct Rail Loading Operations	BNCOC	MO	3-4

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 34. Basic Cargo Operations (KALMAR-RTCH)				
551-88H-3502	Prepare Kalmar Rough Terrain Container Handler for Air Movement (RT 240)	BNCOC	AN	3-4
551-88H-3503	Attach Forklift Kit to Kalmar Rough Terrain Container Handler (RT 240)	BNCOC	AN	3-4
551-88H-3510	Supervise Material Handling Equipment (MHE) Operation	BNCOC	MO	3-4
Subject Area 35. Advance Automated Cargo Documentation, Computer Deployment Systems (CODES)				
551-88H-4515	Check Trim and Stability	ANCOC	SA	3-4
Skill Level 4				
Subject Area 36. Advanced Cargo Operations (Air)				
551-88H-4501	Monitor External Sling Load Operation	UNIT	SA	4
551-88H-4502	Monitor Air Terminal Operations	ANCOC	DS	4
551-88H-4512	Brief Troop Commander on Flight Safety	UNIT	SA	4
Subject Area 37. Advanced Cargo Operations (Ship)				
551-88H-4508	Monitor Marine Terminal Operations	ANCOC	AN	3-4
551-88H-4510	Monitor Handling of Dangerous or Hazardous Cargo Aboard a Cargo Vessel	ANCOC	MO	3-4
551-88H-4511	Monitor Dangerous or Hazardous Cargo Operations for Motor Transport Movement	ANCOC	MO	3-4
Subject Area 38. Advanced Cargo Documentation				
551-88H-4504	Prepare Prestowage Plan	ANCOC	SA	3-4
551-88H-4505	Interpret Data on Manifest	ANCOC	MO	3-4
551-88H-4509	Monitor Marine Terminal Operations Productivity and Analysis	ANCOC	AN	3-4
Subject Area 41. Advanced Cargo Operations (Shore)				
551-88H-4503	Monitor Cargo Stowage and Securing Operations	UNIT	SA	2-4
551-88H-4506	Monitor Cargo Security Procedures	ANCOC	SA	4
Subject Area 42. Advanced Cargo Operations (Ship and Shore)				
551-88H-4507	Monitor Handling of Refrigerated Cargo	ANCOC	MO	4
Subject Area 43. Advanced Cargo Operations (Rail)				
551-88H-4301	Review Rail Plan for Loading/Unloading Cargo	ANCOC	MO	4

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Chapter 3

MOS/Skill Level Tasks

Skill Level 1

Subject Area 1: Initial Cargo Operations (Air)

Perform Hookup Team Duties

551-88H-1501

Conditions: Assigned as a member of a hookup team in an operational environment, given a completed risk assessment, 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, a designated field site, and field manual (FM) 4-20.197.

Special Conditions: Static wand personnel trained at unit level on the effects of static electricity.

Standards: Performed 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 in accordance with FM 4-20.197.

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/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).
 - 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.

Performance Steps

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

4. Perform hookup personnel duties.
 - a. Ensure hookup person is on or near the load in a stable position (see Figure 3-2).
 - b. Attach the sling or net apex fitting to the cargo hook.
 - c. Manually release of the cargo hook (if required).

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

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

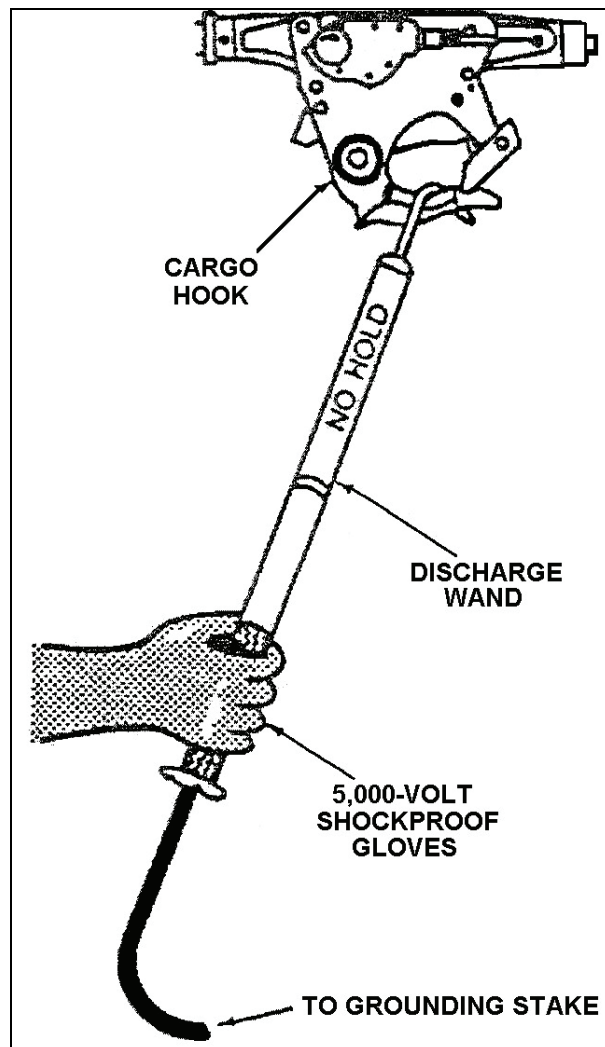


Figure 3-1. Connecting the Static Discharge Wand to the Cargo Hookup

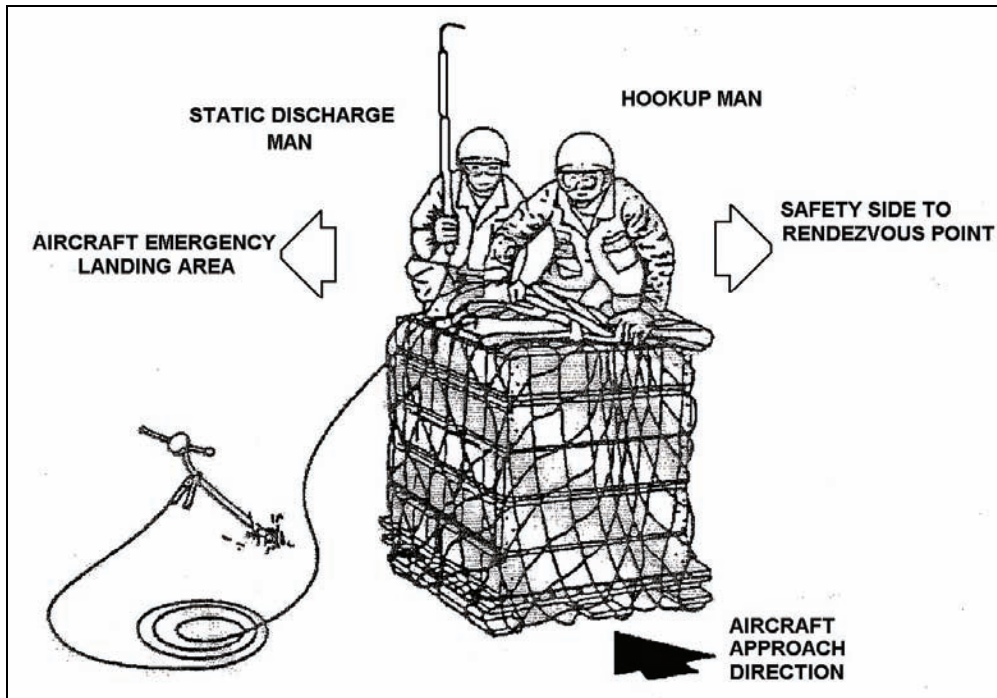


Figure 3-2. Hookup Person On or Near the Load in a Stable Position

Performance Measures

1. Performed pre-operations checks.
2. Performed outside signalman duties.
3. Performed static wand person duties.
4. Performed hookup person duties.
5. Performed sling leg crew duties.

<u>GO</u>	<u>NO-GO</u>
—	—
—	—
—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 4-20.197

Related

Secure Cargo Aboard Aircraft

551-88H-1506

Conditions: Assigned as a member of an aircraft load team in an operational environment, given a completed risk assessment, safety clothing, cargo load plan, aircraft, standard tie-down devices, chains, cargo to be loaded, air terminal or designated field area, FM 4-04.011, FM 55-17, and DOD 4500.9-R, Part III.

Standards: Ensured that each type of cargo was properly secured using aircraft tie-down devices in accordance with FM 4-01.011, FM 55-17, and DOD 4500.9-R, Part III.

Performance Steps

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

NOTE: Position rolling, approach or parking shoring prior to moving (if needed) vehicle onto aircraft.

NOTE: 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 3-3).

NOTE: 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.

NOTE: Before attaching tie-down devices, make certain that the tie-down fitting is the same capacity of the tie-down device.

NOTE: MB1 and MB2 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 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 3-4).

NOTES: (1) Use cargo protective padding when using CGU-1/B strap to secure cargo with 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.

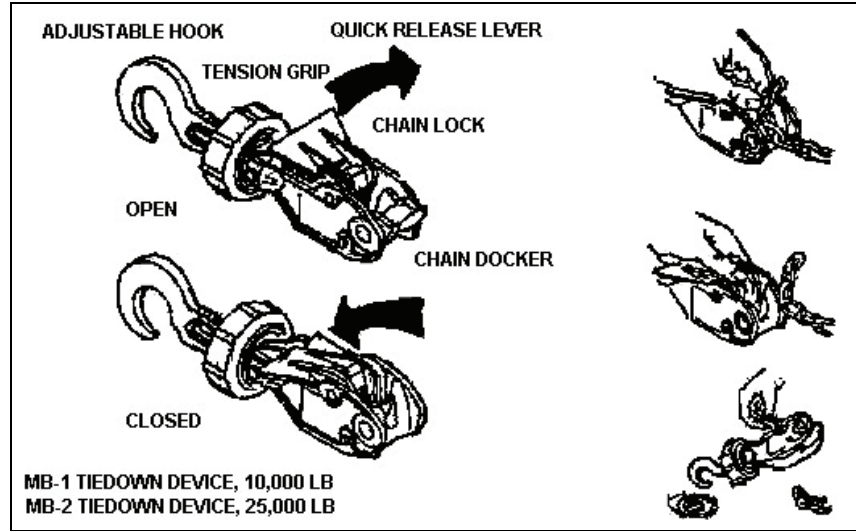


Figure 3-3. Tie-down Devices

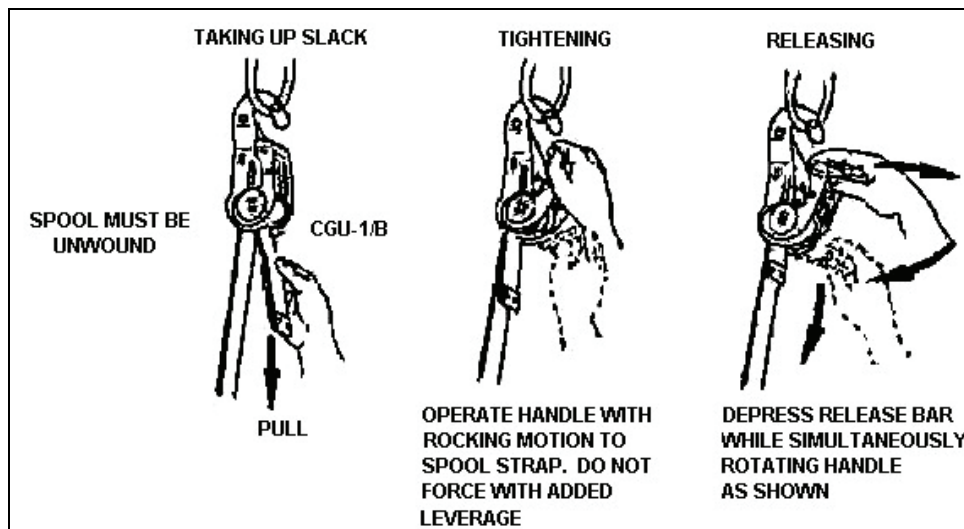


Figure 3-4. CGU-1/B Tie-down Devices

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DOD 4500.9-R, PART III
FM 4-01.011
FM 55-17

Related

Mark Center of Balance for a Multi-axle or Tracked Vehicle

551-88H-1508

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a safety briefing, safety clothing and protective equipment, a multi-axle vehicle with operator, masking tape, black marker, calculator, pencil, note pad, clipboard, tape measure, a minimum of two scales, FM 55-17, and DOD 4500.9-R, Part III.

Standards: Marked center of balance for a multi-axle or tracked vehicle in accordance with FM 55-17 and DOD 4500.9-R, Part III.

Performance Steps

1. Calibrate scales to zero (see Figure 3-5).

NOTE: Failure to do so could result in a false reading and could affect the center of gravity on an aircraft. This is very important to assure flight safety.

NOTE: Figure 3-5 shows vehicle measurement points. 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).

RDL = Reference datum line - The forward front edge of the vehicle.

FAW = Front axle weight - The total weight of the front axle measured in pounds.

IAW = Intermediate axle weight - The total weight of the intermediate axle measured in pounds.

RAW = Rear axle weight - The total weight of the rear axle measured in pounds.

GW = Gross weight - Total weight of the vehicle measured in pounds.

D-1 = Distance-1 - The distance from the RDL to the center of the front axle measured in inches.

D-2 = Distance-2 - The distance from the RDL to the center of the intermediate axle measured in inches.

D-3 = Distance-3 - The 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.

W-1 = Weight-1 - Total weight of the front axle measured in pounds.

W-2 = Weight-2 - Total weight of the intermediate axle measured in pounds.

W-3 = Weight-3 - Total weight of the rear axle measured in pounds.

Moment = This is the product when multiplying the axle weight by the distance of that axle from the RDL.

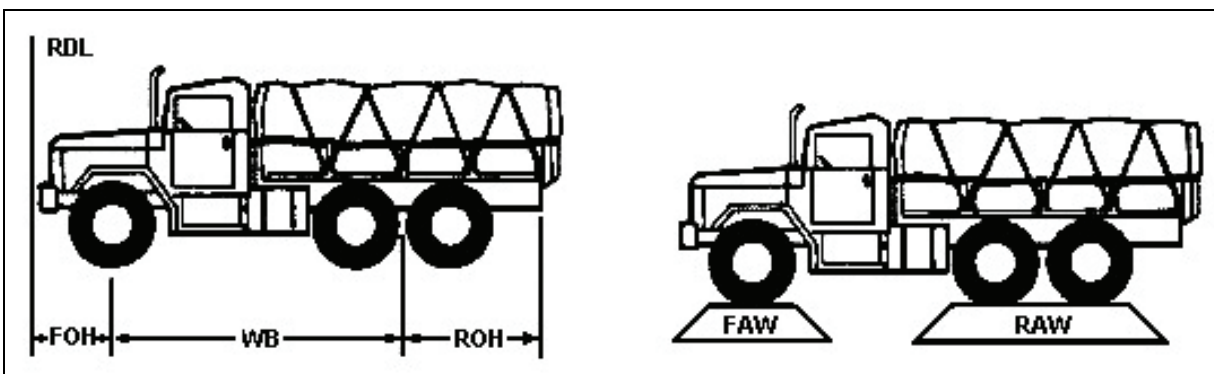


Figure 3-5. Calibrating Scales

Performance Steps

2. Weigh axles (see Figure 3-6).

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

- a. Order driver to position front axle of vehicle on scales.
- b. Order 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 weight-1 (W1).
- e. Record front axle weight on note pad as W1.
- f. Apply strip of masking tape above front axle on both sides of the vehicle.
- g. Record front axle weight (FAW) on the masking tape. (example: FAW 12,500 pounds)
- h. Order driver to remount vehicle and drive forward until the intermediate axle is centered on the scales.
- i. Order 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 weight-2 (W2).
- l. Record weight on note pad as W2.
- m. Apply strip of masking tape above intermediate axle on both sides of vehicle.
- n. Record intermediate axle weight (IAW) on the masking tape. (example: IAW = 12,900 pounds).
- o. Order driver to remount vehicle and drive forward until the rear axle is centered on the scales.
- p. Order 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 weight-3 (W3).
- s. Record weight on note pad as W3.
- t. Apply strip of masking tape above the rear axle on both sides of the vehicle.
- u. Record rear axle weight (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.

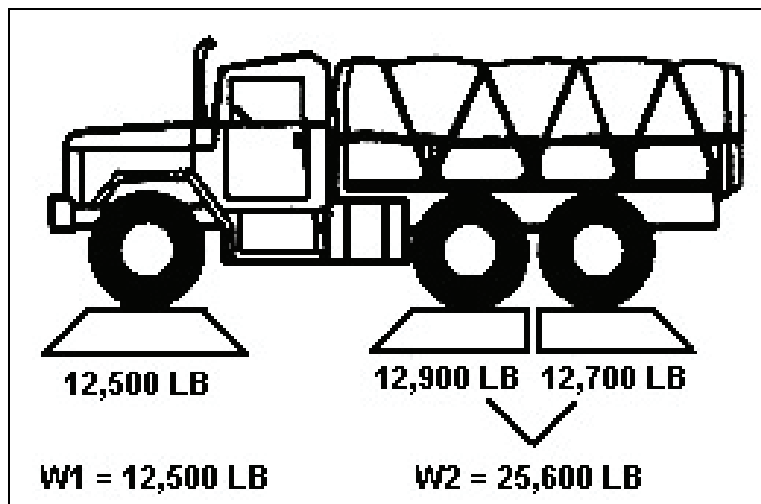


Figure 3-6. Axle Weights

Performance Steps

3. Measure axle distances (see Figure 3-7).

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 (forward edge of front bumper) 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).

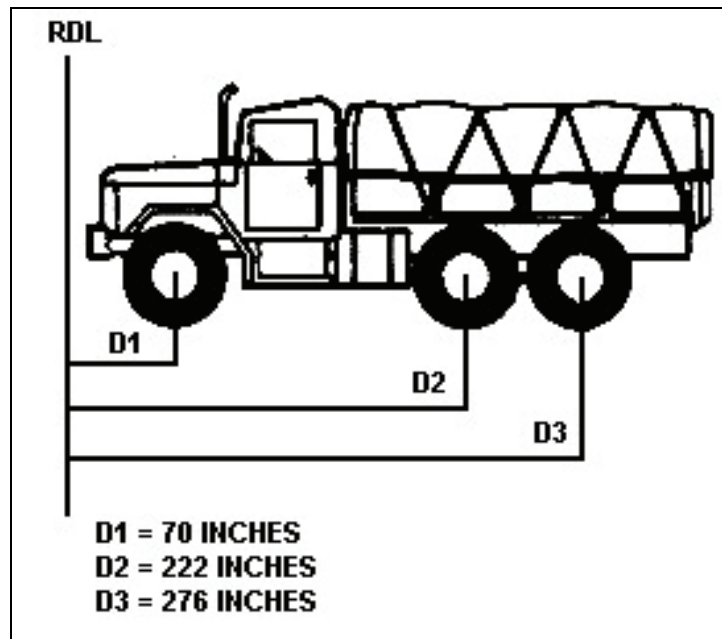


Figure 3-7. Axle Distances

4. Determine axle distance for tandem axle vehicles (see Figure 3-8).

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 (forward edge of front bumper) 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).

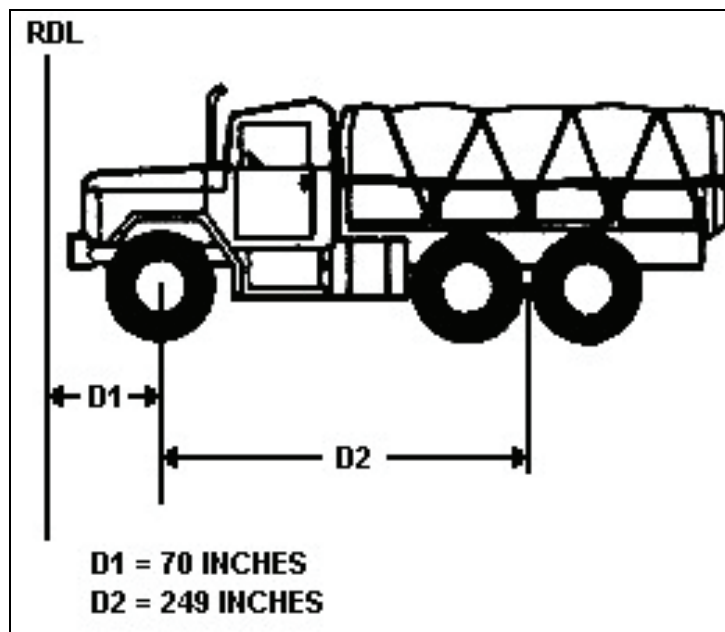


Figure 3-8. Determining Axle Distance for Tandem Axle Vehicles

Performance Steps

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:

$$\frac{[(W1 \times D1) + (W2 \times D2) + (W3 \times D3)]}{\text{Gross Weight}} = \text{Center of Balance}$$

Example computation:

$$\frac{(70" \times 12,500 \text{ lbs}) + (222" \times 12,900 \text{ lbs}) + (276" \times 12,700 \text{ lbs})}{38,000 \text{ lbs}} = 190" \text{ from RDL}$$

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:

$$\frac{[(W1 \times D1) + (W2 \times D2)]}{\text{Gross Weight}} = \text{Center of Balance}$$

Example computation:

$$\frac{(70" \times 12,500 \text{ lbs}) + (249" \times 25,600 \text{ lbs})}{38,100 \text{ lbs}} = 190" \text{ from RDL}$$

Performance Steps

6. Mark center of balance.
 - a. Measure from reference data line to center of balance distance that was obtained from computations (see Figure 3-9)
 - b. Mark center of balance 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 3-10).
 - 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)

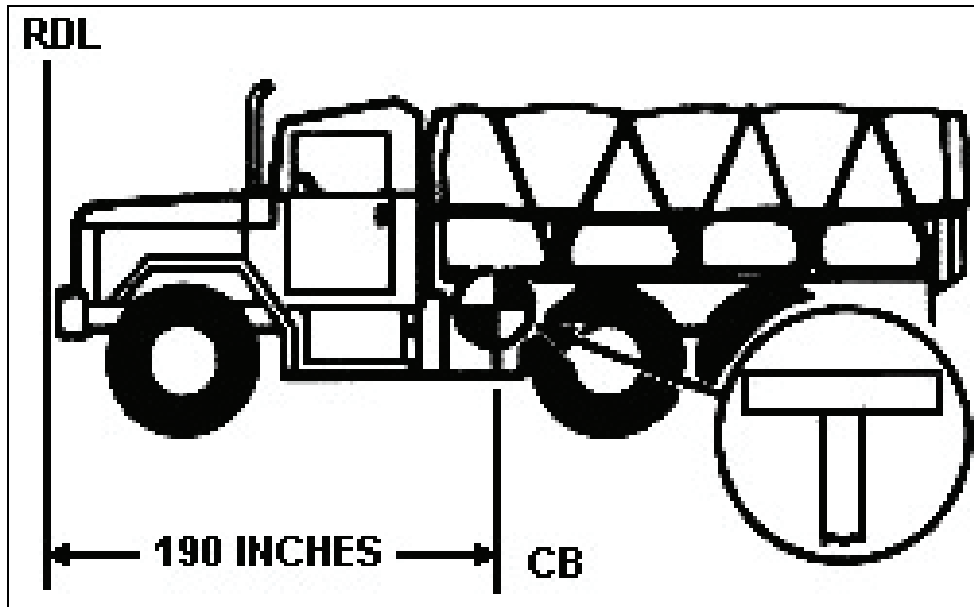


Figure 3-9. Measuring From Reference Data Line to Center of Balance

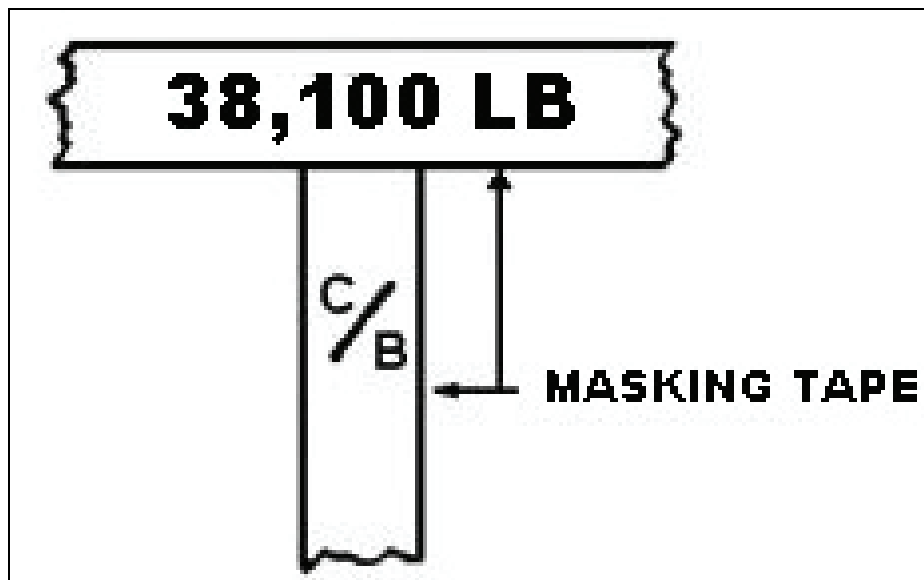


Figure 3-10. Marking Center of Balance

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Calibrated scales.	—	—
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.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DOD 4500.9-R, PART III
FM 55-17

Related

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

Conditions: Assigned as a member of a load team in an operational environment given a completed risk assessment, safety clothing, 463L pallets, dunnage, top and side nets, forklift with operator, DOD 4500.9-R, Part II, and FM 55-17.

Standards: Placed 463L pallets into storage in accordance with FM 55-17.

Performance Steps

1. Inspect 463L pallets before loading cargo on pallet.
 - a. Coordinate with load team chief before loading 463L pallets.
 - b. Ensure each 463L pallet is cleaned.
 - c. 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- by 4- by 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 3-11).
 - 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 reports the total to the supervisor.
5. Inspect 463L top and side nets before storage (see Figure 3-12).

- 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.

Performance Steps

- (4) Keep nets away from heat, direct sunlight, damp areas, acid, batteries, chemicals, and alkalis.
 - (5) Do not place nets on cement, wood, or asphalt floors.
6. Tally the number of serviceable nets stored and reports the total to the supervisor.

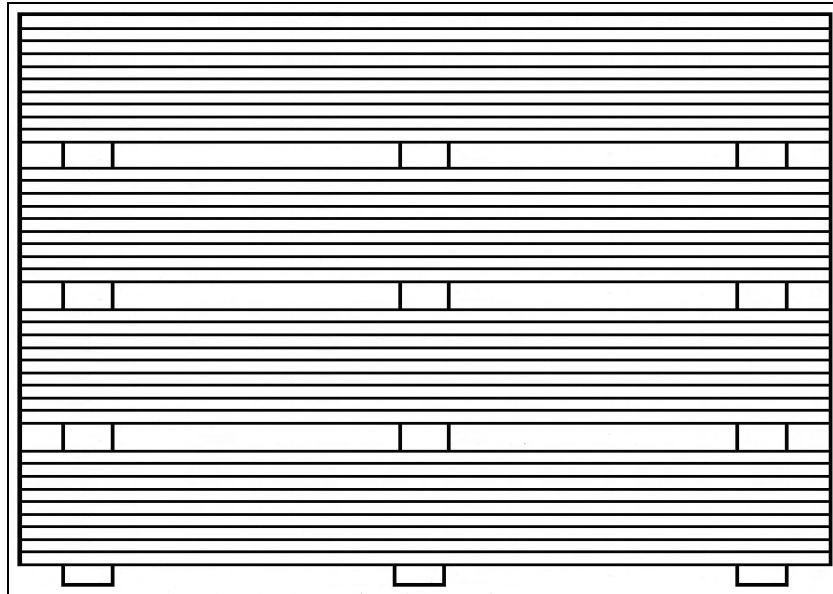


Figure 3-11. Stacking Pallets

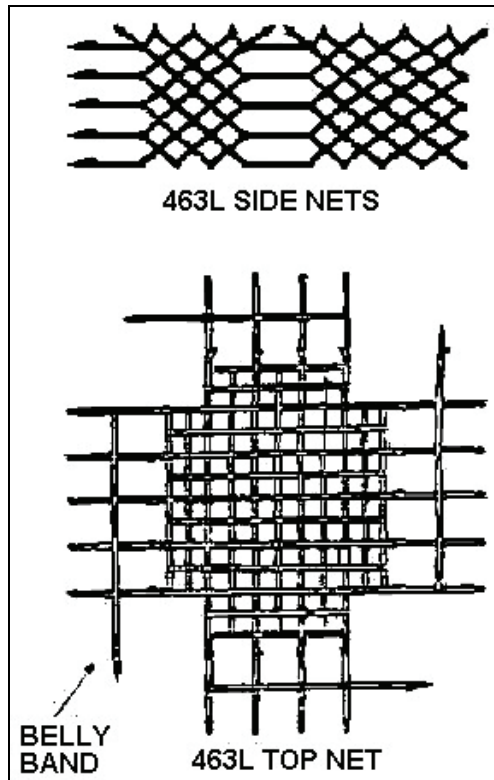


Figure 3-12. 463L Top and Side Nets

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Inspected 463L pallets before loading cargo on pallet.	—	—
2. Stored 463L pallets by laying out three-point dunnage to prevent damage and warping.	—	—
3. Stacked pallets on dunnage.	—	—
4. Talled the number of serviceable pallets stored and reports the total to the supervisor.	—	—
5. Inspected 463L top and side nets before storage.	—	—
6. Talled the number of serviceable nets stored and reported the total to the supervisor.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DOD 4500.9-R, PART II
FM 55-17

Related

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

Conditions: Assigned as a member of an aircraft load team in an operational environment, given a completed risk assessment, safety clothing, hand-held radio, personnel, manifest with clipboard and pen or pencil, vehicle chalk consisting of one or more 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, FM 4-01.011, FM 55-17, and DOD 4500.9-R, Part I.

Standards: Safely escorted personnel (chalks) and load to the aircraft as directed by the ramp NCO or loadmaster while adhering to all flight line safety procedures in accordance with FM 4-01.011, FM 55-17, and DOD 4500.9-R, Part I.

Performance Steps

1. Prepare to escort personnel chalks to aircraft.
 - a. Ensure communication equipment is working properly.
 - b. Coordinate with w/NCO or Loadmaster before proceeding with escorting personnel chalks.
 - c. Identify the location of the aircraft and loading ramp.
 - d. Coordinate with ramp NCO/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.

Performance Steps

4. Prepare to escort cargo chawks to aircraft.
 - a. Establish hand-held radio communication.
 - b. Ensure communication equipment is working properly.
 - c. Coordinate with w/NCO or Loadmaster before proceeding with escorting vehicle chawks.
 - d. Identify the location of the aircraft and loading ramp.
 - e. Coordinate with ramp NCO/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 3 mph.
 - 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 chawks to the aircraft (see Figure 3-13).
 - a. Identify vehicle (chawks) 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.

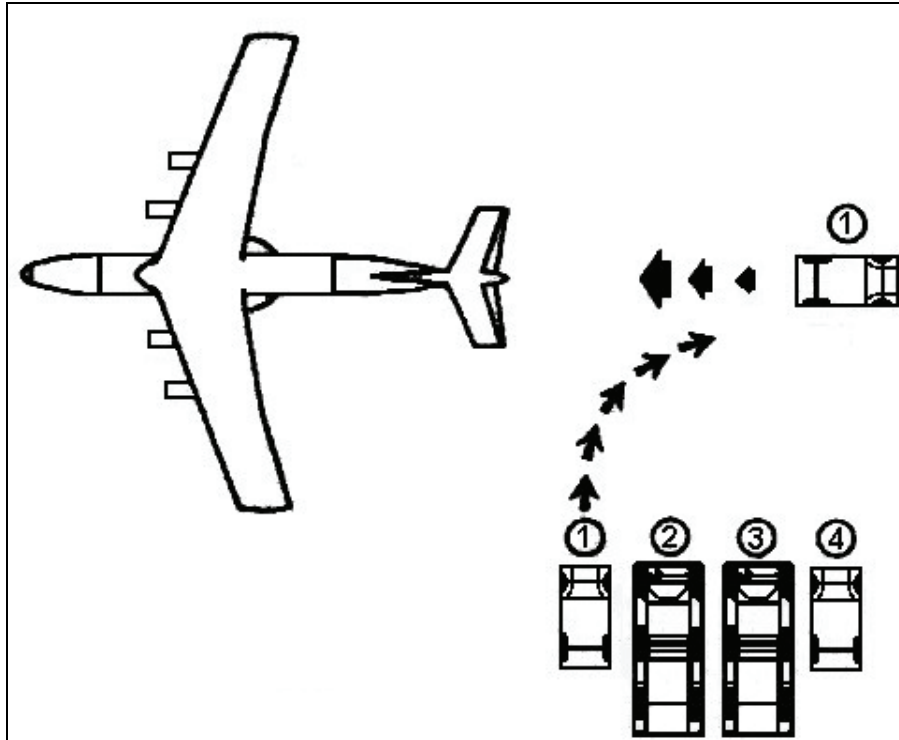


Figure 3-13. Escorting Vehicle Chinks to the Aircraft

Performance Measures

1. Prepared to escort personnel chinks to aircraft.
2. Conducted safety briefing for all deploying personnel.
3. Escorted personnel chinks to the aircraft.
4. Prepared to escort cargo chinks to aircraft.
5. Conducted safety briefing by informing all vehicle operators and vehicle spotters of the following safety guidelines.
6. Escorted vehicle chinks to the aircraft.

<u>GO</u>	<u>NO-GO</u>
—	—
—	—
—	—
—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 DOD 4500.9-R, PART I
 FM 4-01.011
 FM 55-17

Related

Load Married 463L Pallets
551-88H-1514

Conditions: Assigned as a member of an aircraft load team in an operational environment, given a completed risk assessment, safety clothing, two 463L pallets, a loading dock with rollers, spacers, chains, and tie-down devices (B1, B2), load team chief supervision at an air terminal or designated field area, FM 55-17, and FM 4-01.011.

Standards: Ensured 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 in accordance with FM 55-17 and FM 4-01.011.

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 3-14).

NOTE: Two (2) spacers are required as a minimum (see Figure 3-15).

- c. Place spacer between the ends of the indents of the pallets (see Figure 3-16).
- d. Chain pallets together using tie-down devices (see Figure 3-17).
- 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.

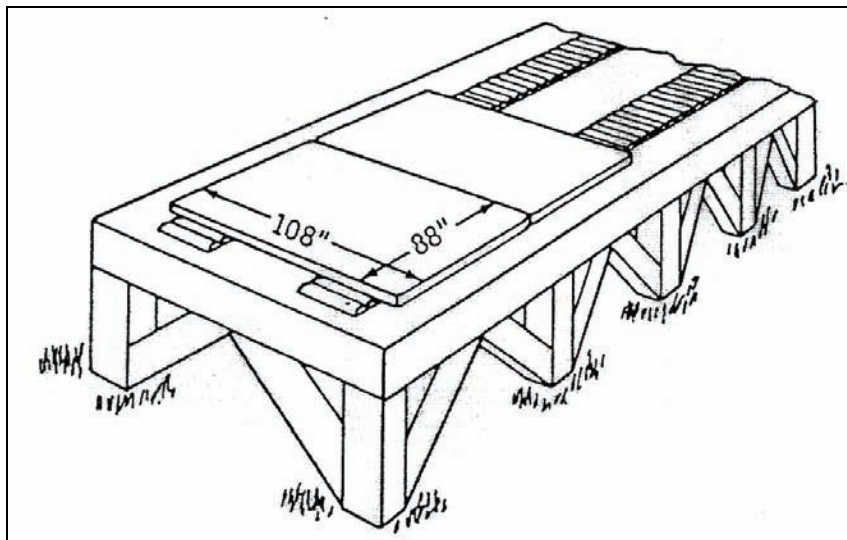


Figure 3-14. Aligning Indents and Detents

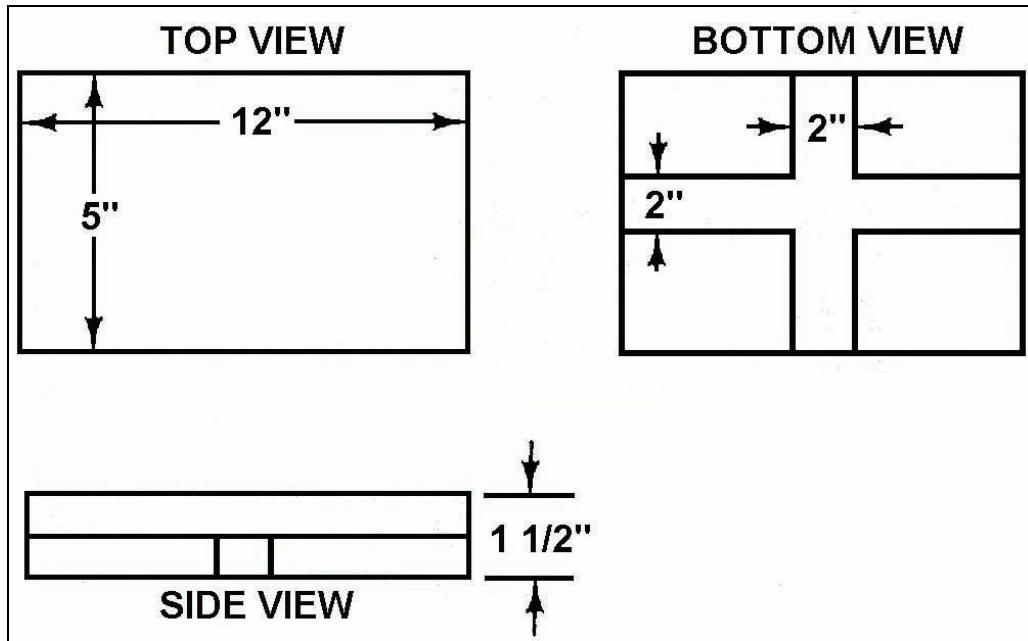


Figure 3-15. Use of Spacers

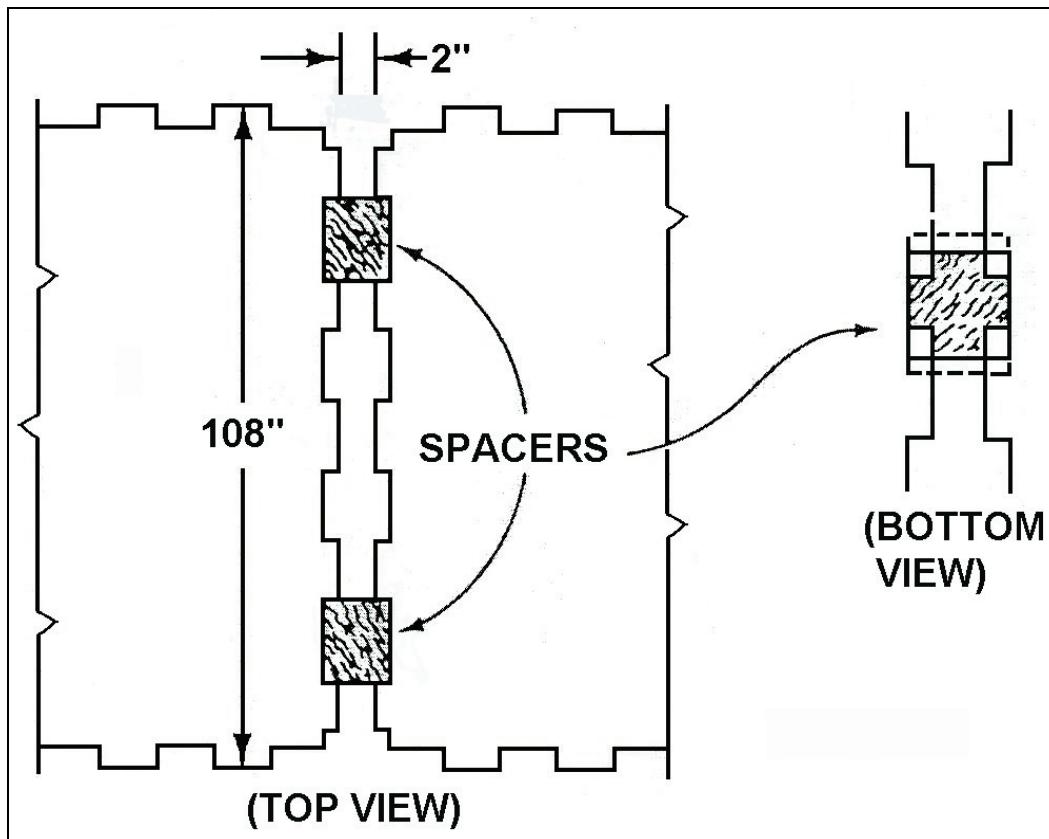


Figure 3-16. Sampler Spacer

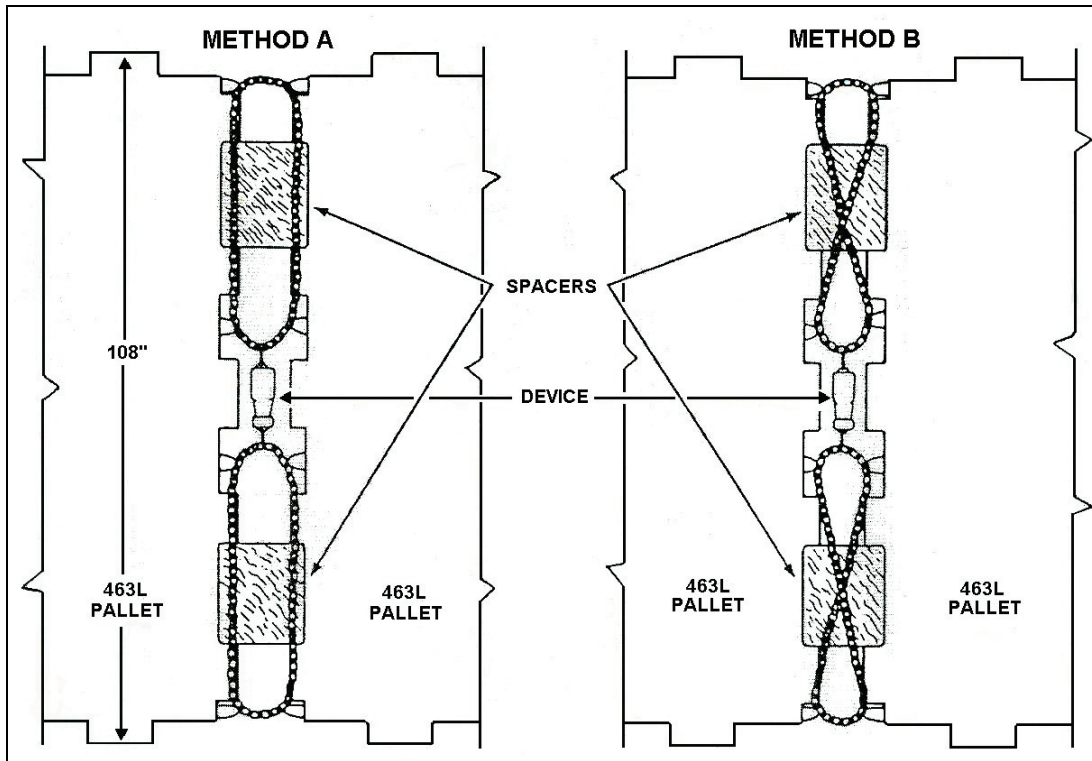


Figure 3-17. Chain Pallets Attached Using Tie-down Devices

Performance Measures

1. Obtained two (2) serviceable pallets.
2. Married two (2) 463L pallets.
3. Loaded married 463L pallets.

GO NO-GO

— —
 — —
 — —

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 FM 4-01.011
 FM 55-17

Related

Build a 463L Pallet
551-88H-1515

Conditions: Assigned as a member of an aircraft load team in an operational environment, given a completed risk assessment, safety clothing, a safety briefing, carefully inspected 463L pallets for building, dunnage, top and side nets, a forklift operator, cargo at an air terminal or designated field area, DOD 4500.9-R, Part II and FM 55-17.

Standards: Built a 463L pallet in accordance with DOD 4500.9-R, Part II and FM 55-17.

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.

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" 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 3-18):
 - (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" upright.
 - (5) Place labeled cargo with their labels facing out.
 - (6) Place crushable/light density cargo on top of boxed and crated cargo.

NOTE: Use a pallet template or measuring stick to ensure the height restrictions are not exceeded (maximum height is 96").

NOTE: 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. Lay out a complete set of nets.
 - b. 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: If you reject one of the nets for damage, send the complete set in for maintenance and repair.

- c. Ensure nets are clean and dry before they are stored.
- d. Lay out the two side nets and the top net as a set, then fold the nets and secure the three nets together.
- e. 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.
- f. 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 maximum capacity of 10,000 pounds at 8 Gs when properly installed.

- g. Cover the pallet of cargo with plastic pallet cover before netting the cargo to the pallet.
- h. Lay nets on floor, untangle and inspect for missing attachments.

Performance Steps

- i. 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 3-19).

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. Attach both side nets and attach straps, then lift straps over the corner of the cargo.
- k. After the side nets are attached and adjusted, place the top net over the pallet.
- l. 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 3-20).

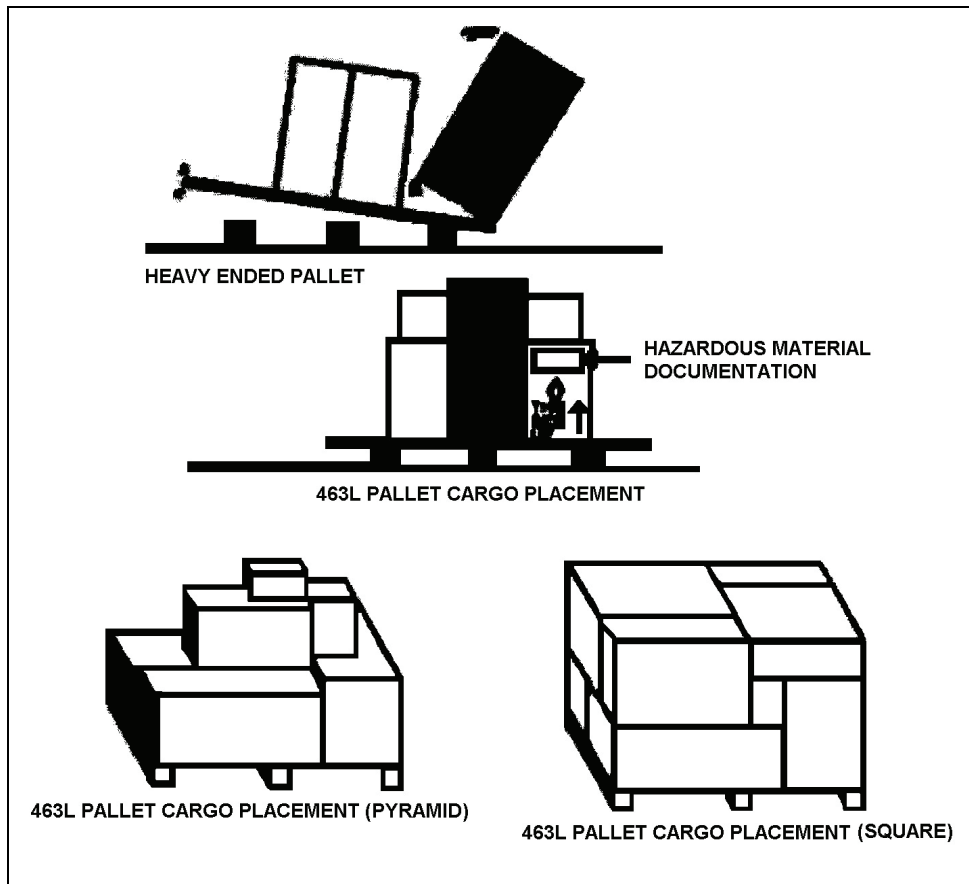


Figure 3-18. Palletizing Cargo

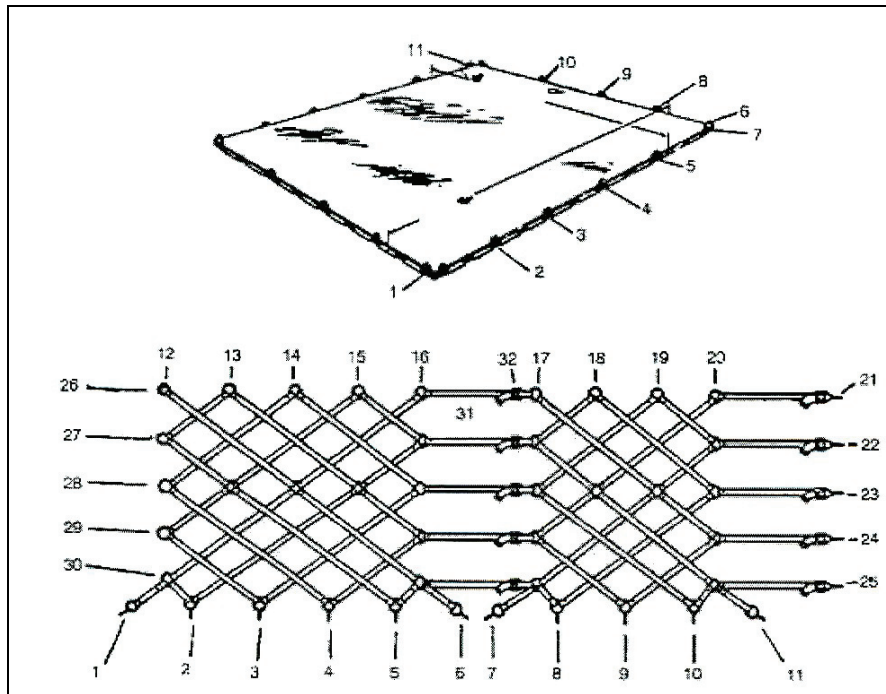


Figure 3-19. Attaching Hook #1 to Ring #1 on the Pallet

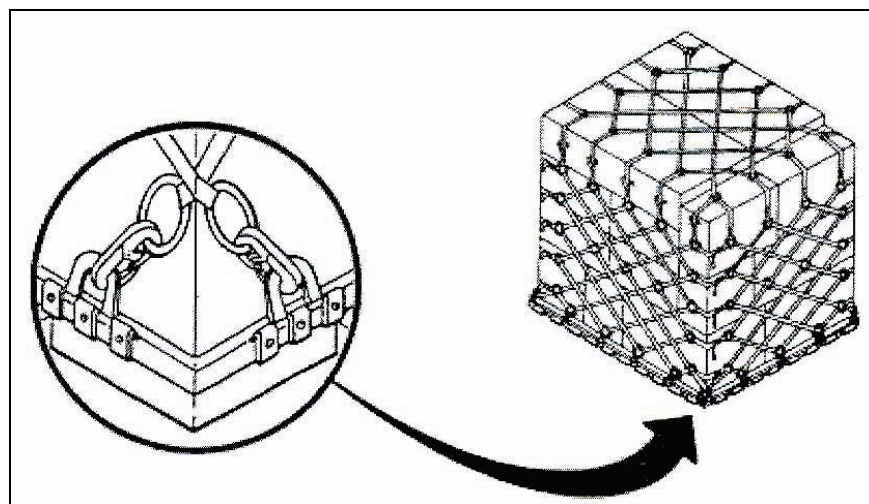


Figure 3-20. Securing the Ends of the Straps

Performance Measures

1. Inspected 463L pallets before loading cargo on the pallet.
2. Loaded cargo on a 463L pallet.
3. Secured cargo to the pallet.

GO NO-GO

—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DOD 4500.9-R, PART I
FM 55-17

Related

Subject Area 2: Initial Cargo Rigging Operations

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

Conditions: Assigned as a cargo handler in an operational environment to load/discharge vessel, given a cargo vessel, completed risk assessment, safety briefing, safety clothing, a signal person, ship's gear, hatch foreman supervision, and FM 55-17.

Standards: Prepared electric winches for operation to load or discharge cargo in accordance with FM 55-17.

Performance Steps

1. Perform winch operation.
 - a. Inspect winches to ensure runners are wound in correct direction and are free of foreign objects (such as dunnage, paper, rags, and trash) (see Figure 3-21).
 - 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.

- c. Turn each power switch ON; one at a time and listen for the fan to come on (see Figure 3-22).

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

- d. Push the winch control to the LOWER position to remove the cargo hook from the pad eyes.
 - e. Engage the winch controls to ensure that the winches are running smoothly.
 - f. Turn switches to the OFF position before leaving the winch controls.
 - g. Contact the hatch foreman if the winches do not function properly.

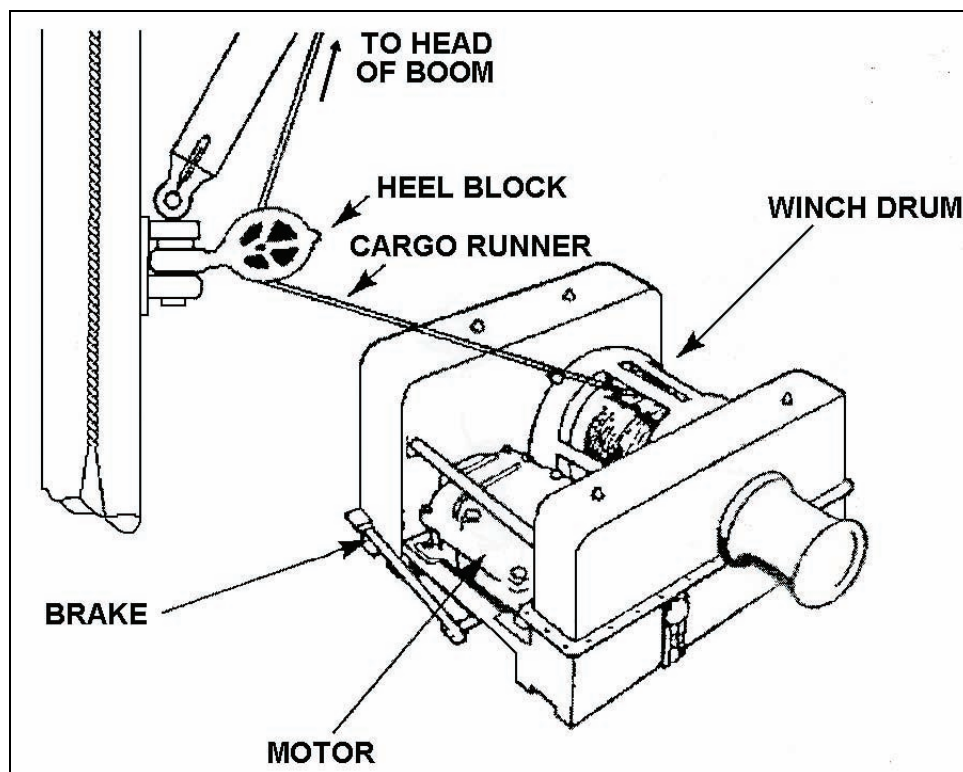


Figure 3-21. Cargo Runner Led Over Winch Drum

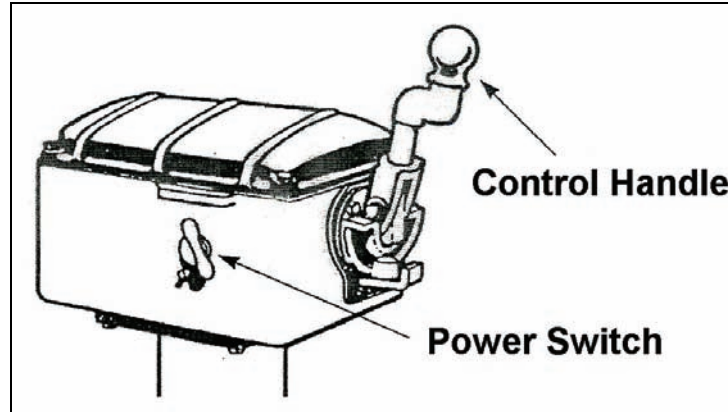


Figure 3-22. Winch Controller

Performance Steps

2. Perform duties and responsibilities of the signalman.

NOTE: The winch operator cannot see the draft at all times; therefore, he depends on the signalman instructions. The safety and smoothness of the operator depend on the judgment of the signalman and the skill of the winch operator; a team effort is essential.

- a. Each member of the hatch section 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. 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 such a position that he can be seen by the winch operator.

NOTE: Both the signalman and winch operator must continually observe the rigging, paying particular attention to slack guys, chaffing runners, loose pins in shackles, strainers, hooks, and bridle which could be unsafe. Stop operation and report deficiency to hatch foreman.

- f. To signal two winches, both hands are used. One hand is used for single winch operation.
- g. Ensure there is a clear understanding between the winch operator and signalman concerning which hand controls each winch.

3. Perform proper hand signals for one-winch operation.

- a. Hoist: Arms and hands are extended; palm up and the fingers are moved upward.
- b. Lower: The arms and hand is extended palms down and the fingers moved downward.
- c. Rack: The arm is extended outward from the body in a sweeping motion, pointing in the direction in which the draft is to be moved.
- d. Stop: The arms are extended forward with a palm facing the winch operator and the fingers are extended upward.

4. Perform proper hand signals for two-winch operation.

- a. Lower/Hoist: Both arms are extended below shoulder height, with the right palm facing downward and left palm facing upward.
- b. Stop: Both arms are extended forward with the palms facing the winch operator and the fingers extended upward.
- c. Emergency Stop: The Arms are extended forward and moved away from the body rapidly and emphatically with the palms facing the winch operator.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed winch operation.	_____	_____
2. Performed duties and responsibilities of the signalman.	_____	_____
3. Performed proper hand signals for one-winch operation.	_____	_____
4. Performed proper hand signals for two-winch operation.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Top Standard Booms Equipped With Single-Topping Lift

551-88H-1504

Conditions: Assigned as a cargo handler in an operational environment, given a cargo vessel with standard boom rigging, standard boom equipped with a single-topping lift, safety briefing, appropriate safety gear, instruction from the hatch foreman, completed risk assessment, and FM 55-17.

Standards: Raised and lowered standard booms securing them at the desired height, as directed by the hatch foreman, without damaging equipment or cargo or causing injury to personnel in accordance with FM 55-17.

Performance Steps

1. Raise the boom equipped with 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: The hatch gang will place the hauling part of the topping-lift wire in a wire rope snatch block (see Figure 3-23).

NOTE: On a vessel rigged with single topping lifts in the catheads are equipped with 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.

- 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 3-24).
 - (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 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.

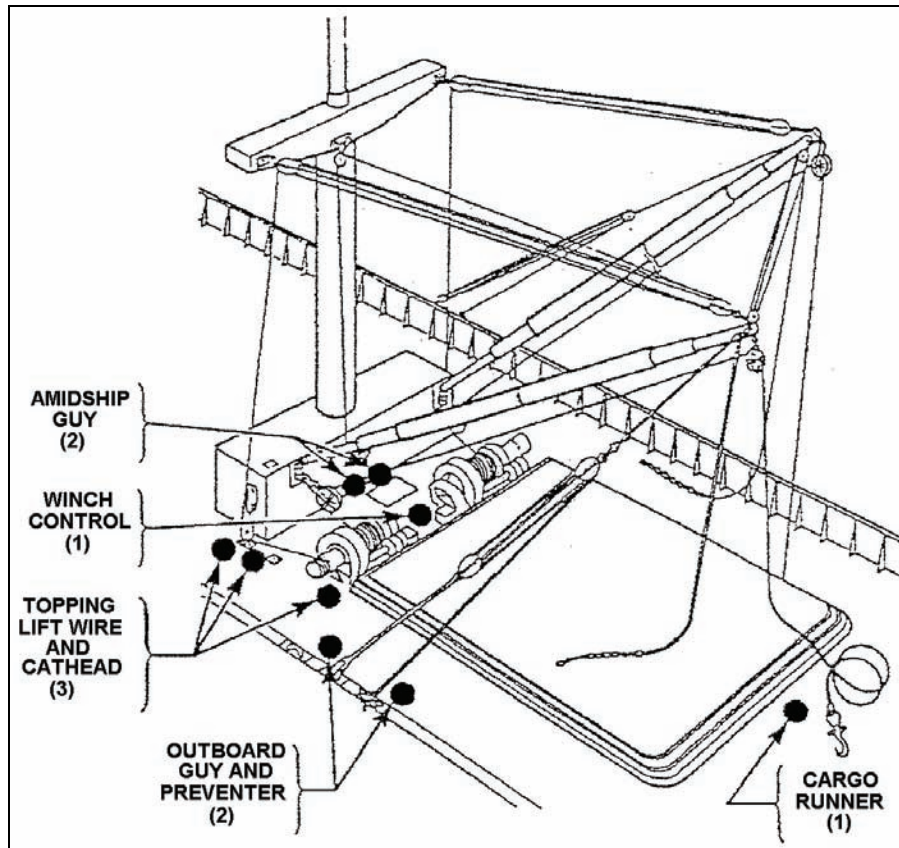


Figure 3-23. Assignment of Hatch Gang

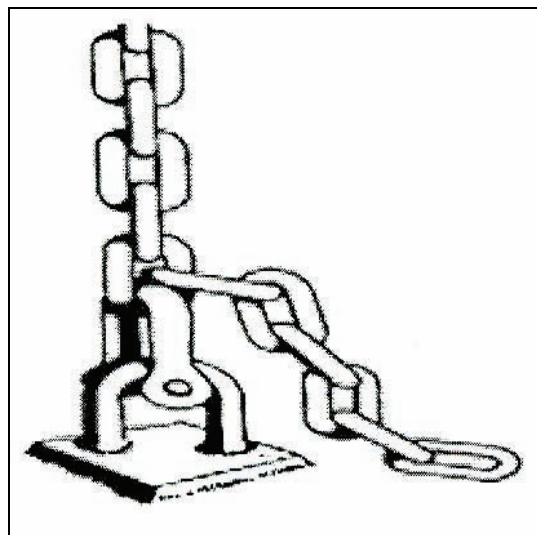


Figure 3-24. Shackling the Bull Chain to the Deck

Performance Measures

1. Raised the boom equipped with single topping lift
2. Lowered the boom equipped with single topping lift.

<u>GO</u>	<u>NO-GO</u>
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

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

Conditions: Assigned as a hatch gang member in an operational environment, given a completed risk assessment, safety briefing, cargo vessel, ship's gear, standard boom equipped with a multiple-topping lift, and FM 55-17.

Standards: Raised the booms and secured them at the desired height as directed by the hatch foreman in accordance with FM 55-17.

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 of 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 yarn 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 3-25).
 - 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 that 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.

Performance Steps

- 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 the 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.

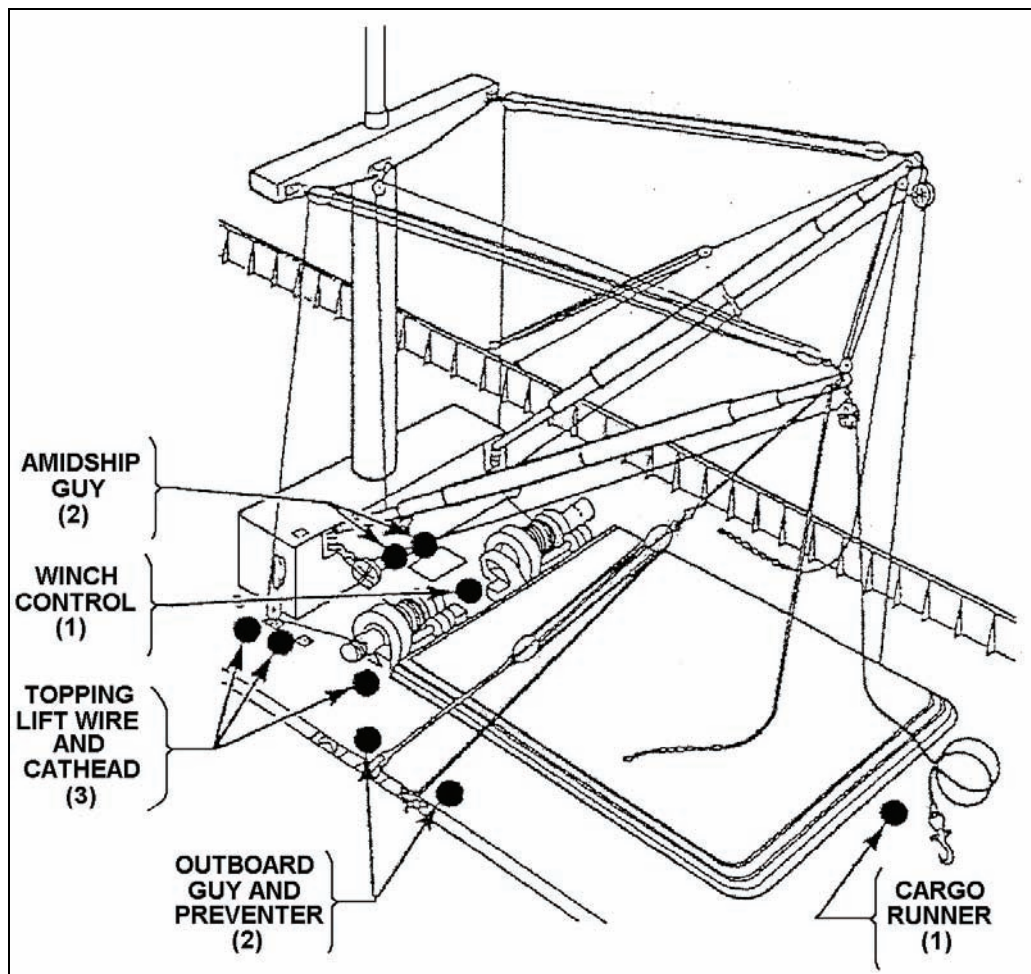


Figure 3-25. Lowering Standard Booms Equipped With Multiple Topping Lift

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 in order 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 yarn 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Inspect Cargo Handling Gear 551-88H-1517

Conditions: Assigned as a cargo handler performing the duties of a hatch gang member in an operational environment, given a completed risk assessment, cargo vessel, cargo handling gear, FM 5-125, and FM 55-17.

Standards: Inspected cargo handling gear in accordance with FM 5-125 and FM 55-17.

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.
 - d. Check for corrosion.
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 beackets 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 3-26).
 - 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 3-27).
 - a. Check for kinks.
 - b. Check for worn spots.
 - c. Check for worn spots.
 - d. Check for worn spots.
 - e. Check for broken strands of wire rope.
 - f. Check for broken fiber in fiber rope.

Performance Steps

8. Inspect deck fittings and shackles (see Figure 3-28).
 - 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.

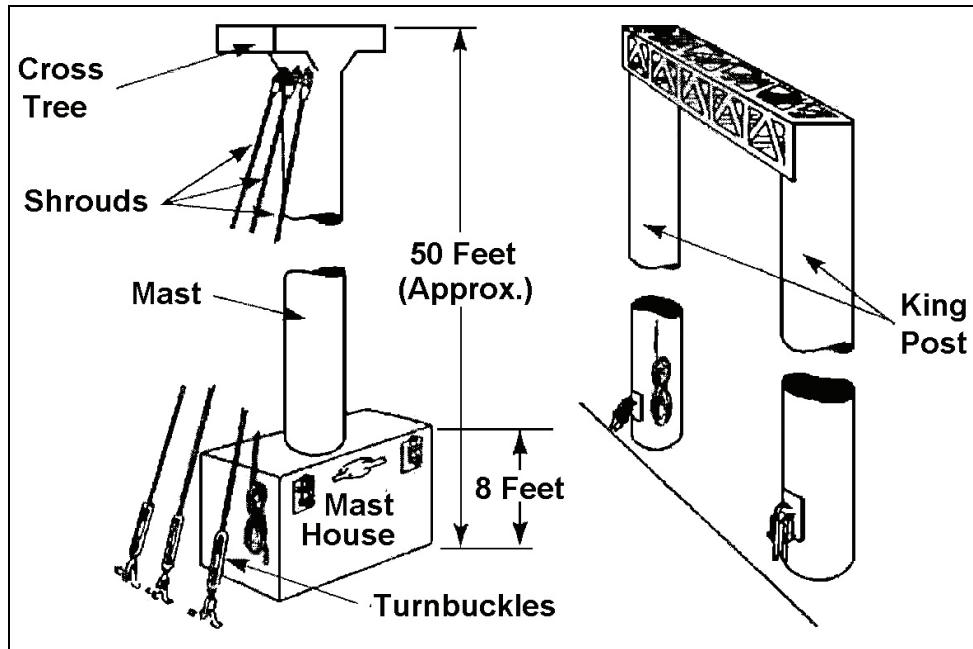


Figure 3-26. Standing Rigging

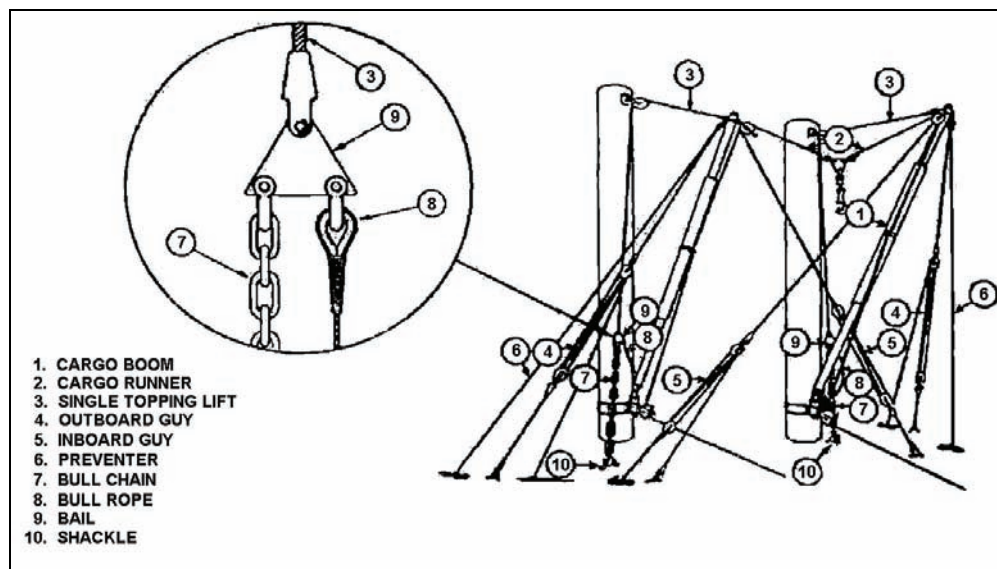
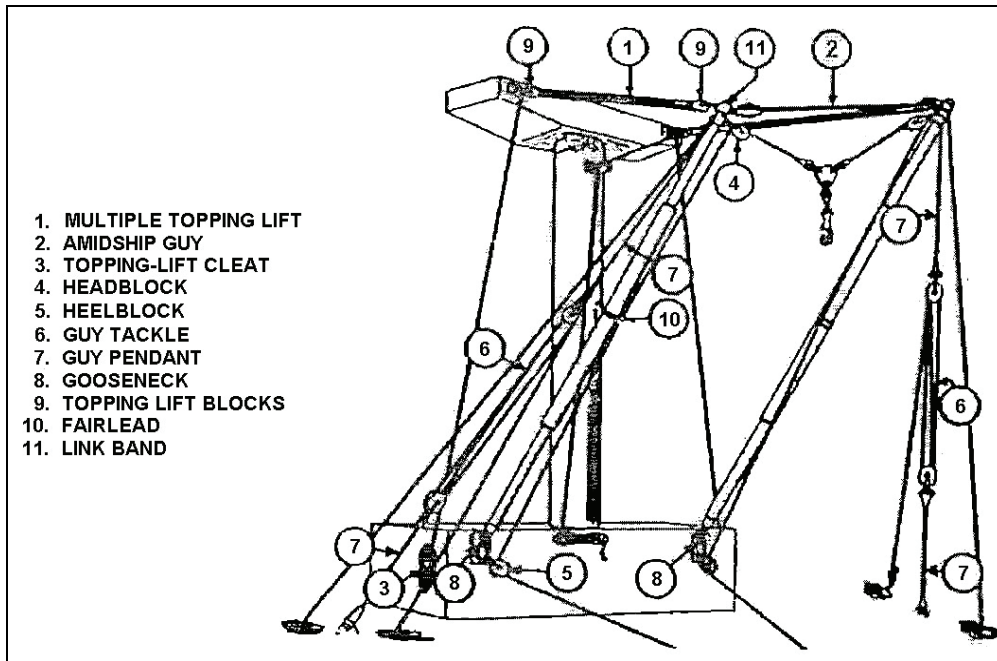


Figure 3-27. Running Rigging



- 1. MULTIPLE TOPPING LIFT
- 2. AMIDSHIP GUY
- 3. TOPPING-LIFT CLEAT
- 4. HEADBLOCK
- 5. HEELBLOCK
- 6. GUY TACKLE
- 7. GUY PENDANT
- 8. GOOSENECK
- 9. TOPPING LIFT BLOCKS
- 10. FAIRLEAD
- 11. LINK BAND

Figure 3-27. Running Rigging (continued)

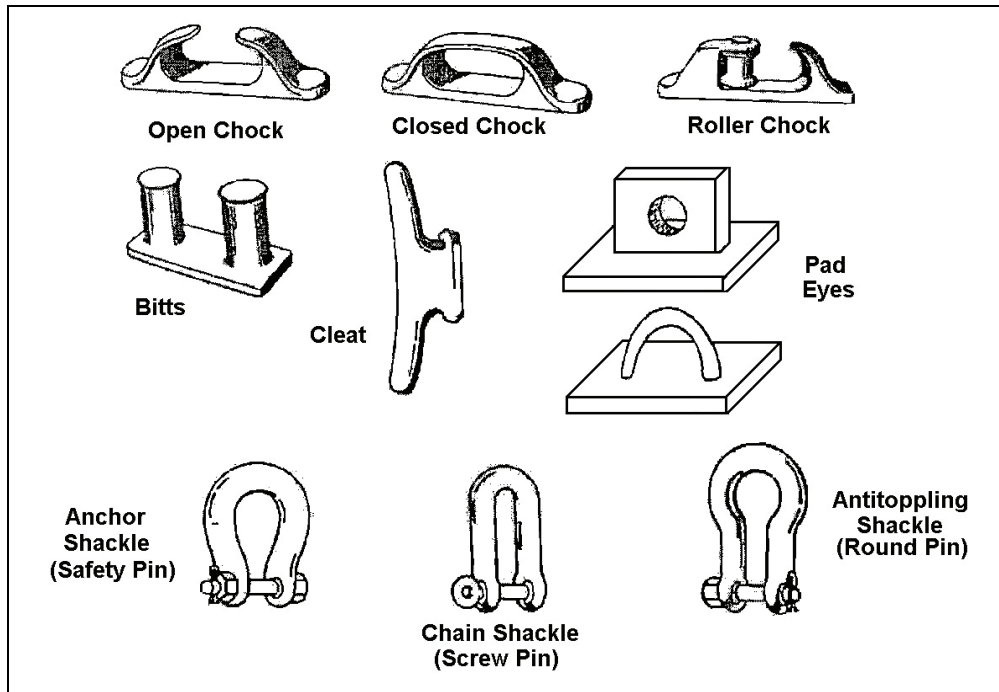


Figure 3-28. Deck Fittings and Shackles

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 5-125
 FM 55-17

Related

Open Hatches

551-88H-1518

Conditions: Assigned as a cargo handler performing the duties of a hatch gang member in an operational environment, given a completed risk assessment, cargo vessel with pontoon covers, tarpaulins, folding metal or hydraulic hatches, ship's gear, dunnage, safety clothing, foreman supervision, and FM 55-17.

Special Conditions: Large Medium Speed Roll-On/Roll-Off (LMSR) and Fast Sealift Ship (FSS) hatch operation.

Standards: Opened hatches without causing injury to personnel or damage to equipment in accordance with FM 55-17.

Performance Steps

1. Open hatches (see Figure 3-29).
 - 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 break bulk).
 - (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) Remove the tarpaulin and place it on the non-working side of the vessel.
 - (5) Attach O-ring of the bridal slings to the cargo hook.
 - (6) Attach the bridal hooks to each corner fitting of the pontoon/removable hatch cover with hook face out.
 - (7) Remove each succeeding pontoon/removable hatch cover and stack them no higher than 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.

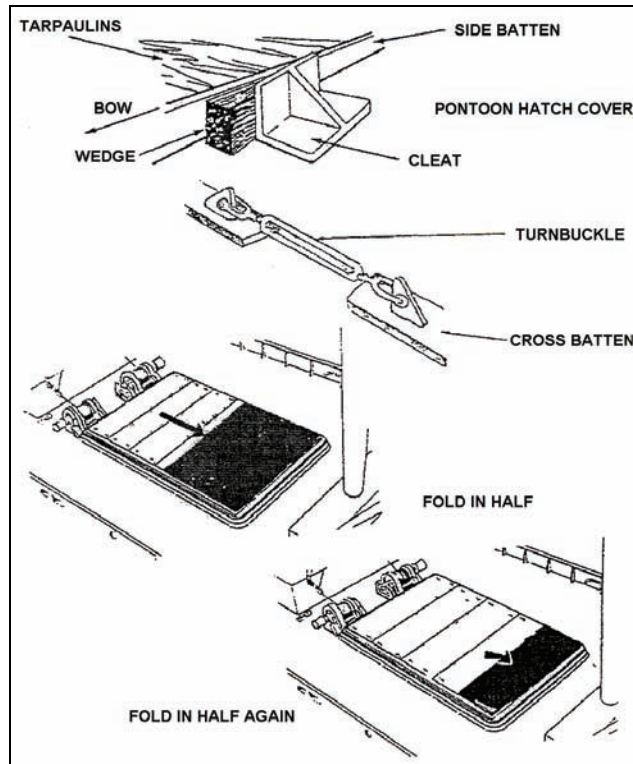


Figure 3-29. Operating Hatches

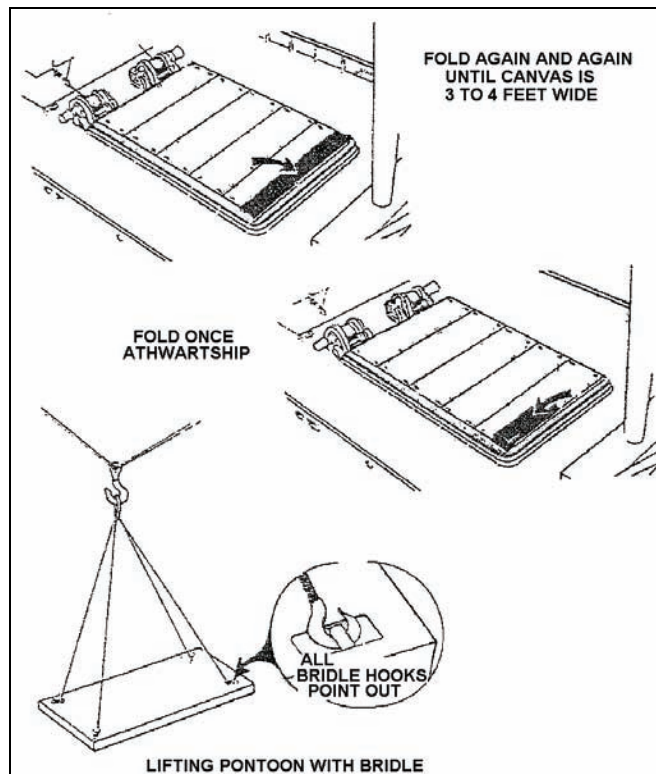


Figure 3-29. Operating Hatches (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Opened hatches.	—	—
2. Completed preparation of hatches (LMSR and FSS).	—	—
3. Closed hatches.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

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

Conditions: Assigned as a cargo handler performing the duties of a hatch gang member in an operational environment, given a completed risk assessment, ship's gear, topped booms, safety gear, FM 5-125, and FM 55-17.

Standards: Rigged the three standard rigs of cargo booms without causing injury to personnel or damage to equipment in accordance with FM 55-17.

Performance Steps

1. Rig a yard-and-stay rig (see Figure 3-30).

- 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.

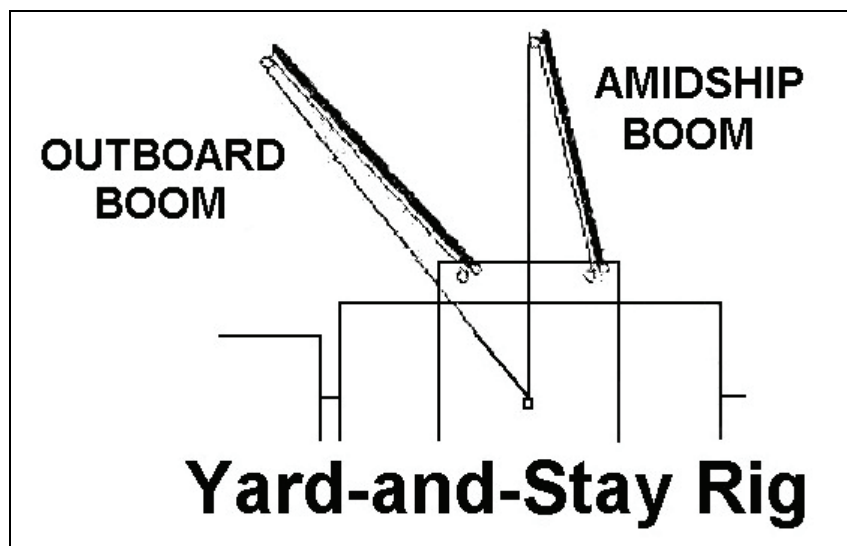


Figure 3-30. Yard-and-Stay Rig Standard Cargo Rig

Performance Steps

2. Rig a west coast rig (see Figure 3-31).
 - 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.

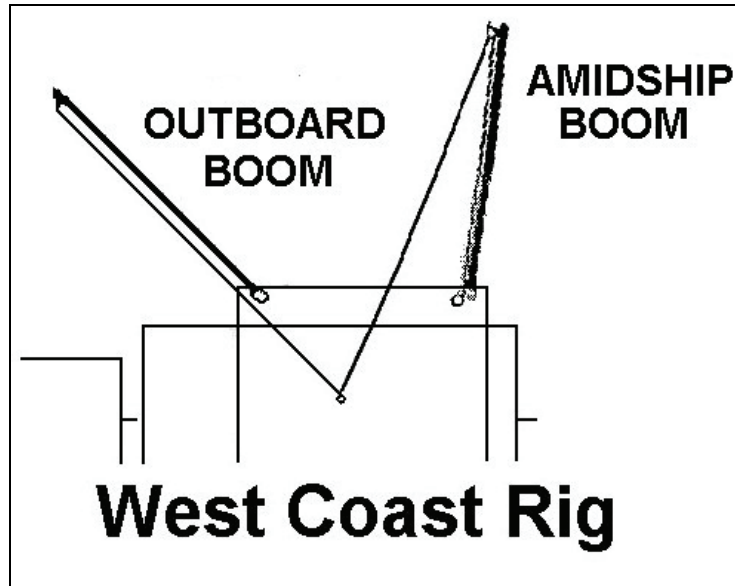


Figure 3-31. West Coast Rig Standard Cargo Rig

3. Rig a wing-and-wing rig (see Figure 3-32).
 - 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.

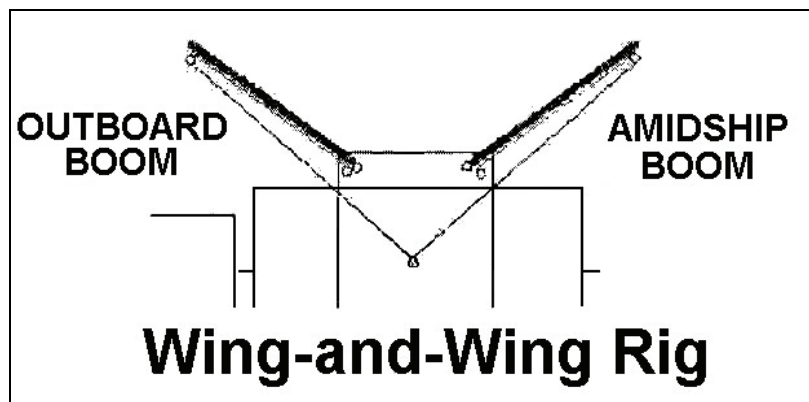


Figure 3-32. Wing-and-Wing Standard Cargo Rig

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Rigged a yard-and-stay rig.	_____	_____
2. Rigged a west coast rig.	_____	_____
3. Rigged a wing-and-wing rig.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 5-125
FM 55-17

Related

Reeve Triple-Sheave Blocks 551-88H-1520

Conditions: Assigned as a hatch gang member in an operational environment, given a completed risk assessment, safety briefing, two triple sheave blocks, fiber rope, FM 5-125, and FM 55-17.

Standards: Reeved triple-sheave blocks, ensuring that sheaves moved freely and were free of cuts, in accordance with FM 5-125.

Performance Steps

1. Reeve triple sheave blocks (see Figure 3-33).
 - a. Lay the blocks out.
 - b. Place the blocks so that the sheaves on one block are at right angles to the sheaves of the other block.
 - c. Inspect each sheave on the blocks for cuts, ensuring that it turns freely.
 - d. Lay a coil of rope beside either block.
 - e. Pass the running end of the line through the center sheave of block 1 from the front.
 - f. Bring the line down and through the right sheave of block 2 from the back.
 - g. Pass the line behind and through the right sheave of block 1.
 - h. Bring the line through the left sheave of block 2 from the front.
 - i. Pass the line through the left sheave of block 1 from the front.
 - j. Bring the line through the center sheave of block 2 from behind.

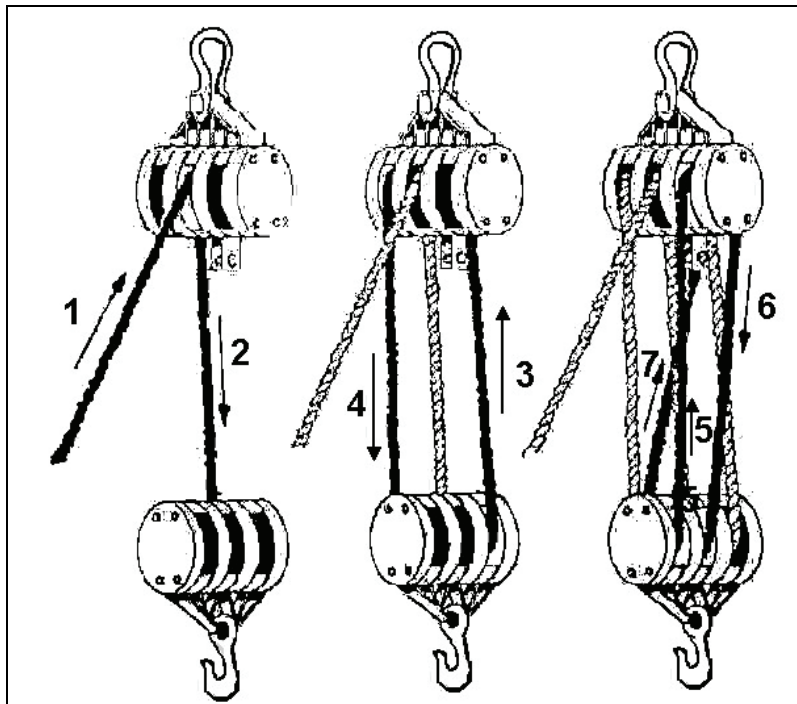


Figure 3-33. Reeve Triple Sheave Blocks

Performance Steps

2. Secure the line to the becket.
 - a. Lead the rope to the center sheaves of the second block.
 - b. 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.

Performance Measures

GO **NO-GO**

- | | | |
|------------------------------------|-------|-------|
| 1. Reeved triple sheave blocks. | _____ | _____ |
| 2. Secured the line to the becket. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 5-125
 FM 55-17

Related

Subject Area 3: Initial Cargo Checking Operations

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

Conditions: Assigned as a cargo handler performing the duties of a cargo checker in an operational environment, given cargo, pen or pencil, clipboard, DD Form 1384 (Transportation Control and Movement Document), and FM 55-17.

Standards: Checked cargo into in-transit storage area, ensuring accurate and legible entries on DD Form 1384 in accordance with FM 55-17.

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 3-34).
 - 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 TXJ		2. TRLR CTR		3. CONSIGNOR N00604 PEARL HARBOR			4. COMMODITY SPECIAL HANDLING 594Z9 PUMPS			5. AIR DIM		6. POE XE2 PEARL HARBOR		7. POD UM4 NSD YOKOSUKA					
8. MODE 9		9. PACK CR		10. TRANSPORTATION CONTROL NO. N6264922060149XXX			11. CONSIGNEE N6249 NSD YOKOSUKA			12. PRI 3	13. RDB 141	14. PROJ 123	15. DATE SHPD		16. ETA 0	17. TRACCT N125			
18. CARRIER			19. FLIGHT-TRUCK-VOY-DOC NO.			20. REF			21. REMARKS			22. PIECES 2		23. WEIGHT 810		24. CUBE 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. TRAILER - CON-TAINER	34. CONSIGNOR COMM ABBR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY NO Air Dim a. POE b.	37. POD	38. HT D E	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER		41. CONSIGNEE	42. P R I	43. REMARKS AND/OR Stow Loc					44. ADDITIONAL REMARKS OR		
												RDB a.	Proj b.	Shpd c.	ETA d.	Tac e.	Pieces g.	Weight h.	Cube i.
SAMPLE																			

Figure 3-34. Sample of DD Form 1384 (Transportation Control and Movement Document)

Performance Measures

GO **NO-GO**

- | | | |
|--|-------|-------|
| 1. Checked the Transportation Control Number (TCN) for completeness. | _____ | _____ |
| 2. Verified the proper posting to the DD Form 1384. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DD FORM 1384
FM 55-17

Related

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

Conditions: Assigned as a cargo checker in an operational environment, given a completed risk assessment, vehicle with operator, cargo, pen or pencil, clipboard, DD Form 1384 (Transportation Control and Movement Document), DOD 4500.9-R, Part II, and FM 55-17.

Standards: Recorded onward movement of cargo on DD Form 1384 ensuring accurate and legible entries in accordance with FM 55-17 and DOD 4500.9-R, Part II.

Performance Steps

1. Record onward movement of cargo.
 - a. Verifies the Transportation Control number (TCN) on DD Form 1384 against the TCN given in the address and markings on the cargo (see Figure 3-35).

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 TXJ		2. TRLR CTR		3. CONSIGNOR N00604 PEARL HARBOR		4. COMMODITY SPECIAL HANDLING 59429 PUMPS		5. AIR DIM		6. POE XE2 PEARL HARBOR		7. POD UM4 NSD YOKOSUKA																					
8. MODE 9		9. PACK CR		10. TRANSPORTATION CONTROL NO. N6264922060149XXX		11. CONSIGNEE N6249 NSD YOKOSUKA		12. PRI 3		13. RDB 141		14. PROJ 123		15. DATE SHPD 0		16. ETA N125		17. TRACCT															
18. CARRIER		19. FLIGHT-TRUCK-VOY-DOC NO.		20. REF		21. REMARKS		22. PCECS 2		23. WEIGHT 810		24. CBRE 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												
XE2			123		H12		130				P7680				2LTF						Ryan Miller												
UM4			124		A 17																Lindy Ruff												
25.				26.				27.				28. CONSIGNEE				29. DATE RECEIVED/OFFERED (Date)				30. CONDITION				31. REMARKS									
32. DOC ID		33. TRAILER-CONTAINER		34. CONSIGNOR COMM ADRES OTHER		35. COMMODITY SPECIAL HANDLING		36. VOY HO Air Dim a. POE b.		37. POD		38. TYPE a. b. c. d. e.		39. PACK		40. TRANSPORTATION CONTROL NUMBER				41. CONSIGNEE		42. PRI				43. REMARKS AND/OR				44. ADDITIONAL REMARKS OR			
SAMPLE																																	

Figure 3-35. Sample of DD Form 1384 (Transportation Control and Movement Document)

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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DD FORM 1384
DOD 4500.9-R, PART II
FM 55-17

Related

Tally Cargo 551-88H-1516

Conditions: Assigned as a cargo checker in an operational environment, given a completed risk assessment, cargo, tally sheets, pen or pencil, clipboard, DD Form 1384 (Transportation Control Movement Document), DOD 4500.32-R, Volume 1, and FM 55-17.

Standards: Talled cargo, inspecting cargo for damage and ensuring accurate and legible entries in accordance with DOD 4500.32-R, Volume 1 and FM 55-17.

Performance Steps

1. Tally individually numbered pieces of cargo, using the Package Method (see Figure 3-36).
- NOTE: Checking cargo involves two general functions:
- Inspecting Cargo for quantity, condition, and identifying marks.
 - Making observations a matter of record.

Definition: 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.

NOTE: 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 <i>TX1</i>		2. TRLR CTR		3. CONSIGNOR <i>A26TBE</i>			4. COMMODITY SPECIAL HANDLING <i>72229</i>			5. AIR DIM		6. POE <i>IMJ</i>		7. POO <i>ZGI</i>																	
8. MODE <i>8</i>		9. PACK <i>PC</i>		10. TRANSPORTATION CONTROL NO. <i>AKA22410700031XX</i>			11. CONSIGNEE <i>AK4224</i>			12. PRI <i>3</i>		13. RDO <i>130</i>		14. PROJ <i>077</i>		15. DATE SHPD		16. ETA <i>4205</i>		17. TRACCT											
18. CARRIER				19. FLIGHT-TRUCK-VOY-DOC NO.				20. REF				21. REMARKS		22. PIECES <i>5</i>		23. WEIGHT <i>1432</i>		24. CUBE <i>467</i>													
a. Transship Point			b. Date Rec		c. Day When		d. Date Shpd		e. Mode Carrier		f. Flight-Track-Voy Doc No.		g. Ref		h. Stow Loc		i. Split		j. Cond		k. Signature/Remarks										
<i>IMJ</i>			<i>078</i>		<i>C-23</i>				<i>Truck</i>		<i>GELG788760</i>										<i>Jeff Bond</i>										
25.				26.				27.				28. CONSIGNEE				29. DATE RECEIVED/OFFERED (Sign)				30. CONDITION				31. REMARKS							
32. DOC ID		33. TRAILER - COM-TABER		34. CONSIGNOR COMB ABBR OTHER		35. COMMODITY SPECIAL HANDLING		36. VOY NO		37. POB		38. M O D E		39. TYPE PACK		40. TRANSPORTATION CONTROL NUMBER				41. CONSIGNEE		42. P R I		43. REMARKS AND/OR				44. ADDITIONAL REMARKS OR			
		<i>Damaged</i>		<i>Short</i>		<i>Over</i>																									
		<i>1</i>		<i>2</i>		<i>3</i>		<i>4</i>		<i>5</i>		<i>3</i>																			

Figure 3-36. Tallying General Cargo Using Package Method

Performance Steps

2. Tally items with serial numbers (trucks, MILVANS, and so on), using the Unit Method (see Figure 3-37).

Definition: 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.

NOTE: 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 <i>TYO</i>	2. TRLR CTR	3. CONSIGNEE <i>A25TBB</i>			4. COMMODITY SPECIAL HANDLING <i>8672Z</i>			5. AIR ORN	6. POE <i>IGC</i>		7. POB <i>JFI</i>							
8. MODE <i>D</i>	9. PACK <i>VO</i>	10. TRANSPORTATION CONTROL NO. <i>AKA3358203001XXX</i>			11. CONSIGNEE <i>AK4334</i>			12. PRI <i>3</i>	13. RPD <i>253</i>	14. PROJ	15. DATE SHPD <i>221</i>		16. ETA <i>2</i>	17. TRACCT <i>4205</i>				
18. CARRIER		19. FLIGHT-TRUCK-VOY-DOC NO.			20. REF		21. REMARKS		22. PIECES <i>7</i>		23. WEIGHT <i>12880</i>		24. CUBE <i>1630</i>					
a. Tranship Point		b. Date Rec	c. Bay When	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.		g. Ref	h. Stow Loc	i. Spdt	j. Cond	k. Signature-Remarks						
<i>S.S. Minnon</i>		<i>260</i>										<i>J.B. Hale</i>						
<i>JFI</i>		<i>261</i>	<i>Yard</i>									<i>B. U. Denver</i>						
25.		26.		27.		28. CONSIGNEE		29. DATE RECEIVED/OFFERED (Sign)		30. CONDITION		31. REMARKS						
32. DOC ID	33. TRAILER-CON-TABER	34. CONSIGNEE-COMM ARR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY HO	37. POB	38. TYPE PACK	39. TRANSPORTATION CONTROL NUMBER	40. CONSIGNEE	41. P R I	42. REMARKS AND/OR			43. ADDITIONAL REMARKS OR					
<i>TYO</i>	<i>M35</i>	<i>8672Z</i>	<i>IGD</i>	<i>JFI</i>	<i>3</i>	<i>LD</i>	<i>NK43317201001XXX</i>	<i>AK4331</i>	<i>3</i>	42.1. RPD <i>00255L096M11H</i>	42.2. Proj <i>USA</i>	42.3. Stow Loc <i>4L76H</i>	42.4. Shpd <i>USA</i>	42.5. ETA <i>USA</i>	42.6. Tax <i>USA</i>	42.7. Pieces <i>USA</i>	42.8. Weight <i>USA</i>	42.9. Cube <i>USA</i>
<p><i>NOTE: Left side of windshield broken</i></p> <p><i>Left headlight broken</i></p> <p><i>Hood dented - R.U. Denver</i></p>																		

Figure 3-37. 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 3-38).

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT																	PAGE NO.	
1. DOC ID <i>TXO</i>	2. TRLR CTR	3. CONSIGNEE <i>A33HFV</i>			4. COMMODITY SPECIAL HANDLING <i>51A29</i>			5. AIR ORN	6. POE <i>IMJ</i>		7. POB <i>FGI</i>							
8. MODE <i>A</i>	9. PACK <i>CS</i>	10. TRANSPORTATION CONTROL NO. <i>AT88874004002XXX</i>			11. CONSIGNEE <i>AT8887</i>			12. PRI <i>057</i>	13. RPD <i>020</i>	14. PROJ	15. DATE SHPD <i>020</i>		16. ETA <i>3</i>	17. TRACCT <i>A205</i>				
18. CARRIER		19. FLIGHT-TRUCK-VOY-DOC NO.			20. REF		21. REMARKS		22. PIECES <i>382</i>		23. WEIGHT <i>21,392</i>		24. CUBE <i>573</i>					
a. Tranship Point		b. Date Rec	c. Bay When	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.		g. Ref	h. Stow Loc	i. Spdt	j. Cond	k. Signature-Remarks						
<i>IMJ</i>		<i>023</i>	<i>C-42</i>									<i>H. B. Salk</i>						
25.		26.		27.		28. CONSIGNEE		29. DATE RECEIVED/OFFERED (Sign)		30. CONDITION		31. REMARKS						
32. DOC ID	33. TRAILER-CON-TABER	34. CONSIGNEE-COMM ARR OTHER	35. COMMODITY SPECIAL HANDLING	36. VOY HO	37. POB	38. TYPE PACK	39. TRANSPORTATION CONTROL NUMBER	40. CONSIGNEE	41. P R I	42. REMARKS AND/OR			43. ADDITIONAL REMARKS OR					
<i>(48)</i>	<i>LHI</i>	<i>11 + 46 =</i>	<i>382</i>							42.1. RPD	42.2. Proj	42.3. Stow Loc	42.4. Shpd	42.5. ETA	42.6. Tax	42.7. Pieces	42.8. Weight	42.9. Cube
<p><i>NOTE: (48) LHI 11 + 46 = 382</i></p>																		

Figure 3-38. Tallying General Cargo Using Block Method

Performance Steps

4. Tally general cargo with different amounts in each draft, using the Straight Method (see Figure 3-39).

Definition: When cargo with different amounts of 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 <i>TX1</i>		2. TBLR CTR		3. CONSIGNEE <i>A33HRV</i>			4. COMMODITY SPECIAL HANDLING <i>733229</i>			5. AIR DBL <i>2DC</i>		6. POE		7. POD <i>KF1</i>													
8. MODE <i>8</i>		9. PACK <i>CS</i>		10. TRANSPORTATION CONTROL NO. <i>AK732120240003AKK</i>			11. CONSIGNEE <i>AK3321</i>			12. PRJ <i>071</i>		13. RDO <i>030</i>		14. DATE SHD <i>3</i>		15. TR ACCT <i>A205</i>											
16. CARRIER				17. FLIGHT-TRUCK-VOY. DOC NO.				18. REF				19. REMARKS		20. WEIGHT <i>81</i>		21. CUBE <i>3,372</i>		22. SIGNATURE-REMARKS <i>B. Carvide</i>									
a. Transship Point		b. Date Rec		c. Day/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							
<i>2DC</i>		<i>033</i>		<i>A-19</i>																<i>B. Carvide</i>							
23. CONSIGNEE				24. DATE RECEIVED/OFFERED (Date)				25. CONDITION				26. REMARKS															
32. DOC NO		33. TRAILER - CON-TAINER		34. CONSIGNEE COMMAND OTHER		35. COMMODITY SPECIAL HANDLING		36. VOY NO		37. POD		38. M O B E		39. TYPE PACK		40. TRANSPORTATION CONTROL NUMBER		41. CONSIGNEE		42. P R I		43. REMARKS AND/OR				44. ADDITIONAL REMARKS OR	
<i>24</i>		<i>30</i>		<i>27</i>		<i>= 81</i>																					

Figure 3-39. 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DD FORM 1384

DOD 4500.32-R, VOL 1

FM 55-17

Related

Subject Area 4: Initial Haggglunds Crane Operations

Prepare Haggglunds Crane for Operation
551-88H-1403

Conditions: Assigned as a Haggglunds crane operator in an operational environment, given a completed risk assessment, Haggglunds crane, safety gear, pen or pencil, DA Form 2404 (Equipment Inspection and Maintenance Worksheet), Haggglunds Hydraulic Deck Crane Manual, DA Pamphlet 750-8, and FM 55-17 while under hatch foreman supervision.

Standards: Prepared Haggglunds crane for operation and stow/unstow in accordance with Haggglunds Hydraulic Deck Crane Manual and FM 55-17.

Performance Steps

1. Perform pre-operational checks on the Haggglunds crane (see Figure 3-40).

- 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 does register 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 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.

2. Stow/Unstow the Haggglunds crane in parking support.

- a. Ensure the boom is unclamped.
- b. Start the Haggglunds 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.

3. Stow the Haggglunds crane.

- a. Start the Haggglunds crane.
- b. Slew (swing) the crane into the stowage position.
- c. Lower the hook slowly
- d. Lower the boom (jib) until it stops
- e. Turn on the jib radius bypass switch and hold it in position.
- f. Lower the boom (jib) slowly onto the parking support.
- g. Lower the cargo hook to the cargo fastening devices that lock the crane boom (jib) in the parking support and place the hook in the locking device.
- h. Slack off the cargo hook to prevent stress to the wire sheaves and winches.
- i. Stop the motor of the crane.
- j. Switch off all accessories.

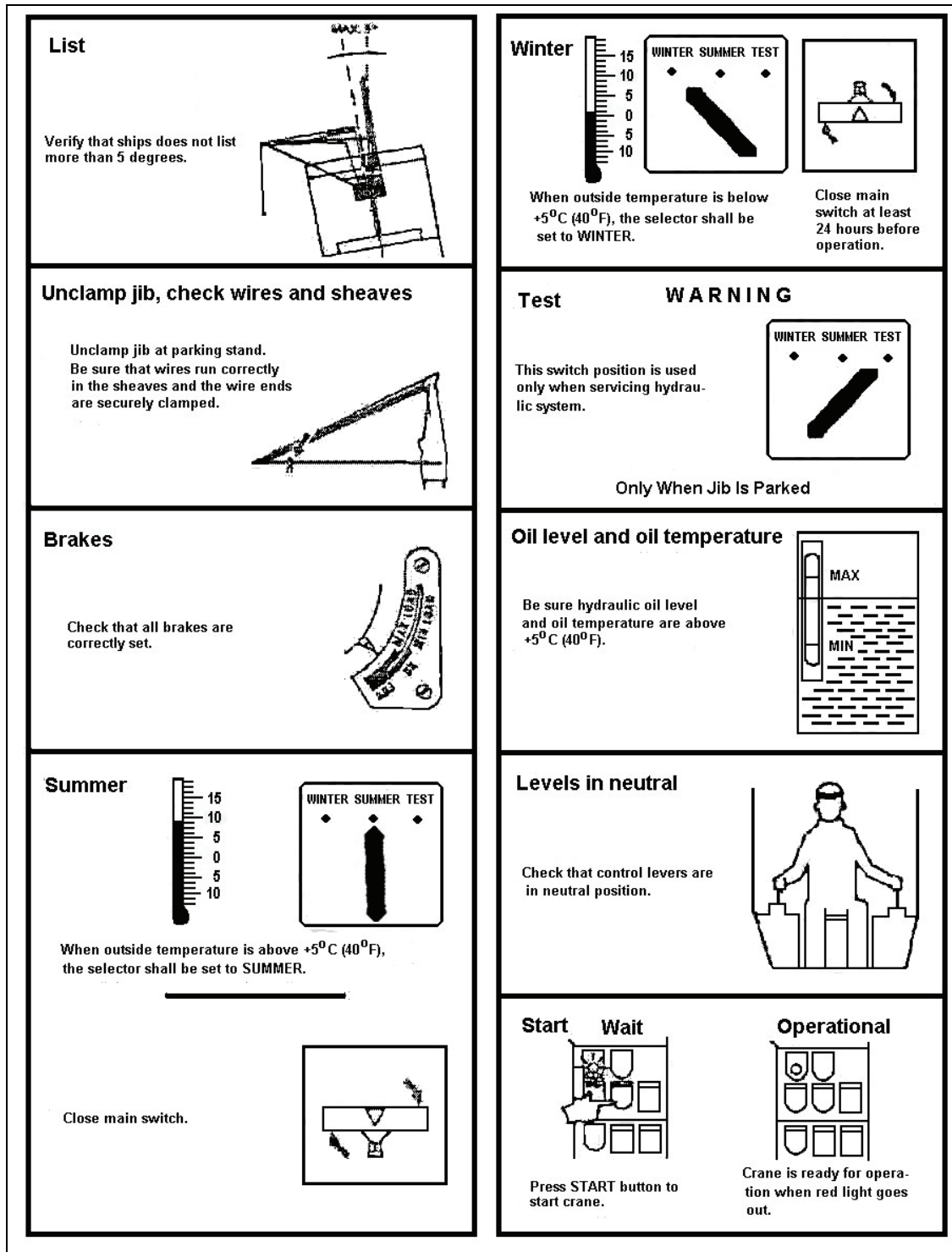


Figure 3-40. Hagglunds Crane Checklist

Performance Steps

4. Unstow the Haggglunds crane.
 - a. Ensure the boom is unclamped.
 - b. Start the Haggglunds 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed pre-operational checks on the Haggglunds crane.	—	—
2. Stowed/Unstowed the Haggglunds crane in parking support.	—	—
3. Stowed the Haggglunds crane.	—	—
4. Unstowed the Haggglunds crane.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DA FORM 2404
 DA PAM 750-8
 FM 55-17
 HAGGLUNDS HYDRAULIC DECK CRANE
 MANUAL

Related

**Operate Haggglunds Crane in Single Mode
551-88H-1405**

Conditions: Assigned as a Haggglunds crane operator in an operational environment, given Haggglunds crane, a completed risk assessment, cargo, safety gear, safety briefing, signalman, Haggglunds Hydraulic Deck Crane Manual, and FM 55-17.

Standards: Raised, swung, and lowered a load using the Haggglunds crane in accordance with Haggglunds Hydraulic Deck Crane Manual and FM 55-17.

Performance Steps

1. Place the Haggglunds 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 Haggglunds crane (see Figure 3-41).
2. Operate the controls on the Haggglunds 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.

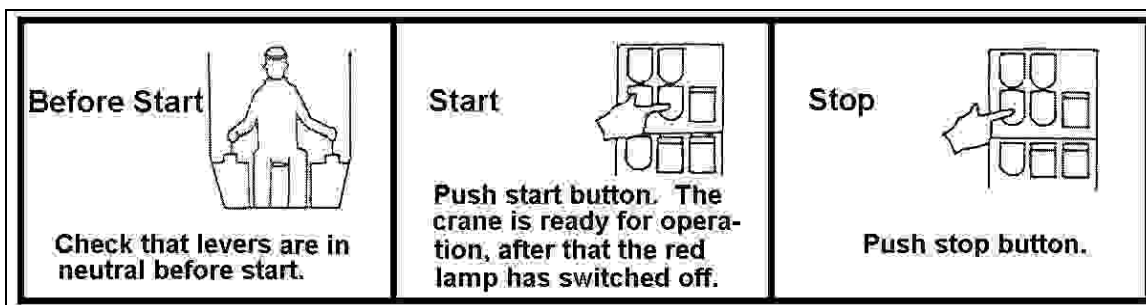


Figure 3-41. Pressing Start Button on Haggglunds Crane

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Placed the Haggglunds crane into single mode operation.	—	—
2. Operated the controls on the Haggglunds crane.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
FM 55-17	
HAGGLUNDS HYDRAULIC DECK CRANE MANUAL	

Place Haggglunds Crane in Twin Mode

551-88H-1406

Conditions: Assigned as a Haggglunds crane operator in an operational environment, given a completed risk assessment, Haggglunds crane, cargo, safety briefing, signalman, assistant operator, wearing safety gear, while under supervision of hatch foreman, and FM 55-17.

Standards: Placed Haggglunds crane in twin mode following safety guidelines without causing injury to personnel or damage to equipment or the environment in accordance with FM 55-17.

Performance Steps

1. Set up the Haggglunds crane in twin mode (see Figure 3-42).

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

- a. Position assistant operator on crane number two (slave) platform.
- b. Ensure that the controls are in the NEUTRAL position.
- c. Start crane by pressing the START button on the control panel in crane number two.
- d. Slew (swing) crane number two into the twin position by using the bypass slewing limit switch.
- e. Move the right control lever to the right.
- f. Using the right hand, move the right control lever to the right to swing the crane into the twin position.
- g. Instruct the assistant operator to extract the safety pin from the slewing lock lever to engage the slewing lock on crane number 2.

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

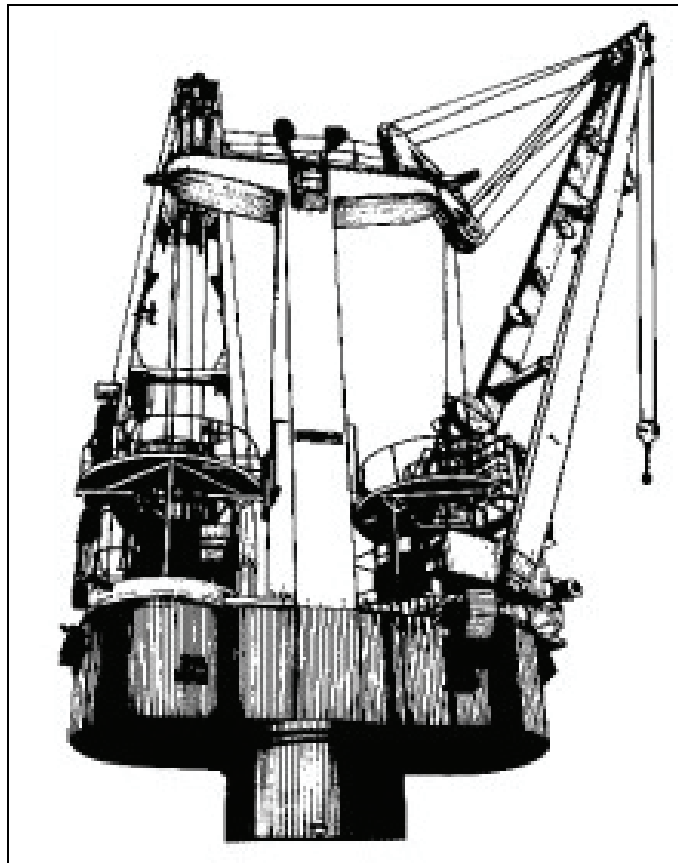


Figure 3-42. Haggglunds Crane in Twin Mode

Performance Steps

2. Operate the Haggglunds 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 number one 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 NEUTRAL position.
 - e. Raise the boom by moving the right-hand control lever slowly straight to the rear, using the right hand.
 - f. Lower the boom by moving the right-hand control lever slowly straight forward, using the right hand.

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

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

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

Performance Measures

GO **NO-GO**

- | | | |
|--|-------|-------|
| 1. Set up the Haggglunds crane in twin mode. | _____ | _____ |
| 2. Operated the Haggglunds crane in twin mode. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

**Perform Spreader Operations with Haggglunds Crane Using 20-and 40- foot Spreader
551-88H-1407**

Conditions: Assigned as a Haggglunds crane operator in an operational environment, given a completed risk assessment, a Haggglunds crane, cargo, safety gear, safety briefing, 20- and 40-foot spreader frames, containers, TM 10-3990-205-12&P, and FM 55-17.

Standards: Performed spreader operations with Haggglunds crane using 20- and 40-foot spreader in accordance with FM 55-17.

Performance Steps

1. Perform spreader operations with Haggglunds 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. Ensure all four spreader bayonet cones lock evenly into all four container corner fittings.
 - g. 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 Haggglunds 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 Haggglunds crane.

NOTE 2: Ensure that the operator performs these functions using both the 20-foot and 40-foot spreaders.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed spreader operations with Haggglunds crane.	_____	_____
2. Lifted containers using 20- and 40-foot spreaders.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
FM 55-17	
TM 10-3990-205-12&P	

Load Flatracks Aboard a Cargo Vessel

551-88H-1413

Conditions: Assigned as a hatch gang member aboard a Fast Sealift Ship (FSS) in an operational environment, given a completed risk assessment, safety briefing, Hagglands Crane, spreader, loaded flatrack, FM 55-15, and FM 55-17.

Standards: Loaded flatracks aboard a cargo vessel, stowing flatracks to prevent movement or damage to cargo or vessel, in accordance with FM 55-17.

Performance Steps

1. Discharge flatrack.

NOTE: The purpose of flatracks is to provide the capability to stow aircraft, vehicles, and oversized and break-bulk cargo that cannot be placed into containers.

- 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

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 FM 55-17, Chapter 8).

2. Load 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 outsized loads of cargo (see Figure 3-43).

- a. Load cargo or vehicles onto flatrack.
- b. Ensure that vehicles or cargo are properly secured.
- c. Hook up the spreader and position over flatracks.
- d. Lower spreader frame onto flatrack.
- e. Attach tag lines to spreader.
- f. Secure spreader frame to flatrack.
- g. Slowly lift the flatrack until it clears the side of the vessel.
- h. Position the flatrack over the hatch to be loaded.
- i. Lower the flatrack into the hold.
- j. Disconnect spreader frame from flatrack.

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

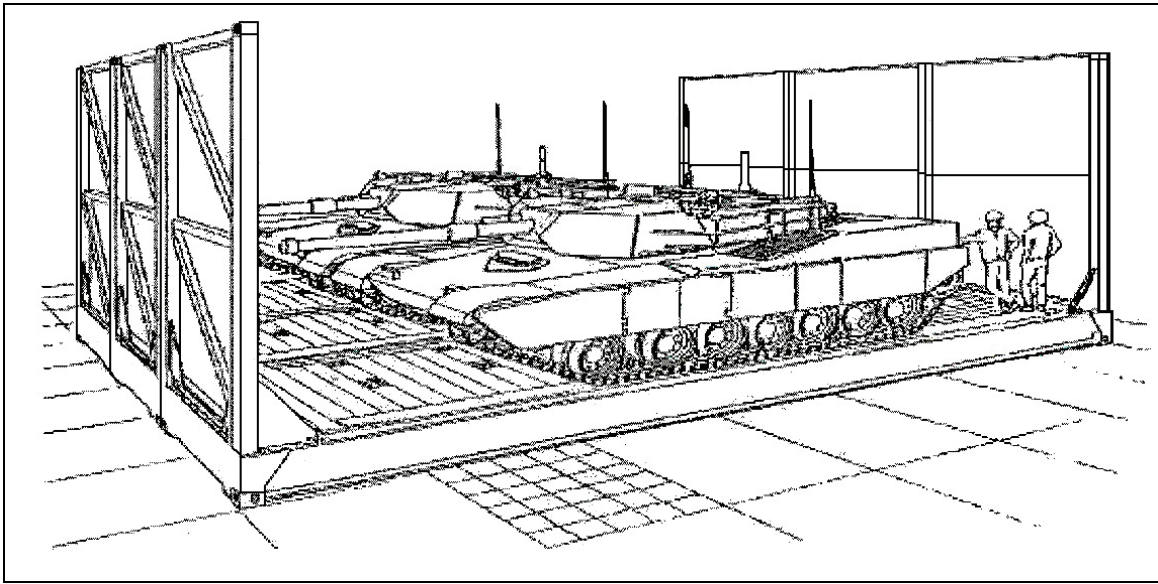


Figure 3-43. Cargo Loaded on Flatracks

Performance Measures

GO **NO-GO**

1. Discharged flatrack.
2. Loaded flatrack.

___ ___
 ___ ___

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 55-15
 FM 55-17

Related

Stow General Cargo at Assigned Hatch

551-88H-1414

Conditions: Assigned as a hatch gang member aboard an Fast Sealift Ship/Large Medium Speed Roll-On/Roll-Off (FSS/LMSR) in an operational environment, given a completed risk assessment, safety briefing, ship's gear, hatch set, dunnage, cargo, blocking, bracing, and tie-down materials, stowage plan, FM 55-17, TEA Pamphlet 700-4, TEA Pamphlet 700-6, and TEA Pamphlet 700-7.

Standards: Stowed cargo at assigned hatch without causing injury to personnel or damage to equipment in accordance with FM 55-17, TEA Pamphlet 700-4, TEA Pamphlet 700-6, and TEA Pamphlet 700-7.

Performance Steps

1. Apply the general rules for stowing cargo.
 - a. Ensure that cargo arrives at its destination undamaged.
 - b. Stow as much cargo as possible in the compartment of the ship.
 - c. 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.

- d. Use dunnage only in required quantities.
- e. Avoid cargo damage by following the instructions on labels.

NOTE: If it is necessary to walk on top or 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. 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 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. 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 (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. Use the correct type, strength, and number of lashings.
- e. Load general cargo, drummed cargo, and barreled cargo in the wings and end 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, chain, 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.

Performance Steps

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. 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.

Performance Measures

- 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.

<u>GO</u>	<u>NO-GO</u>
—	—
—	—
—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- FM 55-17
- TEA PAM 700-4
- TEA PAM 700-6
- TEA PAM 700-7

Related

Secure Vehicles or Cargo in Seasheds

551-88H-1415

Conditions: Assigned as a hatch gang member in an operational environment, preparing to load/discharge cargo at an assigned hatch, given a completed risk assessment, safety gear, ship's gear, and hatch equipped with seasheds aboard a cargo vessel (such as a Fast Sealift Ship (FSS)), TEA Pamphlet 700-6, and FM 55-17.

Standards: Secured vehicles or cargo in seasheds in accordance with TEA Pamphlet 700-6 and FM 55-17.

Performance Steps

1. Operate seashed system (see Figure 3-44).

NOTE 1: Seasheds provide temporary multiple decks in containerships for transporting large military vehicles and oversized break bulk cargo that cannot be placed into container.

NOTE 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.

NOTE 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 switches on the circuit breaker.

NOTE 4: 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 5: The ship's crew will open and close the folding work-through floor sections.

2. Secure vehicles or cargo in seasheds (see Figure 3-45).

- a. Position vehicles or cargo in the desired location.

NOTE: The floor is equipped with 70,000 pounds capacity cloverleaf type, flush mounted tie-downs made into the floor.

- b. Attach tie-down to the cloverleaves and "D" rings when securing cargo.
- c. Position cloverleaves 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 both sides, fronts, and back of the vehicle.

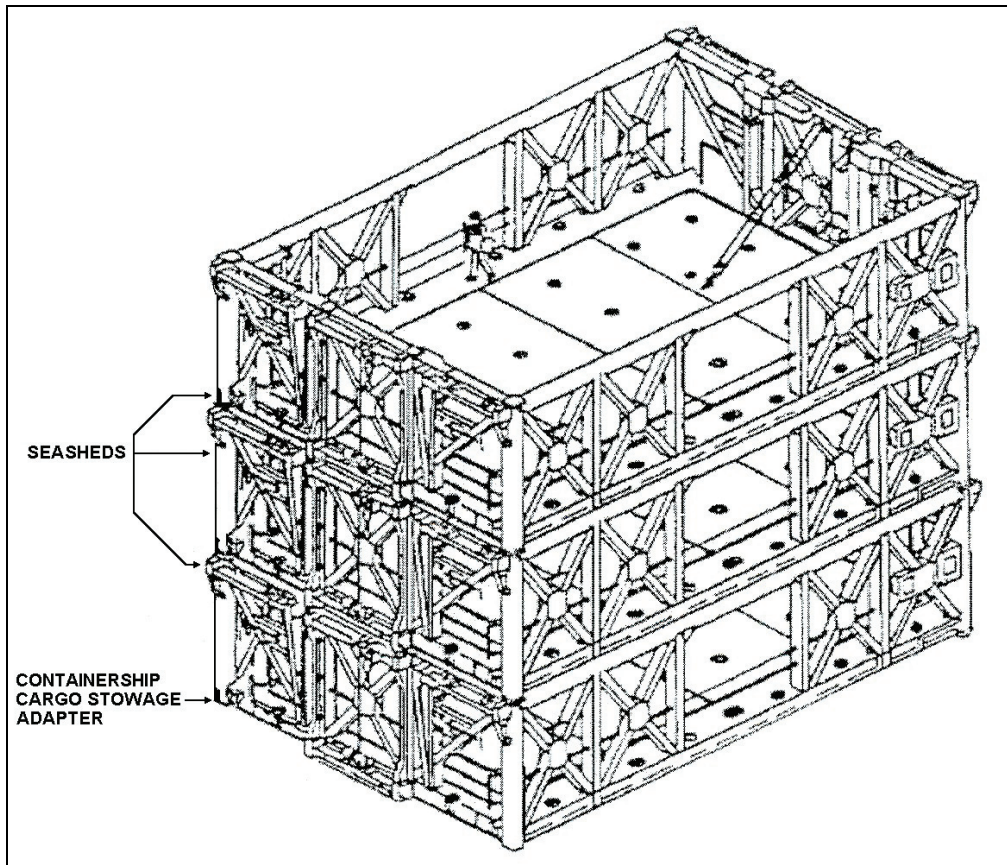


Figure 3-44. Seashed System

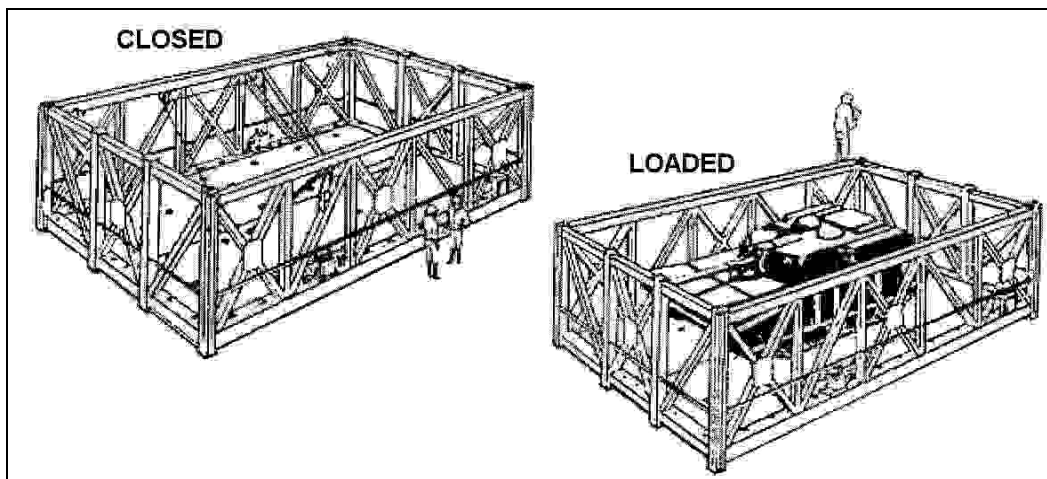


Figure 3-45. Seasheds (Closed and Loaded)

Performance Steps

3. Lower the work through floor (see Figure 3-46).

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.

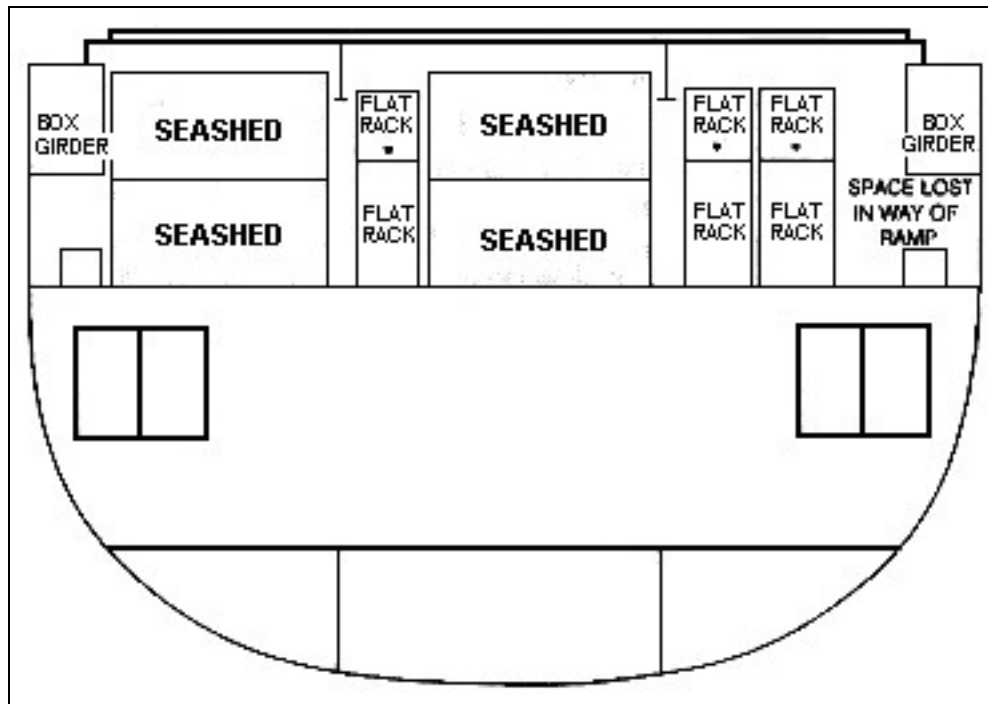


Figure 3-46. Loading the Lower Seashed

Performance Measures

1. Operated seashed.
2. Secured vehicles or cargo in seasheds.
3. Lowered the work through floor.

<u>GO</u>	<u>NO-GO</u>
—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 55-17
TEA PAM 700-6

Related

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

Conditions: Assigned as a hatch gang member in an operational environment, given a completed risk assessment, safety gear, hatch on an Fast Sealift Ship/Large Medium Speed Roll-On/Roll-Off (FSS/LMSR), ship's gear, semiautomatic toplift spreader, tag line, container, lashing equipment, FM 55-60, and FM 55-17.

Standards: Stowed containers aboard a cargo vessel to prevent movement or damage to cargo and vessel in accordance with FM 55-60 and FM 55-17.

Performance Steps

1. Attach semi-automatic toplift spreader devices to containers.
 - a. Attach the toplift spreader to the cargo hook.
 - b. Signal the winch operator to hoist the toplift spreader.
 - c. Signal the winch operator to lower the device onto the container.
 - d. Secure the device to the four corners of the container.
 - e. Engage twist locks.
 - f. Disengage the container bottom twist locks.
 - g. Signal the winch 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 semiautomatic toplift spreader device to the container (see Figure 3-47).
 - (1) Attach the toplift spreader to the cargo hook.
 - (2) Signal the winch operator to hoist the toplift spreader.
 - (3) Signal the winch 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 3-48).
 - (5) Engage twist locks.
 - (6) Disengage the container bottom twist locks.
 - (7) Signal the winch 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.

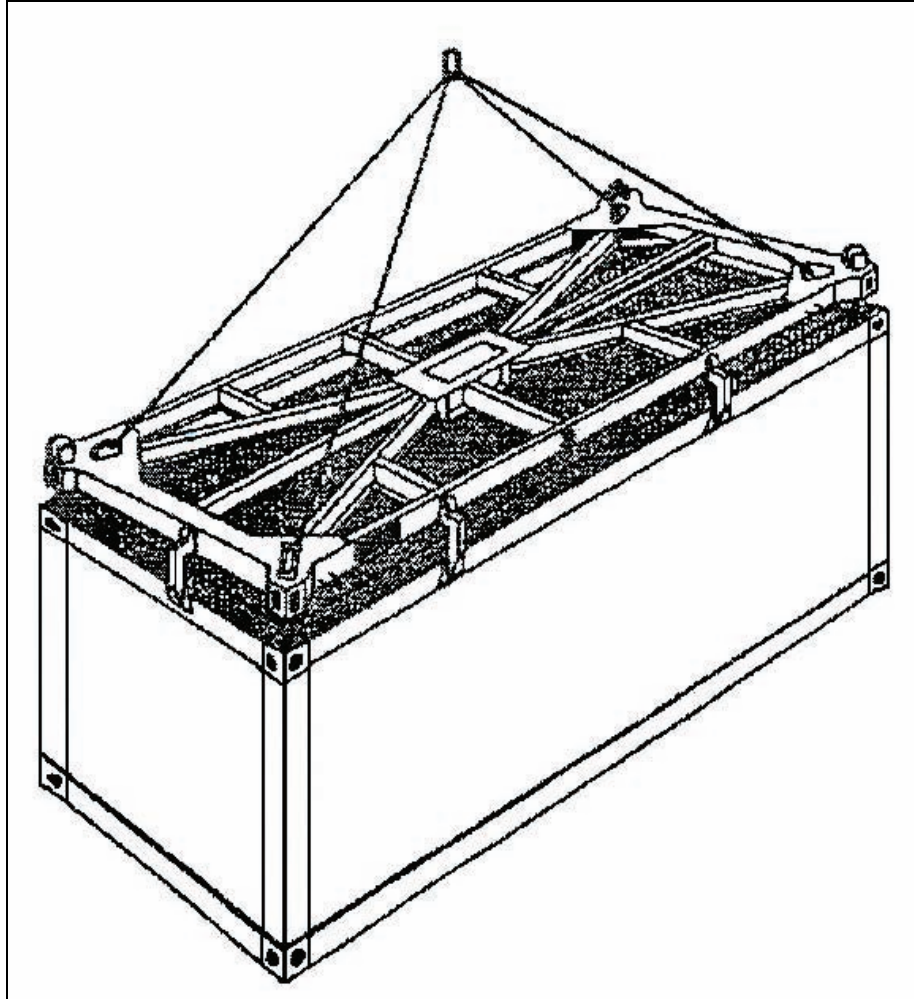


Figure 3-47. Attaching Semiautomatic Toplift Spreader Device to the Container

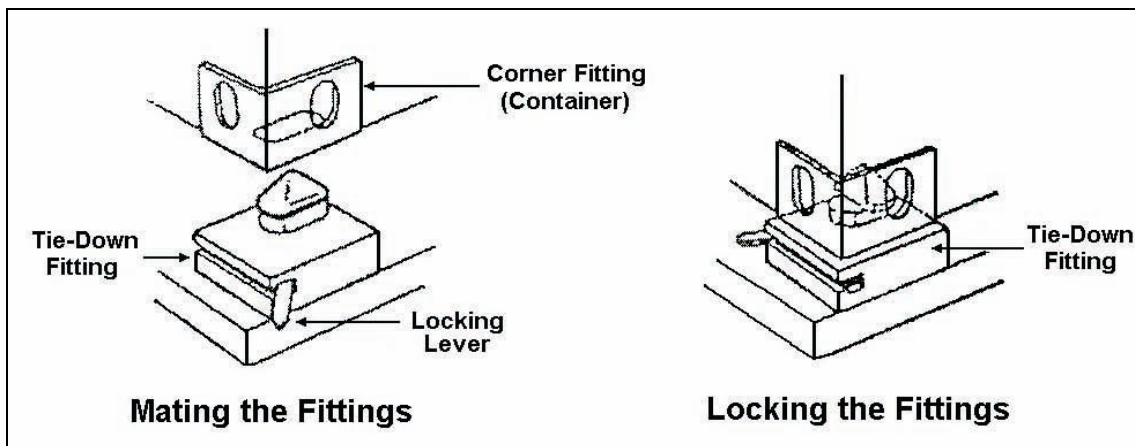


Figure 3-48. Securing the Device

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 55-17
 FM 55-60

Related

Signal Crane Operator Using Standard Hand Signals
551-88H-1421

Conditions: Assigned as a signalman in an operational environment, given a completed risk assessment, safety gear, a Haggblunds crane with operator, and FM 55-17.

Standards: Signaled crane operator using standard hand signals without damage to the cargo, vessel, or ship's gear in accordance with FM 55-17.

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 3-49).
4. Stop operation and report to the hatch foreman when a safety hazard is observed.

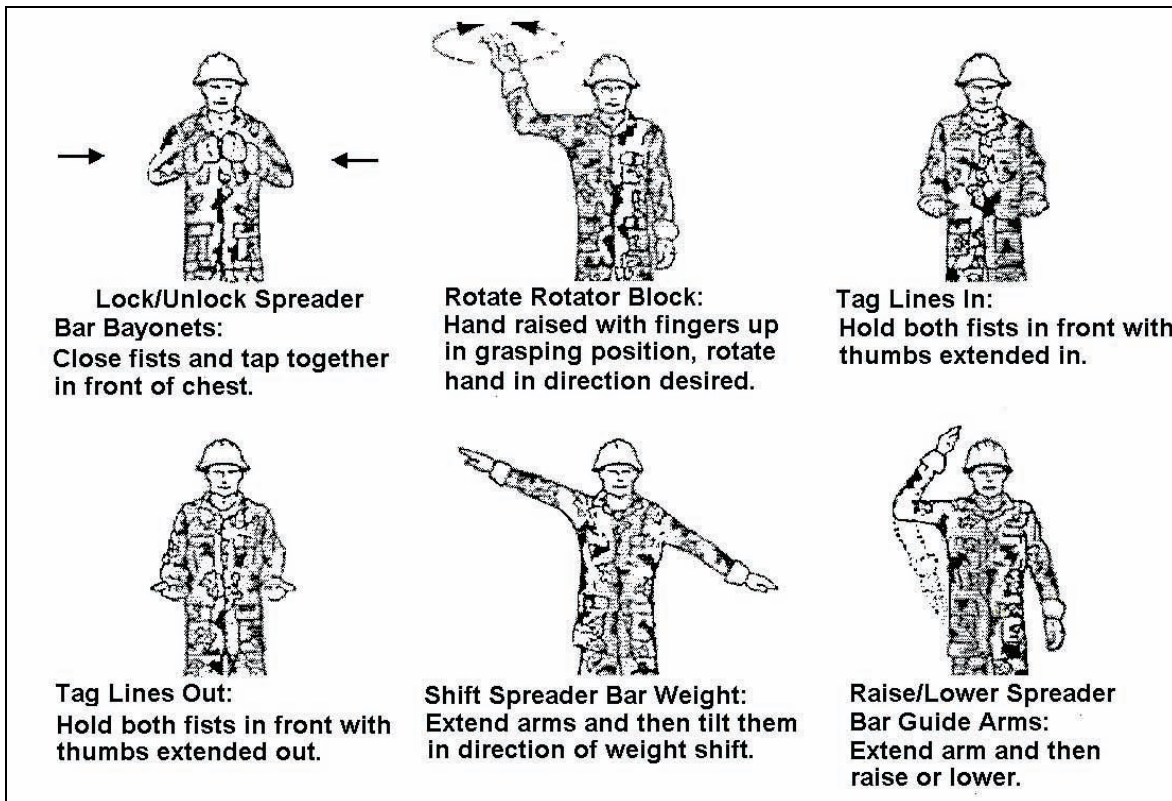


Figure 3-49. Standard Hand Signals

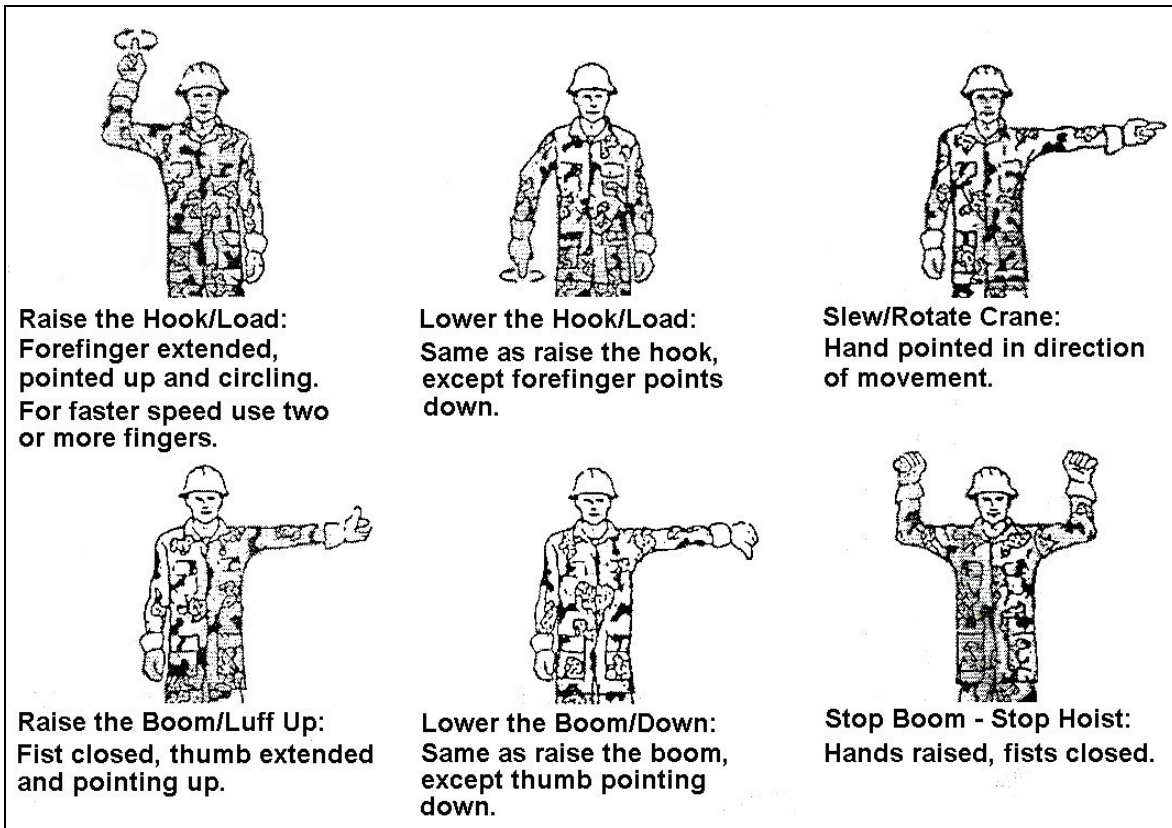


Figure 3-49. Standard Hand Signals (continued)

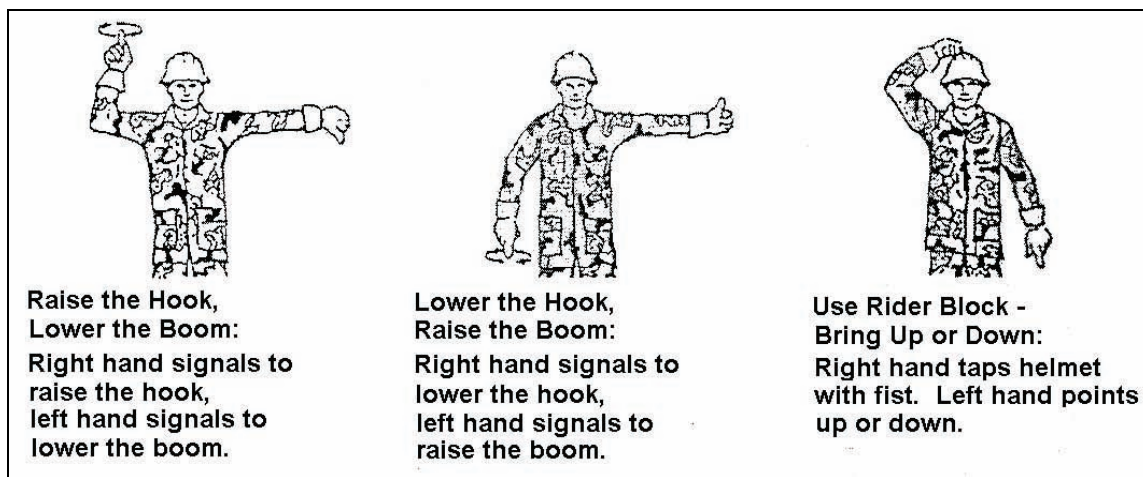


Figure 3-49. Standard Hand Signals (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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.	—	—
4. Stopped operation and reported to the hatch foreman when a safety hazard was observed.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Subject Area 5: 4,000 Lbs Rough Terrain Forklift Operation

**Operate the 4,000-lb Rough Terrain Forklift
551-88H-1533**

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a safety briefing, safety clothing and hearing protection, a 4,000-pound capacity, rough terrain forklift, Army Model MHE 237, and TM 10-3930-638-10.

Standards: Operated 4,000-pound rough terrain forklift (RTFL) in accordance with TM 10-3930-638-10.

Performance Steps

1. Start the engine.

WARNING: Noise level exceeds 85dB(A) at three feet in front, 15 feet at side and 24 feet at rear of vehicle. All personnel shall wear a hearing protection device when operating the vehicle.

WARNING: Before starting engine, check and be sure that STEERING BYPASS valve is closed (fully clockwise) and that shipping lock pin has been removed. Failure to do so will cause loss of steering control which may result in serious injury or death and damage to equipment. Be sure your seat belt is fastened before starting 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.

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.

- h. Depress START pushbutton switch.

WARNING: Starting fluid is toxic and highly flammable. Do not discharge starting fluid in confined areas or near open flame.

- 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 pushbutton 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.

CAUTION: 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.

2. Operate the forklift truck.

- 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.

NOTE: When operating on soft sand at slow speeds (not exceeding 10 MPH), tire inflation pressure may be decreased to 30 pounds per square inch (psi) for improved traction.

Performance Steps

NOTE: When operating in excess of 10 MPH or on hard surface terrain or roads, standard tire inflation pressure of 45 psi should be maintained.

3. Stop the forklift truck.
 - a. Depress brake pedal to stop forklift truck.
 - 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.

4. 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Started the engine.	_____	_____
2. Operated the forklift truck.	_____	_____
3. Stopped the forklift truck.	_____	_____
4. Operated the forklift to pickup and deposit a load.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 10-3930-638-10

Related

Subject Area 6: 10,000 Lbs Rough Terrain Forklift (M10A)

**Enter Surf with 10,000-lb Rough Terrain Forklift (M10A)
551-88H-1526**

Conditions: Assigned as a rough terrain forklift (RTFL) operator in an operation environment, given a completed risk assessment, safety briefing, 10,000-pound RTFL, palletized load, a landing craft, and TM 10-3930-643-10.

Standards: Operated 10,000-pound RTFL with a palletized load in the surf in accordance with TM 10-3930-643-10.

Performance Steps

1. Perform actions required prior to entering surf with a 10,000-pound RTFL.

NOTE: This forklift may be safely subjected to depths of 60 inches of water including wave action. Do not exceed this depth.

- a. Check the depth of the water allowing for consistency of the bottom.
- b. Raise forks high enough to clear the surf.

CAUTION: Engage or disengage the fan only when the engine is operating at low idle.

2. Perform actions required to enter surf with a 10,000-pound RTFL.
 - a. Turn the fan switch to OFF if there is a chance of water entering the fan.
 - b. Increase engine speed to reduce danger of stalling engine.

NOTE: Leave transmission selector in range 1.

- c. Enter from the center of the landing craft ramp on the wave using the fork tilt control lever to balance the load while on the ramp.
- d. Enter the surf slowly to minimize surges of backwash into engine compartment. Do not exceed speed of three to four mph.
- e. When operating with the fan off, watch the water temperature gage closely. If overheating is indicated, immediately move to more shallow water and turn the fan on.

3. Perform actions required to exit surf with a 10,000-pound RTFL.
 - a. Turn the fan switch to ON when the sweep clears the water level.
 - b. Lubricate the forklift completely as soon as possible after exiting the surf. Refer to the organization maintenance section.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Performed actions required prior to entering the surf with a 10,000-pound RTFL.	—	—
2. Performed actions required to enter the surf with a 10,000-pound RTFL.	—	—
3. Performed actions required to exit surf with a 10,000-pound RTFL.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 10-3930-643-10

Related

**Operate 10,000-lb Rough Terrain Forklift (M10A) Under Blackout Drive Conditions
551-88H-1528**

Conditions: Assigned as a cargo specialist in an operational environment, given a safety briefing, completed risk assessment, 10,000-pound rough terrain forklift (RTFL) (M10A), a ground guide with flashlight, and TM 10-3930-643-10.

Standards: Operated RTFL under blackout conditions in accordance with TM 10-3930-643-10.

Performance Steps

1. Turn electrical system master switch to the ON position.
2. Check to ensure parking brake is engaged.
3. Check transmission directional lever to ensure it is in NEUTRAL position.
4. Start the Engine.
5. Turn light switch to the blackout drive position.
 - a. Turn the unlock switch to the right and hold.
 - b. Place upper switch to the left in blackout drive position.
6. Check visually to ensure all blackout lights are on.
7. Apply and hold the brake pedal.
8. Accelerate the engine by partially depressing the accelerator pedal.
9. Pull the forklift control lever back and raise forks to travel height.
10. Release the accelerator pedal.
11. Disengage the parking brake.
12. Place transmission directional lever in desired position (forward or reverse).
13. Place gear range lever in first gear (1) position.
14. Release brake pedal.
15. Gradually depress accelerator pedal to place vehicle in motion.
16. Post a ground guide with a flashlight for personnel/equipment safety reasons.
NOTE: DO NOT move the vehicle if your ground guide moves out of sight, as injury or death could occur.
17. Drive vehicles at a slow speed due to limited visibility.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Turned electrical system master switch to the ON position.	—	—
2. Checked to ensure parking brake was engaged.	—	—
3. Checked transmission directional lever to ensure it was in the NEUTRAL position.	—	—
4. Started the Engine.	—	—
5. Turned light switch to the blackout drive position.	—	—
6. Checked visually to ensure all blackout lights were on.	—	—
7. Applied and held the brake pedal.	—	—
8. Accelerated the engine by partially depressing the accelerator pedal.	—	—
9. Pulled forklift control lever back and raised forks to travel height.	—	—
10. Released the accelerator pedal.	—	—
11. Disengaged the parking brake.	—	—
12. Placed transmission directional lever in desired position (forward/reverse).	—	—
13. Placed gear range lever in first gear (1) position.	—	—
14. Released brake pedal.	—	—
15. Gradually depressed accelerator pedal to place vehicle in motion.	—	—
16. Posted a ground guide with a flashlight for personnel/equipment safety reasons	—	—
17. Drove vehicles at a slow speed due to limited visibility.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 10-3930-643-10

Related

**Operate the 10,000-lb Rough Terrain Forklift (M10A)
551-88H-1531**

Conditions: Assigned as a cargo specialist, required to operate a 10,000-pound rough terrain forklift (RTFL) in an operational environment, given a safety briefing, a completed risk assessment, 10,000-pound RTFL (M10A), and TM 10-3930-643-10.

Standards: Operated 10,000-pound RTFL in accordance with TM 10-3930-643-10.

Performance Steps

1. Start the 10,000-pound RTFL (M10A).

WARNING: To prevent accidental movement of the forklift, apply parking/emergency brake movement and place transmission directional lever in neutral.

- a. Perform before preventive maintenance checks and services (PMCS) prior to vehicle operation according to TM 10-3930-643-10.
- b. Before entering the cab, Turn the master disconnect switch ON.
- c. Depress the accelerator to the one-half engine speed position for temperatures above +50 degrees Fahrenheit (F) or to the full speed position for temperatures below +50 degrees F.
- d. Turn the starting switch to the start position, and release it the instant the engine starts.

CAUTION: After 30 seconds of cranking and the engine does not start, allow two minutes for the starter motor to cool.

- e. After the engine is started, check to ensure the engine fan is on.
- f. Reduce engine speed and keep the engine at low idle, until the systems are warm.

NOTE: Do not move the vehicle until the air pressure warning buzzer has stopped and the pressure gauge reads in the green range.

- g. Perform an after operation PMCS according to TM 10-3930-643-10.

2. Start the 10,000-pound RTFL (M10A) during extreme cold weather.

WARNING: Excessive use of ether will cause piston and ring damage. Use it sparingly and only for starting purposes in temperatures below freezing.

- a. Turn the starting switch to the run position.
- b. Depress accelerator to full speed position.
- c. Move ether injector switch to ON position, and hold two to three seconds, filling ether valve chamber with a measured amount of ether.
- d. Turn starting switch to the start position.
- e. After starting, perform an after operations PMCS according to TM 10-3930-643-10.

3. Put 10,000-pound RTFL in motion.

- a. Before moving the forklift, ensure that the seat belt is fastened.
- b. Ensure personnel are clear of the boom and forks.
- c. Ensure that the transmission directional lever lock is moved to the unlock position in order to shift the transmission to the transmission directional lever.
- d. Check to see if the air pressure gauge is in the green position.
- e. Depress the brake pedal.
- f. Release the parking/emergency brake.
- g. Accelerate the engine partially to raise the forks enough to clear the ground.
- h. Place the transmission direction lever in the desired position.
- i. Place the gear range lever in the first gear position.
- j. Release service brakes.
- k. Press the accelerator pedal and proceed.

Performance Steps

4. Handle palletized loads with RTFL (M10A).

NOTE: (1) Lift control lever. First lever to the right of the operator's seat. It has three control positions: Raise, hold, and lower.

(2) Tilt control lever. Second lever to the right of the operator's seat. It has three control positions: Tilt back, hold, and tilt forward.

- a. Approach the load squarely with the lift forks at the correct height and speed.
- b. Use the mode selector switch to position the forks.
- c. Moves forward until the forks are completely under the load.
- d. Neutralize the transmission by shifting the transmission gear to neutral (N).
- e. Accelerate the engine about 1,500 rpm or not more than half the throttle.
- f. Pull the lift control lever back until the desired height is reached.
- g. Push the control lever forward to lower the load.
- h. Tilt the load by moving the second lever: (1) Tilt back = Pull the lever back until the upward tilt angle is reached. (2) Tilt forward = Push the lever forward until the desired downward tilt angle is reached. NOTE: This forklift has the OSCILLATE left or right feature by placing the mode selector switch to center position.
- i. Pull back the fork lift control lever to retract the load to carrying position and proceed.

5. Stop and shut down the 10,000-pound RTFL (M10A).

- a. Move the forklift to a safe, level location.
- b. Lower the forks to the ground.
- c. Move the lock over the transmission direction lever.

CAUTION: Stopping the engine immediately after the forklift has been under a load could result in overheating and accelerated wear. To prevent this from happening, park the forklift and operate the engine at low idle for five minutes.

- d. Turn the starting switch to the OFF position.
- e. Turn the master disconnect switch to OFF.
- f. Perform after-operations PMCS.

NOTE: Before leaving the forklift: (a) Lock the ignition and master disconnect switch and remove keys. (b) Close and lock the cab door and windows. (c) Before any long extended shutdown period, ensure that the fuel tank is filled to prevent condensation.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Started the RTFL (M10A).	—	—
2. Started the 10,000-pound RTFL (M10A) during extreme cold weather.	—	—
3. Put the RTFL (M10A) in motion.	—	—
4. Handled palletized loads with RTFL (M10A).	—	—
5. Stopped and shut down the RTFL (M10A).	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 10-3930-643-10

Related

Subject Area 7: 10,000 Lbs - All Terrain Lifter Army System (ATLAS)

Operate ATLAS Rough Terrain Forklift Without a Load
551-88H-1537

Conditions: Assigned as a cargo specialist/operator in an operational environment, given a completed risk assessment, safety clothing, and hearing protection, an All Terrain Lifter Army System (ATLAS) rough terrain forklift (RTFL), TM 10-3930-673-10, and FM 21-305.

Standards: Operated the ATLAS clean burn diesel 10,000-lb capacity model skytrak without a load in accordance with TM 10-3930-673-10.

Performance Steps

1. Start the engine (see Figure 3-50).

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. Ensure transmission travel lever is in NEUTRAL position.
- d. Ensure that the steering wheel is unlocked and allow the cable to slowly retract.
- e. Depress accelerator pedal to 1/2 speed.
- f. Turn ignition switch to the ON position and slowly turn the switch the to the start position.
- g. Release the start switch when engine starts and decrease engine speed to idle, allowing warming of engine oil and hydraulic fluid.

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.

- h. Check all instrumentation gages for normal readings and lack of warning indicators.

CAUTION: If any warning indicators are lit or instrumentation gages have incorrect reading, stop engine immediately and investigate cause.

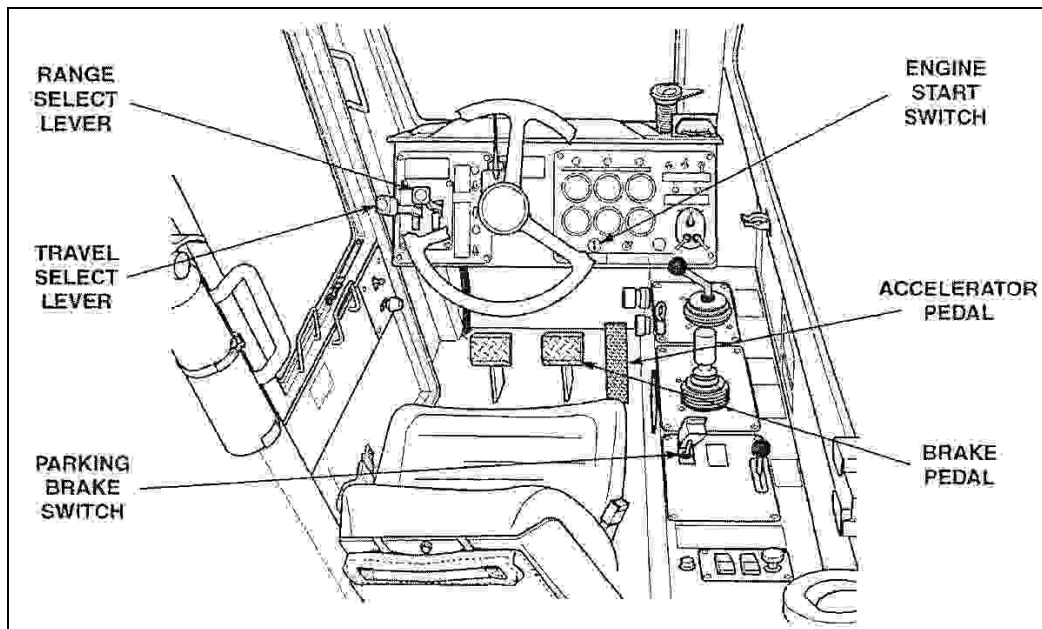


Figure 3-50. Starting Engine

Performance Steps

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.
 - c. Place the travel and range select lever to the desired direction and gear ratio combination.

WARNING: Do not travel with the Automatic Fork level switch in the ON position. This could cause a load to be dropped.

- d. Ensure that the emergency steer 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.
 - g. Release service brake and slowly depress accelerator for forward travel in desired direction.

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.

3. Steer the forklift.
 - a. Select desired steering mode:
 - (1) 4 wheel steer. Move the steer select control switch to the right position.
 - (2) 2 wheel steer. Move the steer select control switch to the center position.
 - (3) Crab steer. Move the steer select control switch to the left 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.

- b. Follow Steering System Synchronization procedures.
4. Stop the forklift.
 - a. Release the accelerator pedal.
 - b. Depress service brake and inching pedal to apply brakes.
 - c. Bring RTF to a complete stop.
 - d. Move travel and range select lever to NEUTRAL position.
 - e. Move PARK BRAKE switch to ON position.
 - f. Move the hydraulic joystick left to retract the boom and extend the cylinder (see Figure 3-51).
 - 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 checks.
 - e. Lock the steering wheel with the steering wheel locking cable and lock.

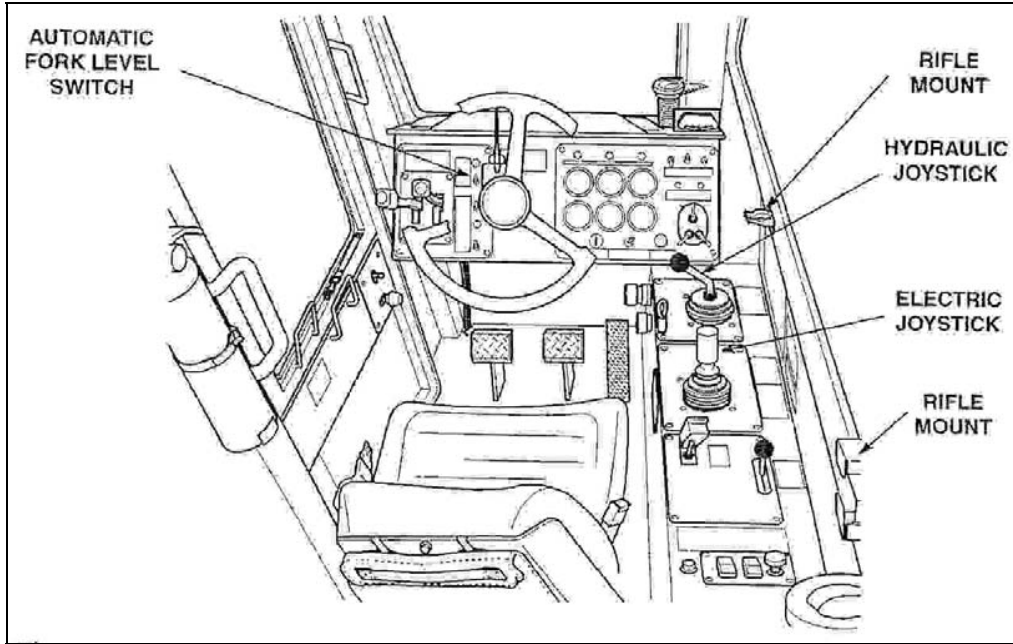


Figure 3-51. Moving Hydraulic Joystick

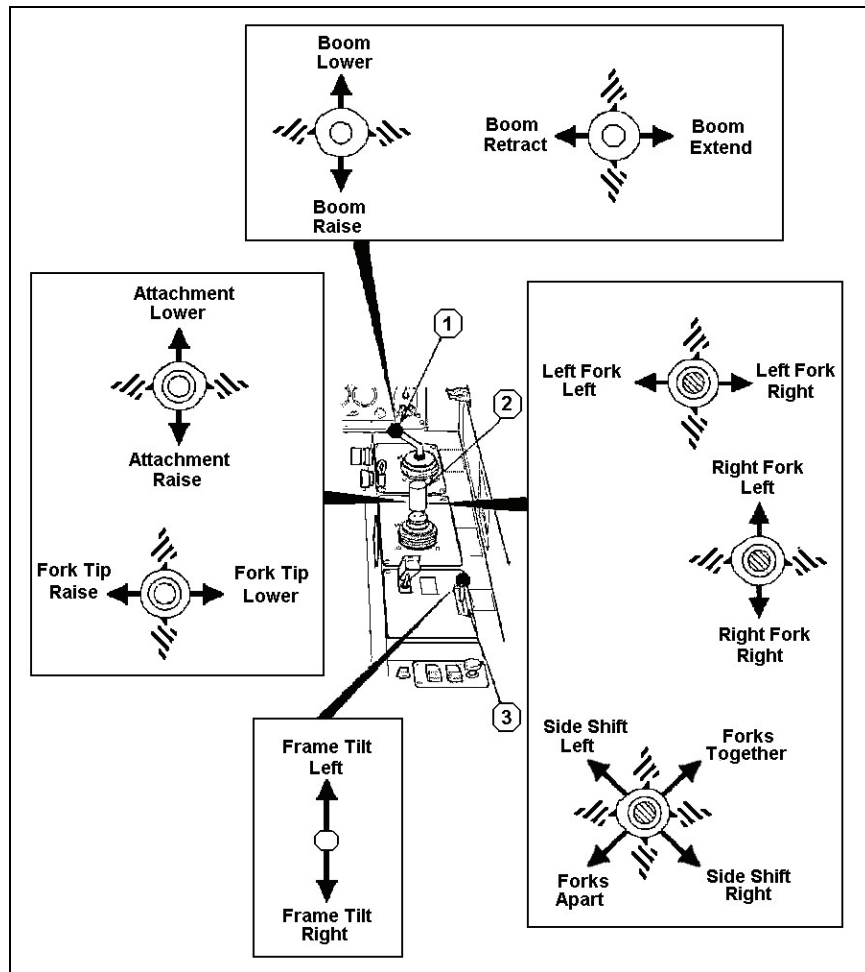


Figure 3-51. Moving Hydraulic Joystick (continued)

Performance Measures

1. Started the engine.
2. Moved the forklift truck.
3. Steered the forklift.
4. Stopped the forklift.
5. Stopped the engine.

<u>GO</u>	<u>NO-GO</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- FM 21-305
- TM 10-3930-673-10

Related

Operate ATLAS Rough Terrain Forklift With a Load 551-88H-1538

Conditions: Assigned as a cargo specialist/operator in an operational environment, given a completed risk assessment, safety clothing, hearing protection, an All Terrain Lifter Army System (ATLAS) rough terrain forklift (RTFL), TM 10-3930-673-10, and FM 21-305.

Standards: Operated ATLAS clean burn diesel 10,000-pound capacity model skytrak with a load in accordance with TM 10-3930-673-10 and FM 21-305.

Performance Steps

1. Start the engine (see Figure 3-52).

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 position.

NOTE: On the first start of the day, check the neutral safety switch for proper operation.

- e. Depress the accelerator pedal to 1/2 speed.
- f. Turn ignition switch to the START position.
- g. When the engine starts, operate the engine at idle speed for 30-60 seconds before driving the vehicle. Return the engine speed to idle speed before moving the range select control.

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.

- 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.
- j. Check all instrumentation gages for normal readings and lack of warning indicators.

CAUTION: If any warning indicators are lit or instrumentation gages have incorrect reading, stop engine immediately and investigate cause.

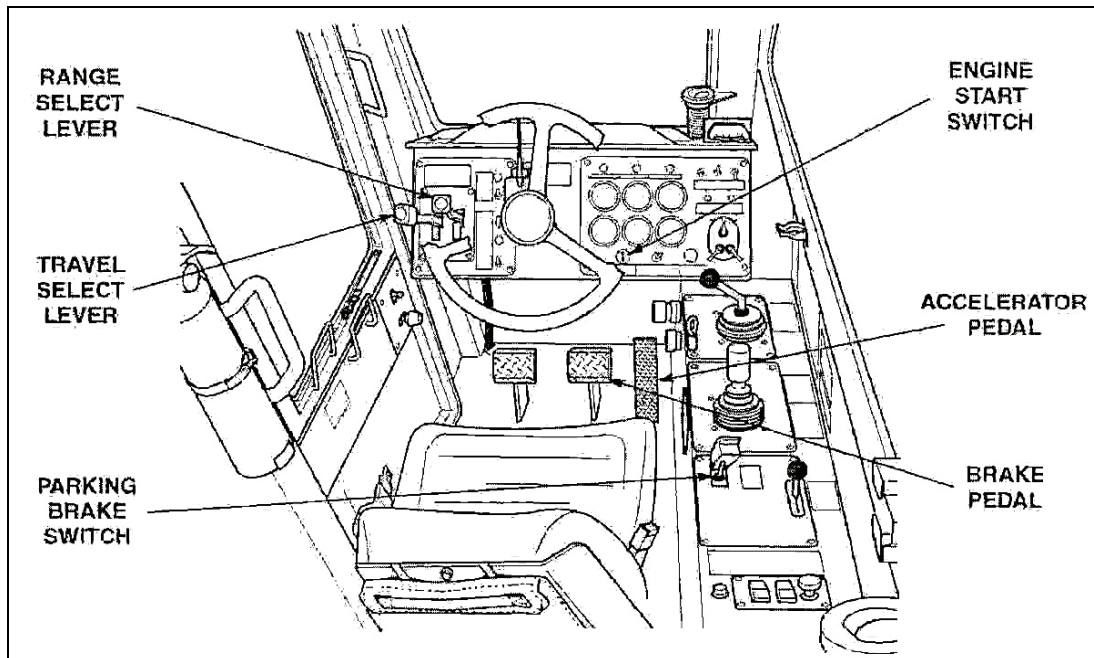


Figure 3-52. Starting the Engine

Performance Steps

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.
 - c. Place the travel and range select lever to the desired direction and gear ratio combination.
 - d. Place the PARK BRAKE switch to OFF to release the parking brake.
 - e. Move the travel select lever to the forward "F" position for forward travel.
 - f. Move the travel select lever to the reverse "R" position for reverse travel.
 - g. Release service brake and slowly depress accelerator for forward travel in desired direction.

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.

3. Steer the forklift.
 - a. Select desired steering mode:
 - (1) 4-wheel steer. Move the steer select control switch to the right position.
 - (2) 2-wheel steer. Move the steer select control switch to the center position.
 - (3) Crab steer. Move the steer select control switch to the left 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.

- b. Follow Steering System Synchronization procedures.

4. Operate forklift with a load (see Figure 3-53).

- a. Move vehicle to the pallet.

WARNING: Do not lift more than one pallet with forks. Pallets may topple and result in load or vehicle damage, or injury or death to personnel.

- 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.
- d. Use the hydraulic joystick to raise the boom and lift the pallet slowly.

WARNING: Always retract the boom before lowering or transporting a load. Failure to do so could cause vehicle instability and result in injury or death to personnel.

- e. Use the hydraulic joystick to retract the boom and then lower the pallet to a travel position (approximately two feet above ground level).

WARNING: Do not travel with the automatic fork level switch in the ON position. It is possible to drop a load which could cause load damage, or injury or death to personnel.

- 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 above for continued operation.

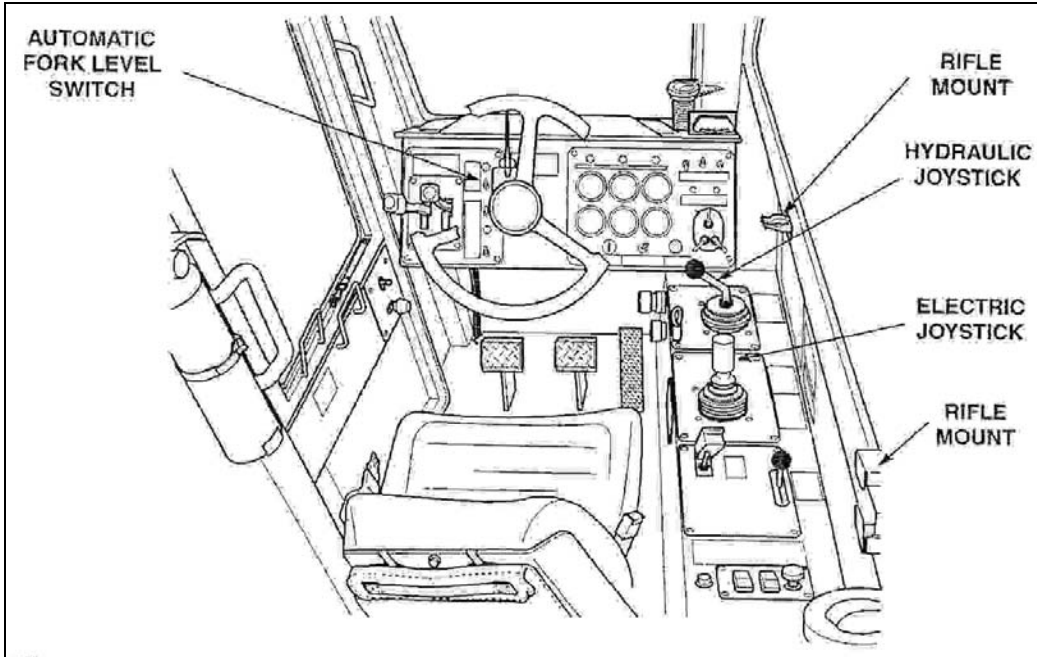


Figure 3-53. Operating Forklift

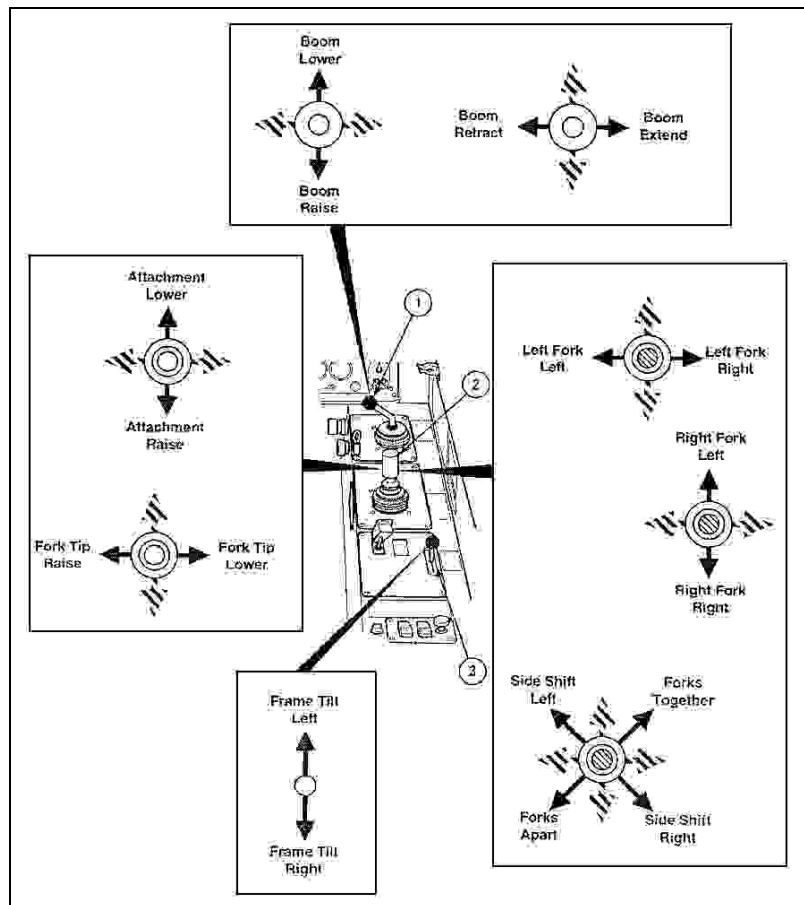


Figure 3-53. Operating Forklift (continued)

Performance Steps

5. Stop the forklift.
 - a. Release the accelerator pedal.
 - b. Depress service brake and inching pedal to apply brakes.
 - c. Bring RTF to a complete stop.
 - d. Move travel and range select lever to NEUTRAL 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. Perform after-operations PMCS.
 - e. Lock the steering wheel with the steering wheel locking cable and lock.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- | | |
|--|-----------------------|
| <p>Required
 FM 21-305
 TM 10-3930-673-10</p> | <p>Related</p> |
|--|-----------------------|

Subject Area 8: 40-Ton Rough Terrain Container Crane Operations

**Perform Emergency Boom Operating Procedures on the Rough Terrain Container Crane (RTCC)
551-88H-1424**

Conditions: Assigned as a Rough Terrain Container Crane (RTCC) operator in an operational environment, given a completed risk assessment, safety briefing, an RTCC with a simulated lift cylinder hydraulic equalizer line failure, a signal person, slings, four tag lines, four tag line holders, a load to control, safety clothing, and TM 5-3810-306-10.

Standards: Lowered load to the ground and lowered boom to the lowest position in accordance with TM 5-3810-306-10.

Performance Steps

1. Maintain operator position. All functions can be accomplished from this position.

NOTE: Operator must have read ALL safety warnings and precautions listed in the operator's technical manual.

NOTE: The signal person will ensure that there are no obstructions and provide signals throughout the entire task to ensure a safe operation.

CAUTION: Operator must watch the signal person and/or the load while it is moving. If the operator cannot see the signal person, stop the operation immediately.

NOTE: Soldiers will wear safety boots, hard hat, hearing protection and work gloves. The operator and signal person will not wear gloves.

2. Maintain engine at normal operation speed (2,500 revolutions per minute (RPM)).

CAUTION: Operate engine at or near the governed RPM during performance of all crane functions.

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: 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.

NOTE: This 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 5-3810-306-10

Related

**Perform Emergency Load Lowering Procedures on the Rough Terrain Container Crane (RTCC)
551-88H-1425**

Conditions: Assigned as a RTCC operator in an operational environment, given a completed risk assessment, safety briefing, a RTCC, an assistant operator, a signal person, slings, four tag lines, four tag line holders, a load to control, safety clothing, a towing vehicle, a towing cable or chain, all basic issue items (BII), and TM 5-3810-306-10.

Standards: Performed emergency load lowering procedures in accordance with TM 5-3810-306-10.

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: Operator must have read ALL safety warnings and precautions listed in the operator's technical manual. Soldiers will wear safety boots, hard hat, hearing protection and work gloves. The operator and signal person 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 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.

Performance Steps

- 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.
- e. Remove breather/fill cap on hydraulic tank by turning it one quarter turn counterclockwise.

CAUTION: When inserting bleed-down hose in the hydraulic reservoir, use care to avoid damaging the inlet strainer.

- f. Place cut off end of bleed-down hose into the hydraulic reservoir opening.
- g. Close 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: 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. 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.
- f. Connect pull chain or cable to counterweight sling lug.

CAUTION: Do not pull on boom. Applying a side load to boom could cause non-repairable damage.

- 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.

Performance Steps

- 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 3-54).
- 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.

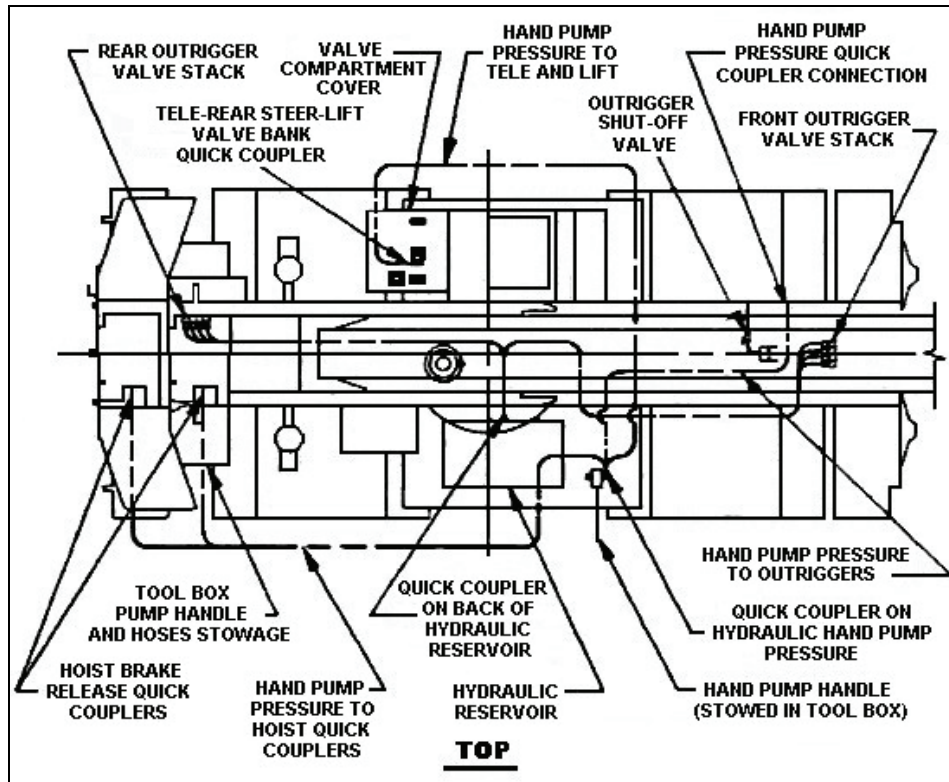


Figure 3-54. Disconnecting Hoist Brake Release Quick Coupler

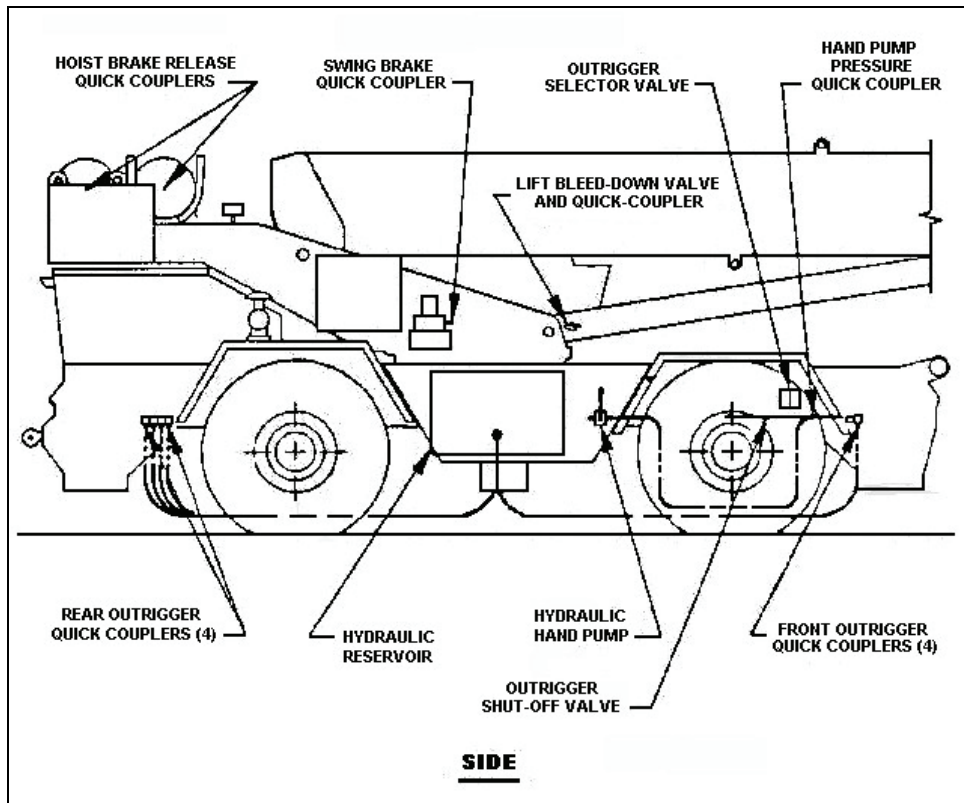


Figure 3-54. Disconnecting Hoist Brake Release Quick Coupler (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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.	—	—
7. Retracted outriggers.	—	—
8. Replaced all equipment back into toolbox.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 5-3810-306-10

Related

Perform Rough Terrain Container Crane (RTCC) Operations

551-88H-1602

Conditions: Assigned as a RTCC operator in an operational environment, given a completed risk assessment, safety briefing, safety gear, 40-ton RTCC, FM 55-17, and TM 5-3810-306-10.

Standards: Performed 40-ton RTCC operations in accordance with FM 55-17 and TM 5-3810-306-10.

Performance Steps

1. Start the RTCC.
 - 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. 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).
 - (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).

2. Program Load Moment 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. Using 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 RTCC 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Started the RTCC.	—	—
2. Programmed LMI for normal operation.	—	—
3. Used LMI operation screen.	—	—
4. Performed RTCC main functions.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

FM 55-17
TM 5-3810-306-10

Related

Drive Rough Terrain Container Crane (RTCC) Without a Load
551-88H-1606

Conditions: Assigned as a RTCC operator in an operation environment, given a completed risk assessment, safety briefing, safety gear, 40-ton RTCC, FM 55-17, and TM 5-3810-306-10.

Standards: Drove a 40-ton RTCC to a designated operation site in accordance with FM 55-17 and TM 55-3810-306-10.

Performance Steps

1. Ensure that the 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.
- b. Swing the boom over the front.

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.

2. Ensure that the swing lock control handle is engaged (handle is pushed down).
3. Ensure that the swing brake control selector is engaged (selector pushed).
4. Ensure that the transmission is placed in NEUTRAL (N).

5. Start the crane engine.

CAUTION: If the engine does not start within 30 seconds, allow the starter to cool for one or two minutes and repeat procedure.

6. Ensure that the crane's engine is warmed up.

CAUTION: (1) Keep lights on when traveling. (2) Under normal operating conditions, operate the crane at 2,500 revolutions per minute (RPM).

7. Sound the horn to warn nearby personnel that crane is being placed in motion and check all clearances around crane.
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 pounds per square inch (psi)).

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 stand still.

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.

Performance Steps

- 13. Shift to the third gear position and accelerate to desired travel speed.
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.
- 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 "R" (reverse).
- 15. Perform shutdown procedures.
 - a. Stop the crane with the service brakes.
 - b. Move the transmission shift lever to "N" (neutral).
 - c. Set parking brakes.
 - d. If parked on a hill, chock the wheels.
 - e. Perform after-operations preventive maintenance checks and services (PMCS).

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Ensured that the crane was in traveling mode.	___	___
2. Ensured that the swing lock control handle was engaged (handle was pushed down).	___	___
3. Ensured that the swing brake control selector was engaged (selector pushed).	___	___
4. Ensured that the transmission was placed in NEUTRAL (N).	___	___
5. Started the crane engine.	___	___
6. Ensured that the crane's engine was warmed up.	___	___
7. Sounded the horn to warn nearby personnel that crane was being placed in motion and checked all clearances around crane.	___	___
8. Positioned the drive axle selector switch to either two-wheel drive high (2WD HI) or four-wheel drive low (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 NEUTRAL (N) to FORWARD (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 shutdown procedures.	___	___

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 55-17

TM 5-3810-306-10

Related

Subject Area 9: 50,000 Lbs - Rough Terrain Container Handler Operations

Operate Rough Terrain Container Handler Without a Load (DV-43)**551-88H-1534**

Conditions: Assigned as a cargo specialist in an operation environment, given a safety briefing, a completed risk assessment, 50,000-pound rough terrain container handler (RTCH) with a tophandler attached, and TM 10-3930-641-10.

Standards: Operated rough terrain container handler without a load in accordance with TM 10-3930-641-10.

Performance Steps

1. Prepare to operate machine.
 - a. While in NEUTRAL, accelerate throttle and operate mast and carriage controls to check for proper operation and then reduce speed.
 - b. Lower tophandler to lowest traveling position.
 - c. Press and hold the right brake pedal down.
 - d. Release the parking brake.
 - e. Move Transmission Directional Lever to desired direction of travel (either forward or reverse).

NOTE: A warning buzzer will sound if the parking brake is engaged while the vehicle is in gear.

- f. Rotate the Transmission Range Selector to first gear.
- g. Check for approaching vehicle, equipment, or personnel.
- h. Release the right brake pedal.
- i. Accelerate gradually.

2. Shift gears.
 - a. Reduce accelerator speed.
 - b. Twist transmission lever to desired gear (first, second, third, fourth).
 - c. Apply accelerator when finish selecting the gear.
 - d. Repeat as necessary to shift into higher or lower gear.

3. Steer the RTCH along course toward destination.
 - a. Prepare to turn by observing all obstacles as well as other personnel or vehicles.
 - b. Reduce speed if necessary.
 - c. Start turning steering wheel in the desired direction.

NOTE: The RTCH responds differently on turn compared to other types of vehicles because of its size and ability to articulate (turn in the frame center).

- d. Adjust the direction of the RTCH by rotating the steering wheel so that the RTCH moves toward the specific objective.

4. Stop the RTCH.
 - a. Remove foot from the accelerator pedal.
 - b. Apply the right brake pedal and bring the vehicle to a halt.
 - c. Place the transmission in NEUTRAL.
 - d. Apply parking brake.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Prepared to operate machine.	—	—
2. Shifted gears.	—	—
3. Steered the RTCH along course toward destination.	—	—
4. Stopped the RTCH.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 10-3930-641-10

Related

Operate Rough Terrain Container With a Load (DV-43)**551-88H-1535**

Conditions: Assigned as a cargo specialist in an operational environment, given safety briefing, a completed risk assessment, 50,000-pound rough terrain container handler (RTCH) with 20-foot or 40-foot tophandler, ground guide, container, and TM 10-3930-641-10.

Standards: Operated RTCC with a load in accordance with TM 10-3930-641-10.

Performance Steps

1. Make connection to/from container tophandler to RTCH.
 - a. Approach the tophandler slowly with the RTCH, and ensure that the forks are lined up directly with the opening in the tophandler.
 - b. Raise forks so that they are level with, and directly in front of, the opening.
 - c. Insert forks into tophandler opening.
 - d. Shut down the engine temporarily.
 - (1) Put directional control lever in neutral.
 - (2) Set parking brake.
 - (3) Turn ignition to the OFF position.
 - (4) Remove the key from the ignition.
 - (5) Release all hydraulic pressure from line by operating the mast controls.
 - e. Attach both safety chains from the RTCH forks to the tophandler.
 - f. Insert power cable into electrical connector.
 - (1) Align plug so that the slot on the plug will be at the top.
 - (2) Insert plug into fitting.
 - g. Insert hydraulic lines into hydraulic connector.
 - (1) Remove the protective cap from the hydraulic connector receptacles and lines.
 - (2) Insert male end into female connector and release O-ring to lock the male end into female end.
 - h. Restart engine.
 - i. Check the hydraulic container lock lever to determine if lock is operational.
 - (1) Pull lift lever.
 - (2) Ensure the tophandler does not snag; if on racks, lifts it clear.
 - (3) Ensure hydraulic twist locks are in the unlocked position if the tophandler is on a container.
2. Lift container using RTCH
 - a. Position the front of the RTCH pointed at the container's side and centered (broadside).
 - (1) Drive slowly straight toward the middle of the container's broadside.
 - (2) Raise tophandler to a position higher than the top of the container while approaching the container.
 - (3) Stop the machine when the four twist locks are over the four-corner fitting of the container.
 - b. Position the tophandler locks directly over the corner fitting.
 - c. Lower tophandler so that the four twist locks are inserted into the four-corner fittings of the container.
 - (1) Push lift lever forward until tophandler is seated on top of the container.
 - (2) Check the container lock indicator panel to ensure the two yellow READY TO LOCK lights are on and the red UNLOCK light is on.
 - d. Pull container lock lever to lock tophandler onto container.
 - e. Lift container.
 - (1) Pull the lift lever until the container is at least 12 inches above its original position.
 - (2) Release the lift lever.

Performance Steps

- f. Pull the tilt lever to tilt the container back toward the machine.
- g. Back the machine slowly away from the pick up point and deliver the container to the desired destination.
- h. Push the tilt and lift levers until the container is flat on the ground.

3. Drive the RTCH with a container attached.

- a. Raise the container to travel height and carrying position.
- b. Move RTCC into motion.
 - (1) Apply service brake.
 - (2) Release parking brake.
 - (3) Place transmission lever in first gear.
 - (4) Check for approaching vehicles, equipment, and personnel.
 - (5) Release service brake pedal.
 - (6) Depress accelerator pedal.

NOTE: Follow directions of the ground guide when moving with container.

- c. Shift gears.
- d. Stop the RTCH.
 - (1) Take foot off accelerator.
 - (2) Apply brake pedal.
 - (3) Place transmission in NEUTRAL position.
 - (4) Apply the parking brake.
 - (5) Lower the load to the ground.

4. Off-load a container with the RTCH.

- a. Position the container about 18 inches above the designated drop-off location.
- b. Lower the container onto the designated drop-off point.
 - (1) Push lift lever to lower the container.
 - (2) Make adjustments using other controls to ensure the container lands on all four corners at the same time.
- c. Unlock the twist locks on the tophandler by pushing the container lock lever forward.
- d. Pull the lift lever to raise the tophandler at least 12 inches above the container.
- e. Back the RTCH away from the container.
 - (1) Pull the gear selector into reverse.
 - (2) Release the service brake.
 - (3) Look to the left and right rear, sound the horn twice, and back up slowly.

5. Disconnect the tophandler from the RTCH.

- a. Lower the container tophandler onto its support (rack or another container).
 - (1) Push the lift lever until the tophandler is resting on the rack or container.
 - (2) Ensure twist locks are inserted into the corner fitting if the container is used as support.
- b. Shut down engine temporarily.
 - (1) Put the directional control lever in neutral.
 - (2) Set parking brake.
 - (3) Remove key from ignition.
 - (4) Release all hydraulic pressure from the lines by operating the mast controls.
- c. Remove hydraulic lines from both hydraulic connector fittings.
 - (1) Slide spring-loaded quick-disconnect, O-ring down.
 - (2) Remove end of hydraulic lines, place protective caps over ends, and place them in the carriage trough.
- d. Disconnect the power cable from the electrical connector.
 - (1) Pull the spring-loaded cap of connector until the cap is separated from the electrical plug.
 - (2) Pull the electrical plug from the connector.
 - (3) Release the spring-loaded cap of connector.
- e. Remove the safety chains and shackles from tophandler (chain and shackles stay with the vehicle).

Performance Steps

- f. Restart engine.
- g. Remove forks from tophandler openings.
 - (1) Place foot on the right brake.
 - (2) Release the parking brake.
 - (3) Place the transmission selector in reverse.
 - (4) Look out to the left and right rear and sounds the horn twice.
 - (5) Release foot from the right brake pedal and accelerates slowly.
 - (6) Back the machine in a straight line until forks have cleared the tophandler openings.

NOTE: Adjust hydraulic controls, as necessary, to keep forks from being stuck in the tophandler opening.

- (7) Apply brakes and come to a halt.
- h. Perform engine shut down procedure (end of mission).

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Made connection to/from container tophandler to RTCH.	—	—
2. Lifted container using the RTCH.	—	—
3. Drove the RTCH with a container attached.	—	—
4. Off-loaded a container with the RTCH.	—	—
5. Disconnected the tophandler from the RTCH.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
TM 10-3930-641-10	

Subject Area 10: 53,000 Lbs - Rough Terrain Container Handler Operations (KALMAR)

**Perform Preventive Maintenance Checks and Services on Material Handling Equipment
551-88H-1401**

Conditions: Assigned as a material handling equipment operator in an operational environment, given a completed risk assessment, safety briefing; All Terrain Lifter Army System (ATLAS), DV-43 rough terrain container handler (RTCH), or KALMAR RTCH; TM 10-3930-641-10, TM 10-3930-673-10, TM 10-3930-675-10-1, TM 10-3930-675-10-2, DA Pamphlet 750-8, and DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

Standards: Performed preventive maintenance checks and services on material handling equipment in accordance with TM 10-3930-641-10, TM 10-3930-673-10, TM 10-3930-675-10-1, TM 10-3930-675-10-2, and DA Pamphlet 750-8.

Performance Steps

1. Perform a visual preventive maintenance check and services (PMCS) before operations.
 - a. Check for leakage on or under the vehicle (oil, fuel, and coolant).
 - b. Check for loose wiring or damaged lines or hoses.
 - c. Check for loose or damaged parts.

NOTE: Perform weekly as well as before PMCSs if:

- (1) You are the assigned operator but have not operated the equipment since last week.
- (2) You are operating the equipment for the first time.

2. Inspect tires.
 - a. Check visually for low tire pressure.
 - b. Check for cuts, abrasions, missing valve caps, and general condition.
3. Inspect exterior features of the material handling equipment (MHE).
 - a. Check for obvious damage to fenders, mirrors, ladders, engine covers, and guards.
 - b. Check for missing parts or damage on the tophandler, hydraulic cylinder, twist lock, container lock cylinders, forks, carriage, lift chains, and mast cylinders (this applies when inspecting any of the RTCH family).
 - c. Check condition of windshield, cab windows, windshield wipers, and blades.
4. Inspect hydraulic steering.
 - a. Check cylinders and hoses for obvious damage.
 - b. Check for linkage.
 - c. Check for missing or damaged parts.
5. Inspect fuel system.
 - a. Check tank and lines for leaks.
 - b. Check fuel filters, lines, and priming pump for damage and leaks.
 - c. Check fuel tank filter cap and screen for damage and debris.
 - d. Inspect fuel level in the fuel tank.

NOTE: If the fuel level is low, ensure that the fuel tank is filled before operation begins.

6. Inspect upper and lower frame pivots for obvious cracks and check bearings.
7. Inspect engine (not running).

NOTE: Vehicle level, equipment lowered, parking brake set, engine off, POWER switch off, and key removed.

- a. Check oil level. Oil should appear between low and full marks on the ENGINE STOP side of dipstick.
- b. If level is low, refer to organizational maintenance.

Performance Steps

- c. Check all visible oil lines for leaks and damage.
- d. Check alternator and fan belts for frays and cracks.

8. Inspect radiator.

WARNING: Remove cap slowly to release pressure.

- a. Check coolant level.
- b. Refer to organizational maintenance if level is not in sight.

9. Inspect air cleaner for serviceability.

10. Inspect battery.

- a. Check electrolyte level.
- b. Fill to the bottom of filler opening if necessary.

11. Inspect hydraulic tank.

- a. Check level of hydraulic fluid at sight gauge with container.
- b. Level must be above the add cold mark in the sight gauge.
- c. Refer to organizational maintenance if hydraulic fluid level low.

12. Inspect rollover protection (ROP) for serviceability.

13. Inspect operator's cab.

- a. Check general condition of the cab interior.
- b. Check seat belts for wear, damage, or loose mounting.
- c. Check for damaged or illegible data/instruction plates and decals.
- d. Inspect warning lights and gauges for broken lens or malfunction.
- e. Turn POWER switch on and panel test switch to ON to make sure all lights come on.
- f. Test container lock indicator lights.
- g. Check LOW FUEL indicator during operation.
- h. Stop and add fuel when fuel indicator comes on.
- i. Check operation of cab heater and defroster if weather permits.

14. Inspect lighting system.

- a. Check operation of all lights.
- b. Check lenses for damage.

15. Inspect parking brake.

- a. Pull out lever P on console to engage parking brake and parking indicator should come on.
- b. Push lever in to release brake and indicator should go off.

NOTE: Indicator light will come on and horn will sound if brake is on and transmission engaged.

16. Inspect steering column lock.

- a. Hold steering wheel; pull column lock out, and adjust wheel and column to suit your body position.
- b. Release the lock button and steering column should lock in position.

NOTE: Before starting engine, move gear selector to neutral, engage parking brake, and lock steering column.

17. Start engine.

- a. Press down on indicator test light switch. All indicator bulbs should light up. If indicator lights do not come on, check for bad fuses or bulbs. Inspect the following indicator lights:
 - (1) LOW ENG OIL indicator.
 - (2) LOW HYD OIL indicator.
 - (3) NO COOLANT FLOW indicator.
 - (4) IMPLEMENT filter indicator.
 - (5) TRANS filter indicator.
 - (6) AIR filter indicator.

Performance Steps

- (7) PILOT filter indicator.
- (8) HI TEMP HYD OIL indicator.
- (9) LOW PRESS BRAKE indicator.
- (10) SUPPLEMENTAL STEERING indicator.
- b. Slightly depress accelerator pedal and hold.
- c. Turn power (ignition) switch to the START position and release switch and accelerator pedal once the engine starts.

NOTE: If the engine does not start after 30 seconds, STOP, let the starter cool for two minutes, and then try again. If engine repeatedly fails to start, contact organizational maintenance.

- d. Run the engine at idle for 5 minutes. DO NOT engage the hydraulic controls at this time.

NOTE: All indicator lights should be off at this time except for the high fuel and parking brake indicators.

The low pressure brake light will flash until pressure reaches operational level; it will then turn off.

- e. Turn on all lights.

18. Inspect gauges (indicator).

- a. ENGINE OIL PRESS, keep engine at low idle and needle should register in NORMAL or GREEN range within 10 second of engine starting, and if not investigate problem.
- b. FUEL PRESS, needle should register in the GREEN range with engine warm and under slight load, but if needle registers in the RED range, stop engine, refer to organizational maintenance.
- c. WATER TEMP, should register in the GREEN range, but if needle is in the RED range, stop engine and measure transmission oil level.
- d. CONVERTER OIL TEMP, needle should register in the GREEN range, but if needle is in the RED range, stop engine and measure transmission oil level.
- e. VOLTS, should register in GREEN range, but if needle is constantly in CHG or BATT ranges, stop engine and inspect charging system.

19. Inspect transmission.

- a. Check transmission oil level with engine warm and running at low idle, and level should be between LOW and FULL marks on dipstick.
- b. Check transmission oil lines for leaks or damage.
- c. Operate vehicle in a clear area moving the selector lever through all ranges to determine correct function.
- d. Annotate any problems in operation of selector lever.

NOTE: Do not shift from forward to reverse or reverse to forward without stopping.

20. Inspect control levers.

- a. Move LIFT control lever to each position to observe movement.
- b. Move TILT control lever to each position to observe movement.
- c. Move SIDE TILT control lever to each position to observe movement.

21. Inspect brakes (service).

- a. Apply and release brake pedal while engine is running, and if LOW PRESS BRAKE indicator light come on with less than 5 applications, the pressure accumulator requires service.
- b. In a clear area, apply service brake, release parking brake and shift transmission to 2nd gear forward, and slowly increase engine speed to full throttle. Machine must not stop.

22. Perform after operation shutdown procedures.

- a. Refuel the machine and record the amount of fuel added on the proper form.
- b. Park the machine.
- c. Shut down the engine.
 - (1) Shift transmission to NEUTRAL position.
 - (2) Set the parking brake.
 - (3) Lower the mast.
 - (4) Perform engine cool-down (idle 5 minutes at half-speed, then at a low idle for 30 seconds).
 - (5) Turn off the ignition and remove the key.

Performance Steps

NOTE: An emergency engine shutoff is initiated by pulling back on the accelerator pedal in the event the power switch should fail. Afterwards, it is necessary to reset the pedal for start-up by pushing the accelerator pedal to the floor prior to starting procedures.

- d. Lock the steering column.
 - (1) Insert the ignition key into the column release lock.
 - (2) Pull out and hold the column release knob.
 - (3) Push the steering wheel as far forward as possible.
 - (4) Release the steering column control lock.
 - (5) Turn the steering column lock key to the LOCK position.
 - (6) Remove the key.

NOTE: An emergency engine shutoff is initiated by pulling back on the accelerator pedal in the event the power switch should fail. Afterwards, it is necessary to reset the pedal for start-up by pushing the accelerator pedal to the floor prior to starting procedures.

- e. Turn off the main disconnect switch and remove key.
- f. Chock the wheels if parked on a slope.

23. Annotate the DA Form 2404 to report deficiencies.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed a visual preventive maintenance check before operations.	—	—
2. Inspected tires.	—	—
3. Inspected exterior features of the MHE.	—	—
4. Inspected hydraulic steering.	—	—
5. Inspected fuel system.	—	—
6. Inspected upper and lower frame pivot and bearings.	—	—
7. Inspected engine (not running).	—	—
8. Inspected radiator.	—	—
9. Inspected air cleaner.	—	—
10. Inspected battery.	—	—
11. Inspected hydraulic tank.	—	—
12. Inspected rollover protection (ROP) for serviceability.	—	—
13. Inspected operator's cab.	—	—
14. Inspected lighting system.	—	—
15. Inspected parking brake.	—	—
16. Inspected steering column lock.	—	—
17. Started engine.	—	—
18. Inspected gauges (indicator).	—	—
19. Inspected transmission.	—	—
20. Inspected control levers.	—	—
21. Inspected brakes (service).	—	—

Performance Measures

GO NO-GO

22. Performed after operation shutdown procedures.

23. Annotated the DA Form 2404 to report deficiencies.

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

DA FORM 2404

DA PAM 750-8

TM 10-3930-641-10

TM 10-3930-673-10

TM 10-3930-675-10-1

TM 10-3930-675-10-2

Related

Operate Kalmar Rough Terrain Container Handler Without a Load (RT 240)
551-88H-1539

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, RT 240 rough terrain container handler (RTCH) forklift, TM 10-3930-675-10-1, and TM 10-3930-675-10-2.

Standards: Operated a Kalmar RTCH without a load in accordance with TM 10-3930-675-10-1 and TM 10-3930-675-10-2.

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-operations preventive maintenance checks and services (PMCS) (refer to the operator manual WP001200 and WP001300).
 - 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.

2. Start engine.

NOTE: Refer to operator manual, Chapter 2, WP 0004 00 for location and operation of instrument panel indicators and controls.

- 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.

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.

- d. Turn ignition switch to ON position. System warning lights will illuminate briefly, then go out.
- e. If ambient temperature is below 32 degrees Fahrenheit (F) (0 degrees Celsius [C]), press the ether injector switch on the instrument panel.

NOTE: Start the engine with throttle in the IDLE position. It is not necessary to press the throttle to start a computer-controlled engine.

- f. Turn ignition switch to START and allow the engine to start and run at idle speed.
- g. Increase the engine speed (revolutions per minute [RPMs]) 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.

3. Operate RTCH forklift without a load.

- a. Start engine and allow it to reach operating temperature.
- b. Raise tophandler to drive position.

CAUTION: When driving without a load, position the tophandler above your field of view.

- 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, F or 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 drive with a load.

Performance Steps

4. Operate lifting boom and tophandler.

NOTE: 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.
 - (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.
 - (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 3-55).
 - (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 widen tophandler from 20 to 40 feet or to close forklift tines, if forklift kit is installed.
- e. Use twistlock lock/unlock button.
 - (1) Press button to lock twistlocks, securing load.
 - (2) Move control handle forward while pressing multiple function trigger button to lower boom and retract boom.
- f. Use boom control handle.
 - (1) Move control handle forward to lower boom.
 - (2) Move control handle back to raise boom.
 - (3) Move control handle right to extend boom.
 - (4) Move control handle 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. control handle forward while pressing multiple function trigger button to raise and lower boom.

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).
- d. Allow the engine to run for 1/2 to 1 minute.

CAUTION: Never turn the master battery switch to "OFF" when the engine is running. The voltage regulator may become damaged as a result.

- e. Stop the engine by turning the ignition switch to "O" position.
- f. If the forklift will not be used for a longer period, place master battery switch to "OFF".

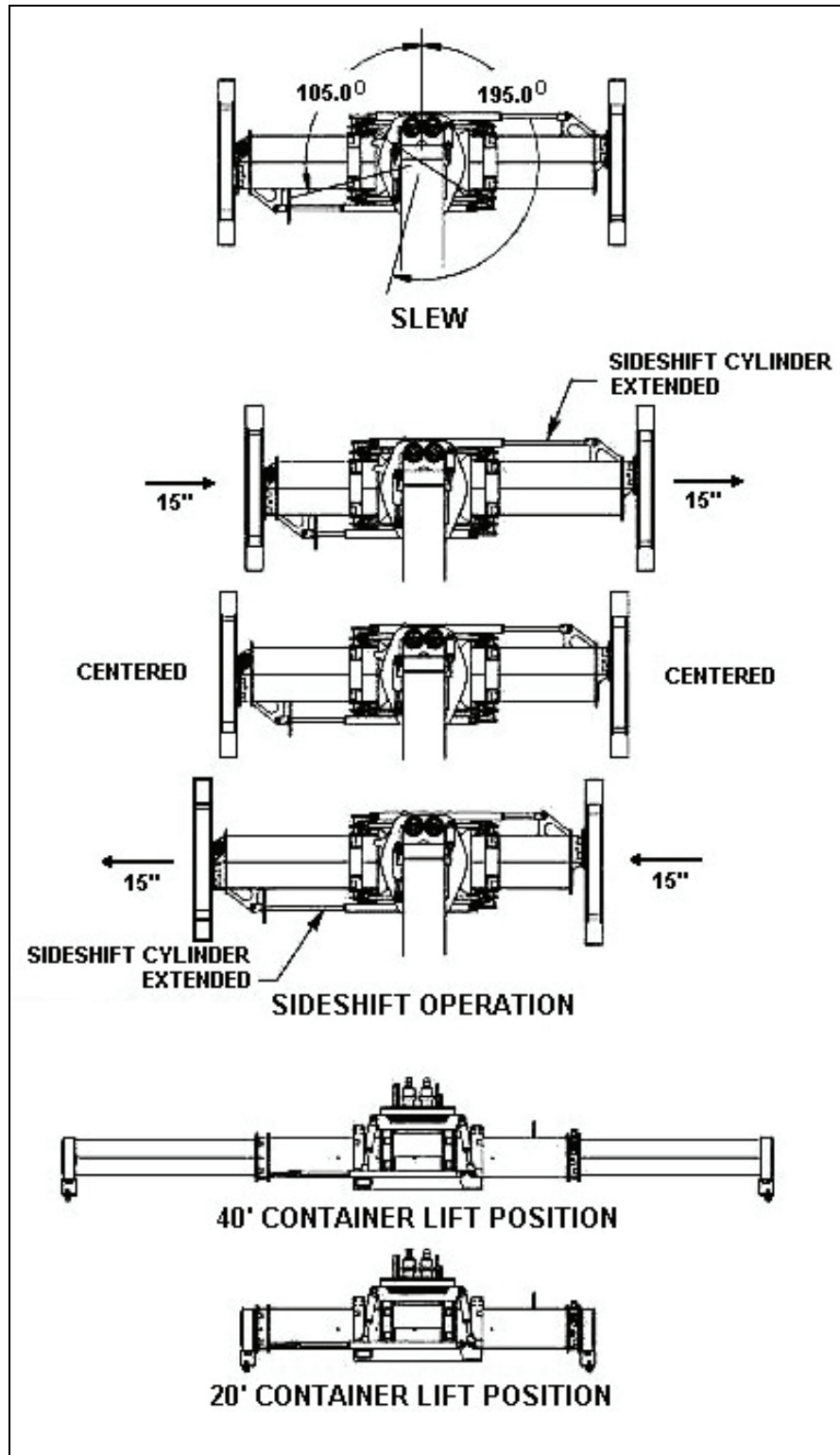


Figure 3-55. Tophandler and Forklift Sides Shift Button

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed initial adjustments, daily checks, and self test on the RTCH	—	—
2. Started engine.	—	—
3. Operated RTCH forklift without a load.	—	—
4. Operated lifting boom and tophandler	—	—
5. Shut down engine.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

TM 10-3930-675-10-1

TM 10-3930-675-10-2

Related

Operate Kalmar Rough Terrain Container Handler With a Load (RT 240)

551-88H-1540

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, RT 240 rough terrain container handler (RTCH) forklift, container, FM 55-17, TM 10-3930-675-10-1, and TM 10-3930-675-10-2.

Standards: Operated Kalmar RTCC with a load in accordance with FM 55-17 TM 10-3930-675-10-1, and TM 10-3930-675-10-2.

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 preventive maintenance checks and services (PMCS) (refer to operator manual WP001200 and WP001300).
 - 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.

2. Operate RTCH forklift with a load.

WARNING: Never operate the RTCH or move the load near a power line or overhead wires. Failure to follow this warning may result in death or injury to personnel or damage to equipment.

- 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 Figure 3-56, Figure 3-57, and Figure 3-58).
- e. Move transmission control lever to desired direction, F or 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.

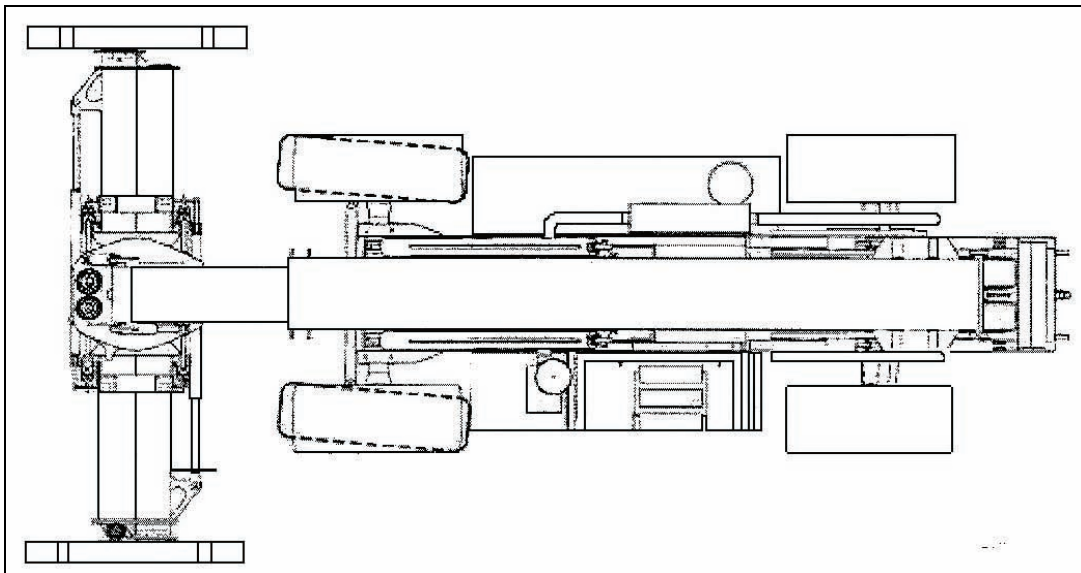


Figure 3-56. Two-Wheel Steering

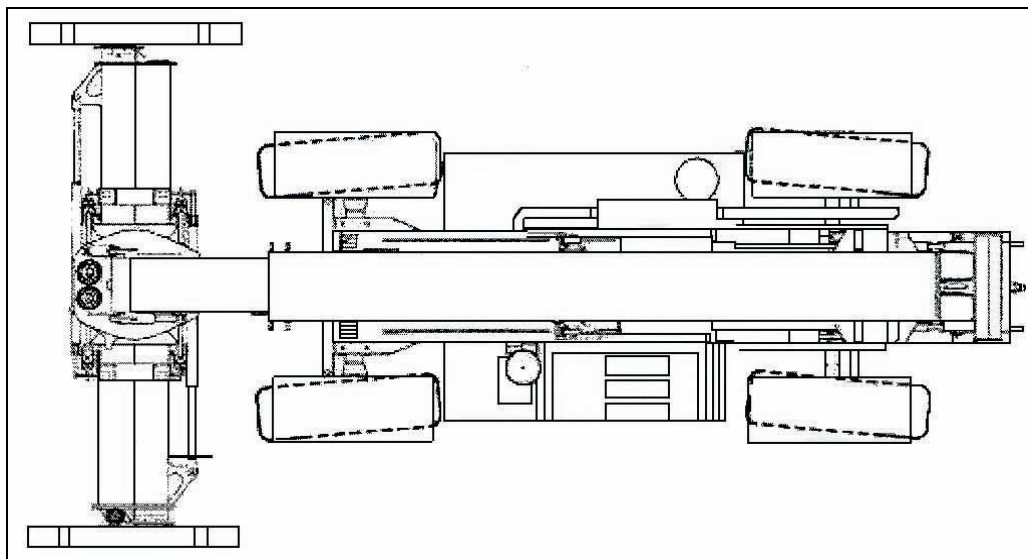


Figure 3-57. Four-Wheel Steering

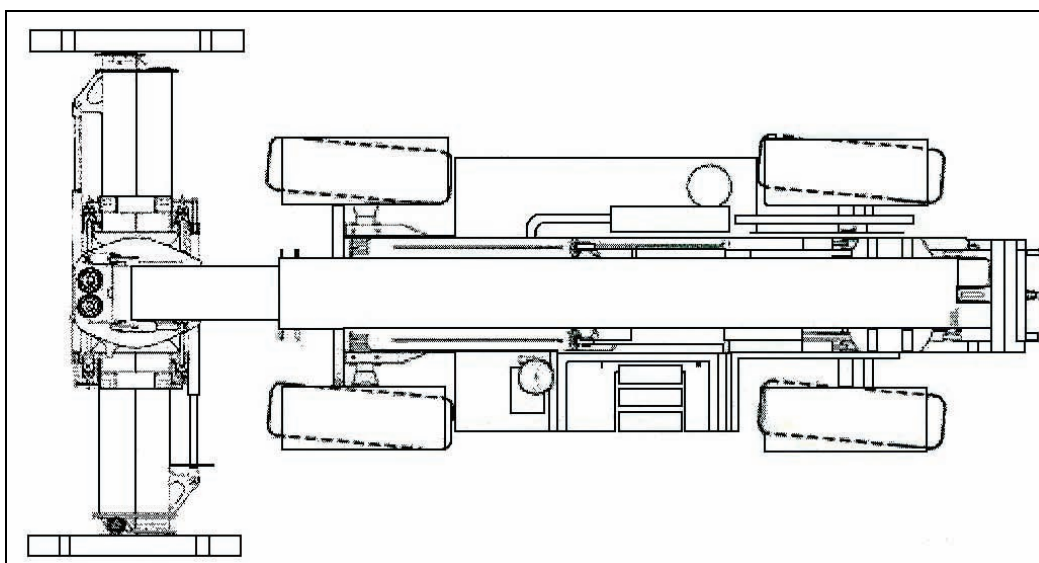


Figure 3-58. Crab Steering

Performance Steps

3. Operate lifting boom and tophandler with a load.

NOTE: During lifting operation, do not exceed the maximum lifting capability.

- a. Adjust the tophandler spreader with (20 to 40 feet) for the container to be lifted (see Figure 3-59).
- b. Position the forklift truck 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 Indicator the twistlocks are engaged in the locking holes of the container.

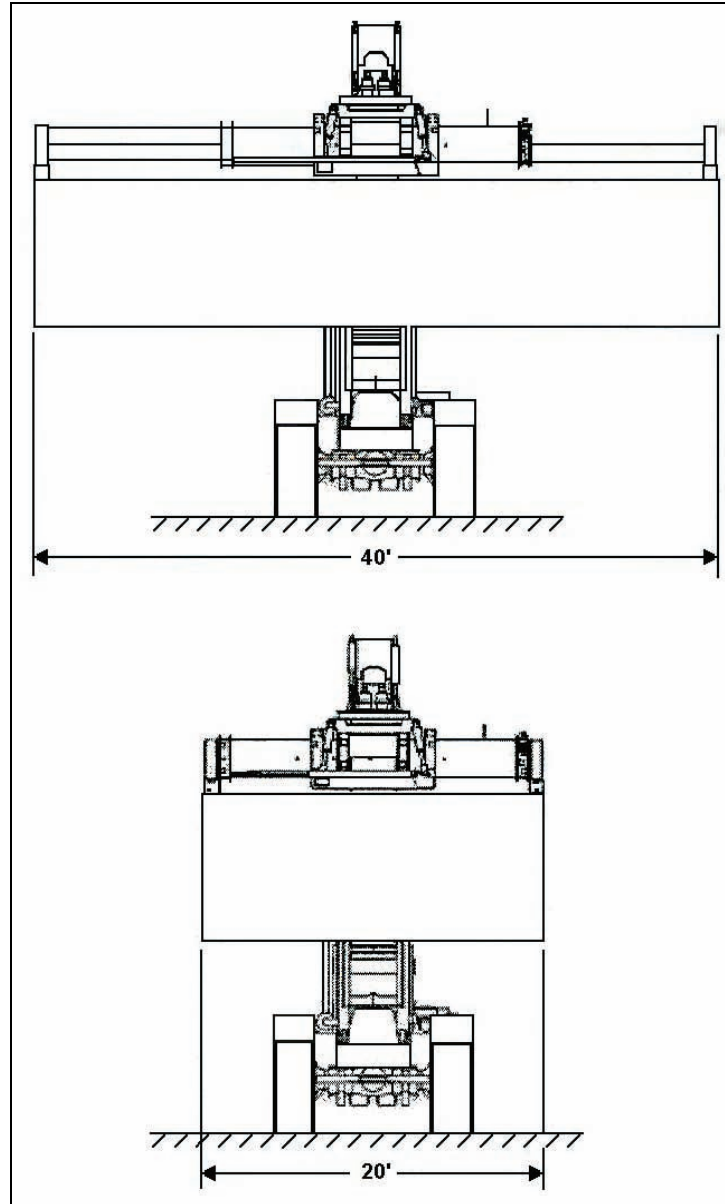


Figure 3-59. Adjusting the Tophandler Spreader

Performance Steps

- e. Lock the twistlocks and check that the GREEN lock indicator light is on.

NOTE:

- o 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 IR lights at the end of the boom also illuminate when operating in blackout mode.
- o 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.
- o 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.

Performance Steps

- g. Engage oscillation and tilt locks before driving with a load over rough terrain (see Figure 3-60).
 - (1) Press to engage lock to secure the load position.
 - (2) Press to release lock to allow the load to float.

4. Shut down engine.

- a. Apply the parking brakes.
- b. Retract and fully lower the boom.
- c. Place the transmission control lever in neutral (N).
- d. Allow the engine to run for $\frac{1}{2}$ to 1 minute.

CAUTION: Never turn the master battery switch to OFF when the engine is running. The voltage regulator may become damaged as a result.

- e. Stop the engine by turning the ignition switch to "O" position.
- f. If the forklift will not be used for a long period, place master battery switch to "OFF."

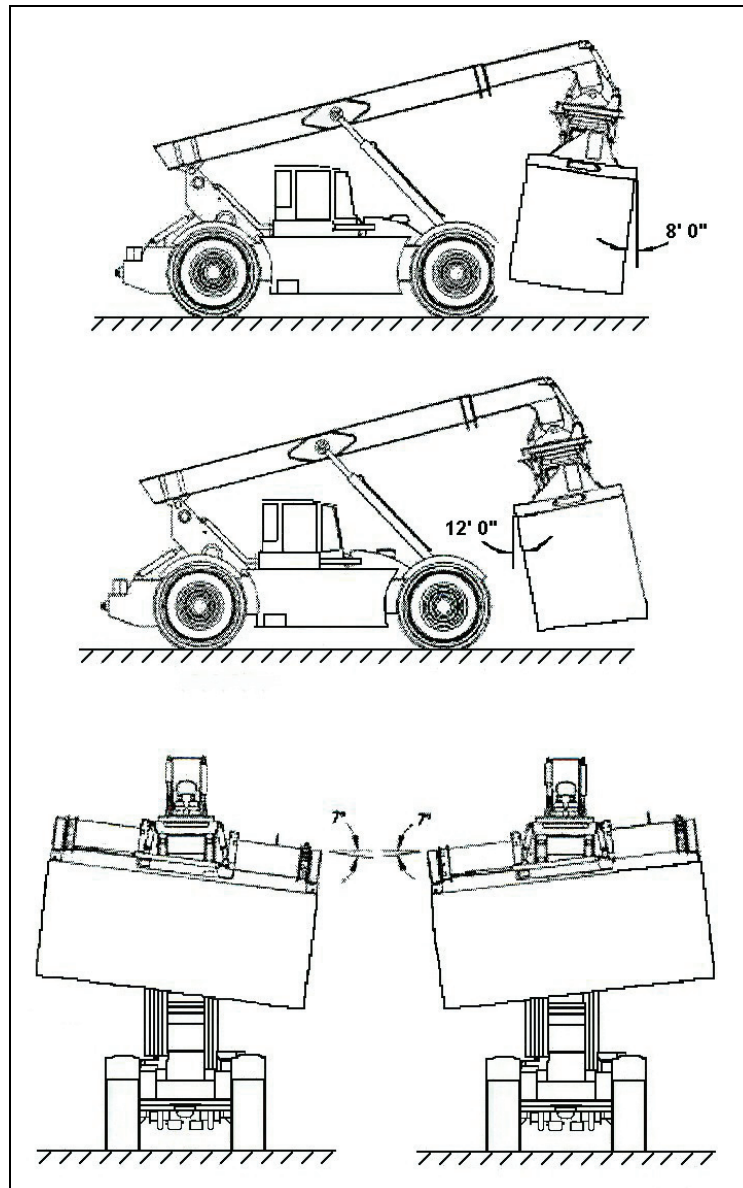


Figure 3-60. Engaging Oscillation and Tilt Locks

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed initial adjustments, daily checks, and self test on the RTCH.	—	—
2. Operated RTCH forklift with a load.	—	—
3. Operated lifting boom and tophandler with a load.	—	—
4. Shut down engine.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

FM 55-17

TM 10-3930-675-10-1

TM 10-3930-675-10-2

Related

Operate Kalmar Rough Terrain Container Handler Under Unusual Conditions (RT 240)
551-88H-1541

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, RT 240 rough terrain container handler (RTCH) forklift, container, TM 10-3930-675-10-1, and TM 10-3930-675-10-2.

Standards: Operated Kalmar RTCC under unusual conditions in accordance with TM 10-3930-675-10-1 and TM 10-3930-675-10-2.

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) (refer to the operator manual WP001200 and WP001300).
 - 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.

2. Operate RTCH forklift in extreme cold.

CAUTION: Touching extremely cold metal surfaces with bare skin or spilling fuel onto skin in extreme cold can cause injury.

- a. Starting the RTCH vehicle.
 - (1) Start vehicle use 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. Parking the RTCH forklift.
 - (1) When parking the vehicle for a short time, park in a sheltered out of the wind and if shelter is not available, park vehicle so the right side where radiator located does not face the wind.
 - (2) Vehicle parked for a long shutdown period should be parked on high ground and use planks or brush 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 organization maintenance remove and store batteries.
 - (5) Fill fuel tank to guard 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.
 - a. Driving 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. Parking 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.

Performance Steps

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.
 - b. Maintain steady pressure on accelerator pedal to keep vehicle rolling until solid ground is reached.
 - c. If vehicle gets stuck, try to pull out slowly in a low gear and place board, brush, or similar materials under tires to provide traction.
 - d. Notify organizational maintenance to clean and inspect propeller shaft for proper lubrication.
5. Operate RTCH forklift in sandy or dusty conditions.
 - a. Maintain steady, even movement with transmission in lower gear and use four wheels as required.
 - b. If vehicle bogs down after the tire pressure has been reduced, place board, brush, canvas, or similar materials under and in front of tires after shoveling a clear path ahead of each tire.
 - c. If all efforts fail to free the vehicle, have another vehicle tow stuck vehicle.
 - d. While operating in sandy or dusty area, you should:
 - (1) Service engine air cleaner and cab air filter more frequently.
 - (2) Make sure each tire has a valve cap.
 - (3) Check engine and transmission temperature and engine oil pressure frequently.
 - (4) If vehicle overheats, stop and find out why.
 - (5) Make sure engine and transmission filler tubes are cleaned before being removed to check fluid levels.
 - (6) Clean spouts of fuel container and areas around filler caps on fuel tanks before adding fuel.
 - (7) Cover window glass to protect against sand blasting.
 - (8) Notify organizational maintenance to clean, inspect, and lubricate propeller shaft more frequently.
6. Operate RTCH forklift on snow and ice.
 - a. Driving 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.
 - b. If a difficult stretch of road approaches, stop and inspect it carefully before driving on it and select transmission gear range that best suits road condition.
 - c. Stopping the RTCH forklift.
 - (1) Ease up on accelerator, leaving vehicle in gear.
 - (2) Apply service brakes lightly and even.
 - (3) Always avoid sudden braking

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

TM 10-3930-675-10-1

TM 10-3930-675-10-2

Related

Subject Area 11: Initial Shipboard Fire Fighting/Damage Control

Perform Fire Fighting Techniques**551-88H-1801**

Conditions: Assigned as a vessel crew member in an operational environment, given a completed risk assessment, 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 back up fire extinguisher, a life jacket, and FM 55-501.

Standards: Performed fire fighting techniques in accordance with FM 55-501.

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.
- d. Remove discharge horn and point toward base of fire.

CAUTION: The horn must be held by the insulated handle due to extremely low temperature of CO2-skin can stick to the horn.

- 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.
- f. If cartridge operated, invert the extinguisher while squeezing the discharge nozzle to release the remaining CO2 from the cartridge.

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.

Performance Steps

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 secures as directed by scene leader.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-501

Related

Subject Area 12: Initial Cargo Operation (Shore and Ship)

Signal Winch Operator Using Standard Hand Signals**551-88H-1422**

Conditions: Assigned as a signalman in an operational environment, given a completed risk assessment and safety briefing, ship's gear, a winch, a winch operator, safety clothing, FM 55-17, and FM 21-60.

Standards: Performed hand signals ensuring the winch operator could clearly see you at all times and there was no damage to cargo, the vessel, or ship's gear and no injury to personnel as a result of your signals in accordance with FM 55-17 and FM 21-60.

Performance Steps

1. Move to the designated location for signaling, clearly visible to the winch operator.
2. Observe rigging for safety hazards.
3. Give the four proper hand signals for a one-winch operation (see Figure 3-61).
4. Give the two proper hand signals for a two-winch operation (see Figure 3-62).

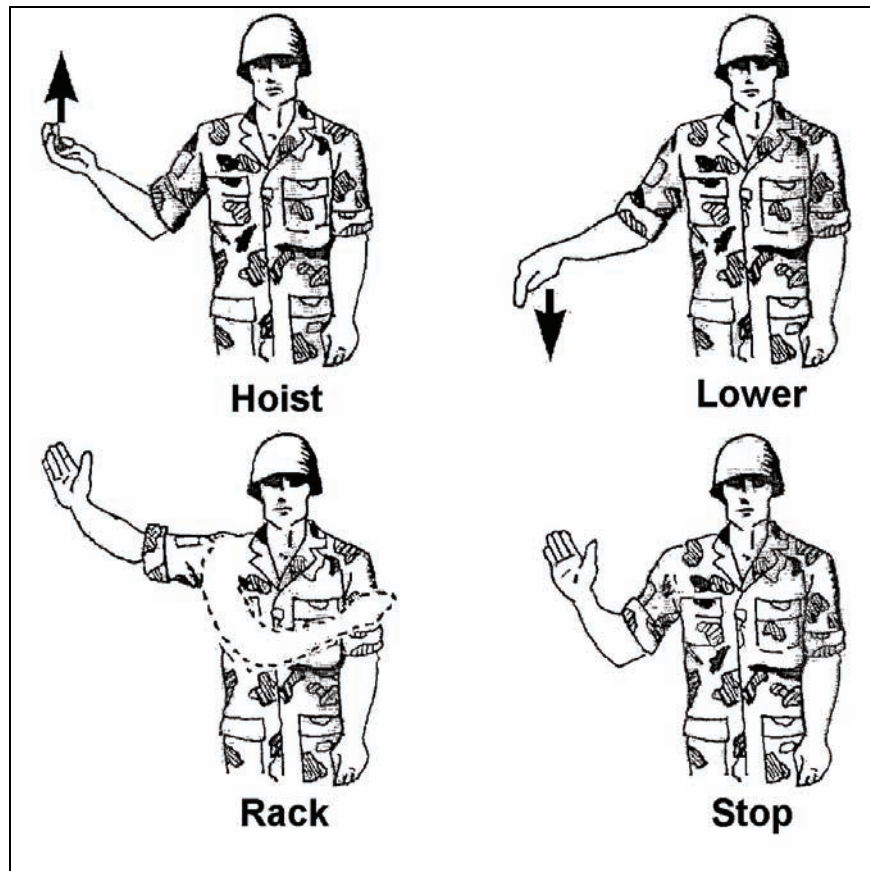


Figure 3-61. Signals for One-Winch Operation

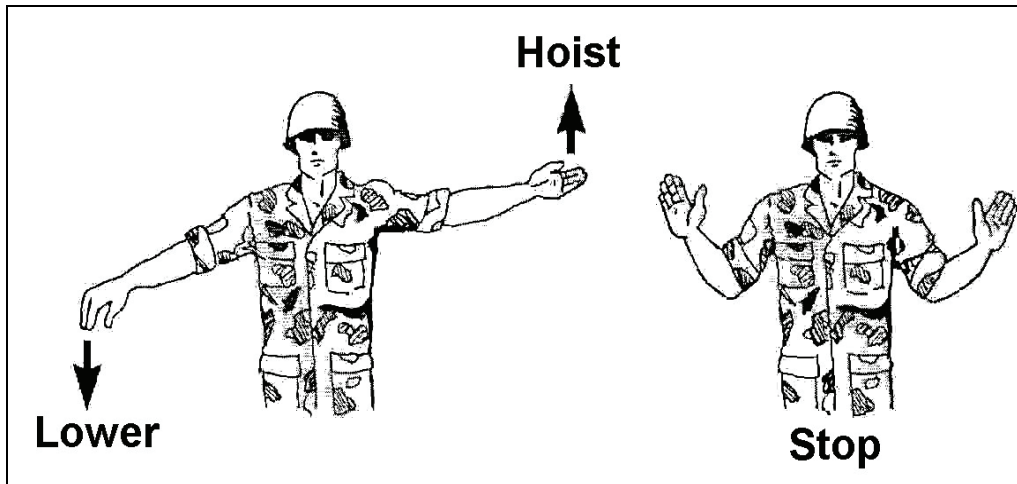


Figure 3-62. Signals for Two-Winch Operation

Performance Measures

1. Moved to a designated location for signaling, clearly visible to the winch operator.
2. Observed rigging for safety hazards.
3. Gave the four proper hand signals for one-winch operation.
4. Gave the two proper hand signals for two-winch operation.

GO NO-GO

_____	_____
_____	_____
_____	_____
_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 21-60
 FM 55-17

Related

**Operate Electric Winches to Load or Discharge Cargo
551-88H-1503**

Conditions: Assigned as a winch operator in an operational environment, given a winch prepared for operation, a completed risk assessment, safety clothing, cargo booms, and FM 55-17.

Standards: Operated electric winches to load or discharge cargo in accordance with FM 55-17.

Performance Steps

1. Ensure the cargo runner is wound correctly on each drum.
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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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. Hoisted the draft.	___	___
7. Racked the draft to position over the hatch or pier.	___	___
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Load Cargo Into Containers 551-88H-1512

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a safety briefing, a completed DD Form 1384 (Transportation Control and Movement Document), a low mast forklift, dunnage, hammer and nails, and safety clothing while under section chief supervision at a terminal, transshipment point, or outport, FM 55-80, and FM 55-17.

Standards: Selected and inspected containers for proper size, clearance, and damages to prepare for loading cargo and record any damages of cargo or containers on DD Form 1384 in accordance with FM 55-80 and FM 55-17.

Performance Steps

1. 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.
 2. Verify shipping documentation and annotate damaged or missing cargo on DD Form 1384.
 3. Clean interior portion of the container and inspect for damage.
 4. Load cargo into container.
 - a. Use a low-mast forklift.
 - b. Package contents to the appropriate level (not over packaged).
 - c. Unitizes cargo when feasible.
 - d. Load only compatible cargo in any one container.
 5. Install blocking and bracing (as required).
 6. 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 3-63).
- NOTE: DO NOT include classified and sensitive material on the packing list.
7. Ensure that container seals are installed and annotated on the DD Form 1384.

SPECIAL HANDLING DATA/CERTIFICATION		
1. ITEM NOMENCLATURE MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	2. NET QUANTITY PER PACKAGE 12 gallons	3. TRANSPORTATION CONTROL NO. 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		
9. ADDRESS OF SHIPPER Charleston AFB, South Carolina	10. TYPED NAME, SIGNATURE AND DATE SFC J. J. Bond, 23 June 2007 <i>J. J. Bond</i>	
<p>DD FORM 1387-2, NOV 2004</p> <p style="text-align: center;">PREVIOUS EDITION IS OBSOLETE.</p> <p style="text-align: right;"><small>Form Approved/OMB No. 0704-0188 Adobe Professional 7.0</small></p>		

Figure 3-63. DD Form 1387-2

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Checked the cargo load plan.	—	—
2. Verified shipping documentation and annotated damaged or missing cargo on DD Form 1384.	—	—
3. Cleaned interior portion of the container and inspected for damage.	—	—
4. Loaded cargo into container.	—	—
5. Installed blocking and bracing (as required).	—	—
6. Closed container door.	—	—
7. Ensured that container seals were installed and annotated on the DD Form 1384.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 DD FORM 1384
 DD FORM 1387-2
 FM 55-17
 FM 55-80

Related

Subject Area 13: Initial Cargo Operations (Rail)

Load Vehicles on Flatcar**551-88H-1302**

Conditions: Assigned as a cargo handler in an operational environment, given a completed risk assessment, vehicles, flatcar, tools, spanners, restraining materials, means of communication, TM 55-2200-001-12, and FM 55-17.

Standards: Loaded vehicles on a flatcar in accordance with TM 55-2200-001-12.

Performance Steps

1. Drive vehicles to ramp.

NOTE: Before loading vehicles on railcars ground guides must be positioned, one per railcar and one on either side of the railcar.

2. Load all vehicles from the rearmost car and move them forward to the assigned position (see Figure 3-64).

NOTE: Follow the ground guide's direction on the ramp and on each railcar.

NOTE: Personnel will not walk backwards on rail cars.

3. Put spanners securely in place to bridge the distance between flatcars (see Figure 3-64).

4. Follow the ground guide's direction on the ramp and on each railcar.

NOTE: Personnel will not walk backwards on railcars.

5. Set handbrake on wheeled vehicles (wire and block levers).

NOTE: Handbrake will not be set on tracked vehicles, but levers will be wired or locked in the disengage position.

6. Disconnect trailer if directed.

NOTE: If trailer is disconnected, lower landing legs on semitrailers and lower support wheels on small trailers.

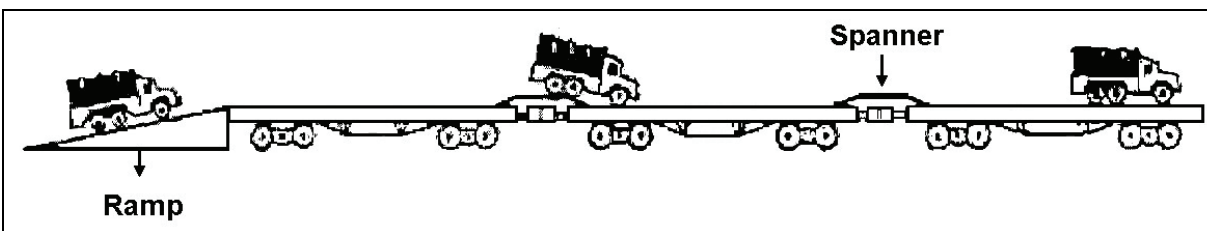


Figure 3-64. Circus Method Loading Vehicles

Performance Steps

7. Apply securing materials to vehicles.

NOTE: Lashings are not tightened completely until all blocks and chocks are nailed in place (see Figure 3-65 and Figure 3-66).

8. Report activities to supervisor.

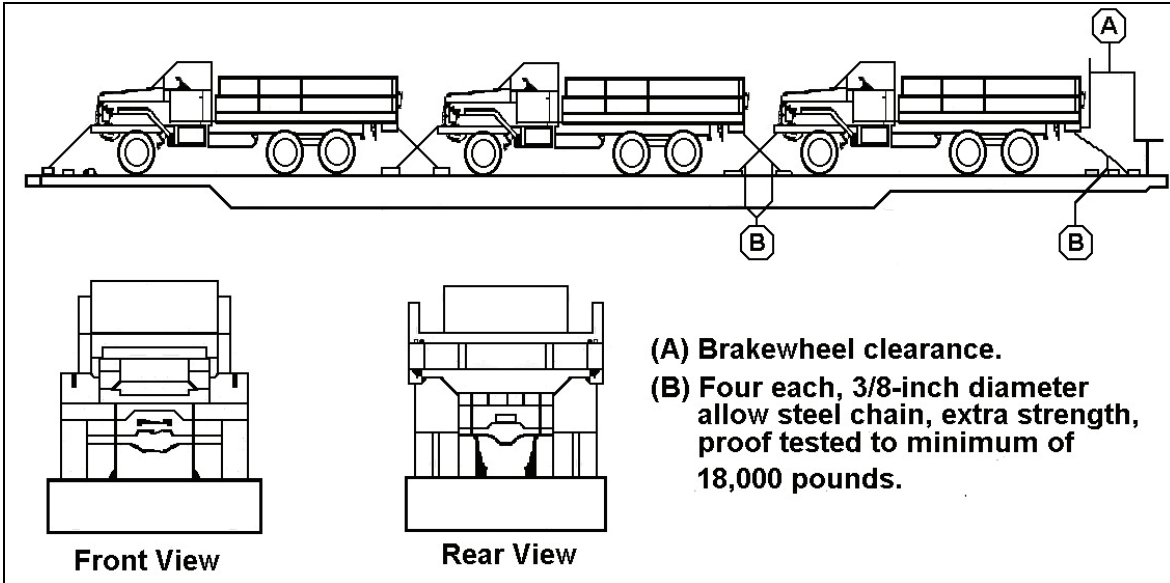


Figure 3-65. Chain Securement of Three-Axle Vehicles

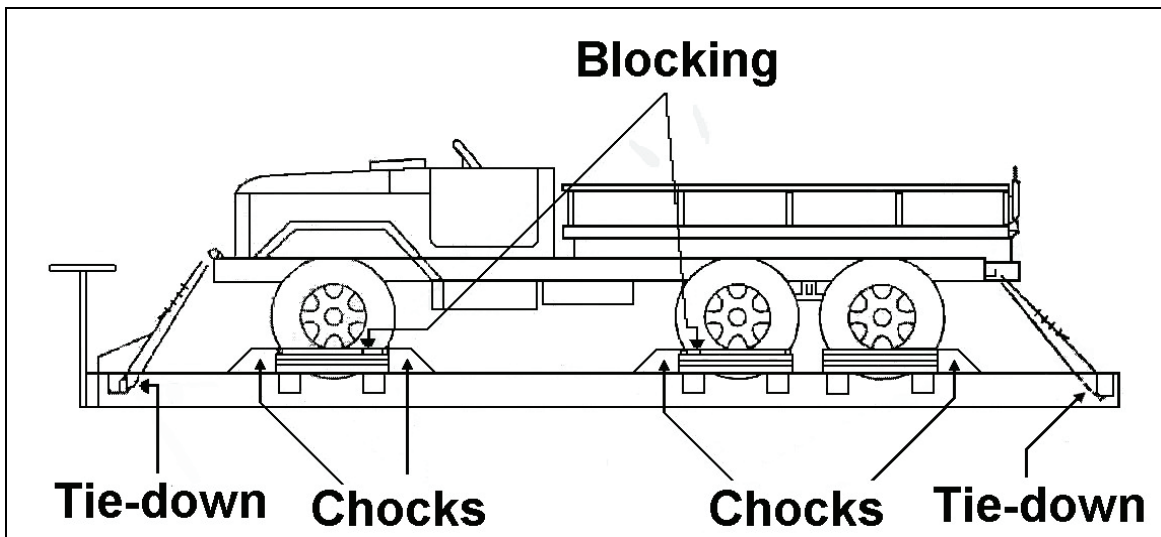


Figure 3-66. Blocking and Bracing of Three-Axle Vehicles

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Drove vehicles to ramp.	—	—
2. Loaded all vehicles from the rearmost car and moved them forward to the assigned position.	—	—
3. Put spanners securely in place to bridge the distance between flatcars.	—	—
4. Followed the ground guide's direction on the ramp and on each railcar.	—	—
5. Set handbrake on wheeled vehicles (wire and block levers).	—	—
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 55-17
 TM 55-2200-001-12

Related

**Mark Dangerous Cargo for Rail Transport
551-88H-1305**

Conditions: Assigned as a cargo handler in an operational environment, given a completed risk assessment, hazardous packages, marking tools and equipment, FM 55-17, AAR Tariff No. Bureau of Explosives (BOE)-6000, and Code of Federal Regulations (CFR) 49, Parts 171 thru 180.

Standards: Marked dangerous cargo for rail transport in accordance with FM 55-17, AAR Tariff No. BOE-6000, and CFR 49, Parts 171 thru 180.

Performance Steps

1. Mark 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Marked 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
AAR TARIFF NO. BOE-6000	
CFR 49	
FM 55-17	

Subject Area 14: Initial Cargo Operation (Ship)
Stow Wheeled and Tracked Vehicles Aboard Cargo Vessel
551-88H-1417

Conditions: Assigned as a cargo specialist in an operational environment, given a safety briefing, ship's gear, a heavy lift cargo set, a cooping and shoring cargo set, dunnage, tag lines, lashing equipment, wheeled and tracked vehicles, safety clothing, a copy of the prestowage plan, and FM 55-17.

Standards: Performed stowage operations on wheeled and tracked vehicles according to prestowage plan with vehicles blocked, braced, and lashed into position to prevent movement and damage to vehicles or cargo vessel in accordance with FM 55-17.

Performance Steps

1. Stow wheeled vehicle(s) aboard a cargo vessel (see Figure 3-67).
 - 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. Stow vehicle(s) in a fore-and-aft direction and set vehicle handbrake, unless the foreman specifies an athwartship direction.
 - d. Block both sides, the fronts, 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 3-68).

NOTE: Lashing materials used will depend on the vehicles weight.

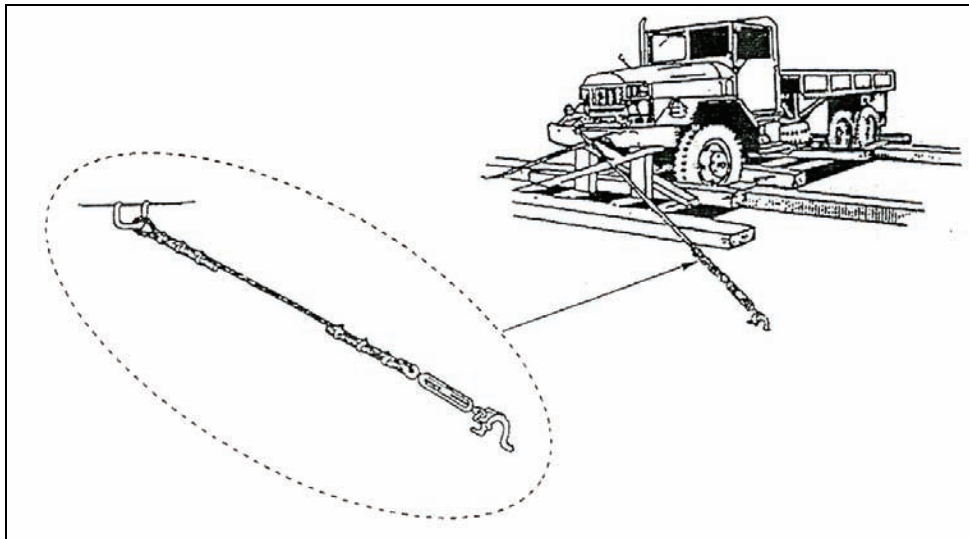


Figure 3-67. Stowing Wheeled Vehicle

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 3-68. Lashing Equipment

Performance Steps

2. Stow tracked vehicles aboard a cargo vessel (see Figure 3-69).
 - a. Lay 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 its stow location. If vehicle(s) is inoperable, use a dragline.
 - d. Stow 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 (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.

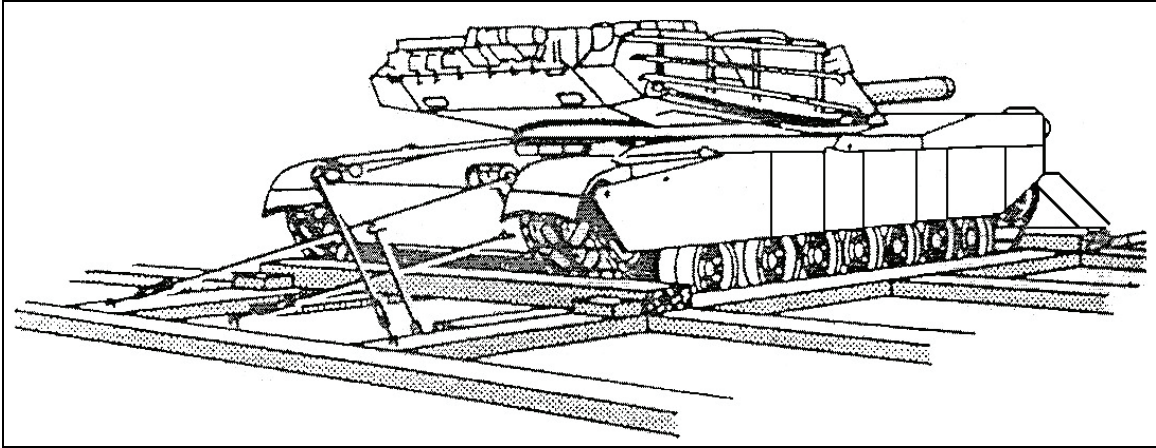


Figure 3-69. Stowing Tracked Vehicle

Performance Measures**GO** **NO-GO**

1. Stowed wheeled vehicles aboard a cargo vessel.
2. Stowed tracked vehicles aboard a cargo vessel.

—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Stow General Cargo for Protection in Transit
551-88H-1513

Conditions: Assigned as a hatch gang member aboard an Fast Sealift Ship/Large Medium Speed Roll-on/Roll-off (FSS/LMSR) in an operational environment, given a completed risk assessment, a safety briefing, ship's gear, prestowage plan, low-mast forklift, an operator, dunnage, coopering and shoring set, cargo, FM 55-17, TEA Pamphlet 700-4, TEA Pamphlet 700-6, and TEA Pamphlet 700-7.

Standards: Stowed general cargo for protection in transit, using dunnage to prevent movement of cargo and to protect the cargo and vessel from damage, in accordance with FM 55-17, TEA Pamphlet 700-4, TEA Pamphlet 700-6, and TEA Pamphlet 700-7.

Performance Steps

1. Stow cargo so that the vessel will not be damaged.
2. Stow cargo so that the strongest structures of an item will bear the greatest pressures and weight of that item.
3. Make the best use of filler cargo.
4. Use dunnage to construct false decks to permit additional stowage.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
5. Use dunnage to chalk off and secure containers.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
6. Place a layer of dunnage stowed over cargo when it is necessary to walk over the top of or land drafts on it.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
7. Position dunnage to provide air circulation.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
8. Position dunnage to separate cargo.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
9. Position dunnage to distribute weight.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
10. Position dunnage to prevent shifting of cargo and chafing of cargo/vessel.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
11. Position dunnage to protect cargo from water or liquids that may seep into the holds.
NOTE: Ensure dry wood dunnage is free of contamination harmful to cargo.
12. Position the bottom layer of dunnage in the hold in the direction of the drains.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Stowed cargo so that the vessel would not be damaged.	—	—
2. Stowed cargo so that the strongest structures of an item would bear the greatest pressures and weight of that item.	—	—
3. Made the best use of filler cargo.	—	—
4. Used dunnage to construct false decks to permit additional stowage.	—	—
5. Used dunnage to chalk off and secure containers.	—	—
6. Placed a layer of dunnage stowed over cargo when it was necessary to walk over the top of or land drafts on it.	—	—
7. Positioned dunnage to provide air circulation.	—	—
8. Positioned dunnage to separate cargo.	—	—
9. Positioned dunnage to distribute weight.	—	—
10. Positioned dunnage to prevent shifting of cargo and chafing of cargo/vessel.	—	—
11. Positioned dunnage to protect cargo from water or liquids that may seep into the holds.	—	—
12. Positioned the bottom layer of dunnage in the hold in the direction of the drains.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 55-17
TEA PAM 700-4
TEA PAM 700-6
TEA PAM 700-7

Related

Perform Vehicle Guide Duties During RO/RO Operations

551-88H-1524

Conditions: Assigned as a hatch gang member in an operational environment, given a completed risk assessment, a safety briefing, hearing protection, Roll-on/Roll-off (RO/RO) vessel, vehicles with operators, and FM 55-17.

Standards: Performed vehicle guide duties with no damage to vehicles, vessel, or injury to personnel, in accordance with FM 55-17.

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.

NOTE: Ensure that each ground guide or traffic control person is trained in using vehicle traffic hand and arm signals.

2. While performing vehicle guide duties, ensure you stay clear of space between moving vehicles and other 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 guide may be required when backing vehicles.
 - b. 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.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 are 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 is 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 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Stow Wheeled and Tracked Vehicles on RO/RO Deck
551-88H-1525

Conditions: Assigned as a crew member in an operational environment, given a completed risk assessment, safety briefing, Roll-On/Roll-Off (RO/RO) ship, wheeled vehicles, tracked vehicles, safety gear, prestowage plan, cooping and shoring cargo set, and FM 55-17.

Standards: Stowed wheeled and tracked vehicles on RO/RO deck to prevent movement and damage to the equipment or vessel in accordance with FM 55-17.

Performance Steps

1. Stow wheeled vehicles on RO/RO deck (see Figure 3-70).
 - a. Place each vehicle with the engine facing forward whenever possible.
 - b. Lash each vehicle with at least four lashings.

NOTE: The Vessel Master may require additional lashings (see Figure 3-71). 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.

NOTE: 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.

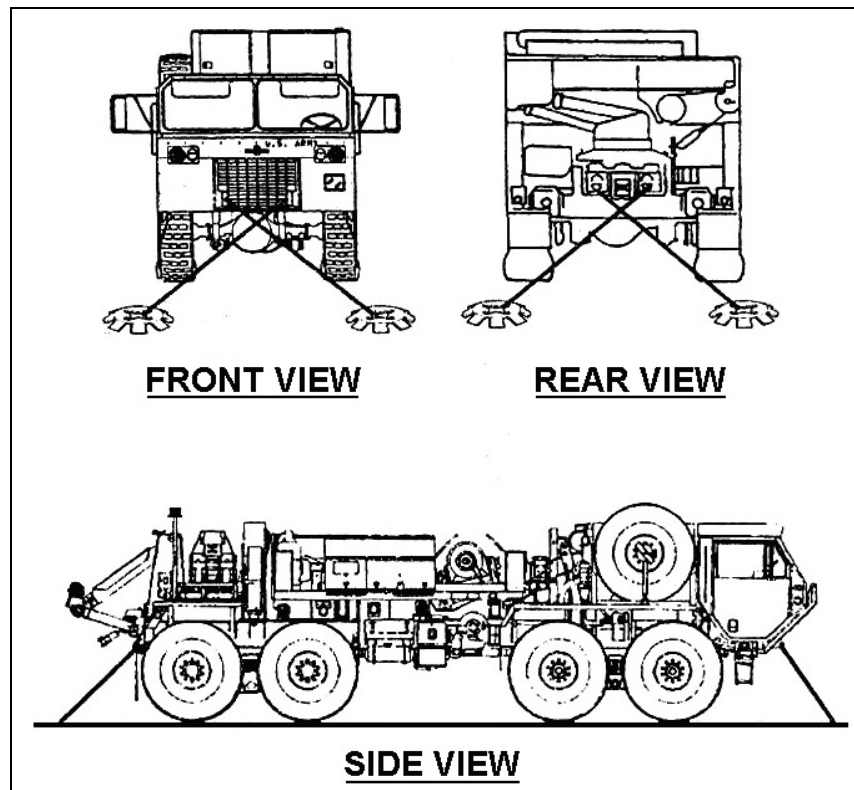


Figure 3-70. Stowing Wheeled Vehicles

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 3-71. Lashings

Performance Steps

2. Stow tracked vehicles on RO/RO deck (see Figure 3-72).
 - 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 athwart ship 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).

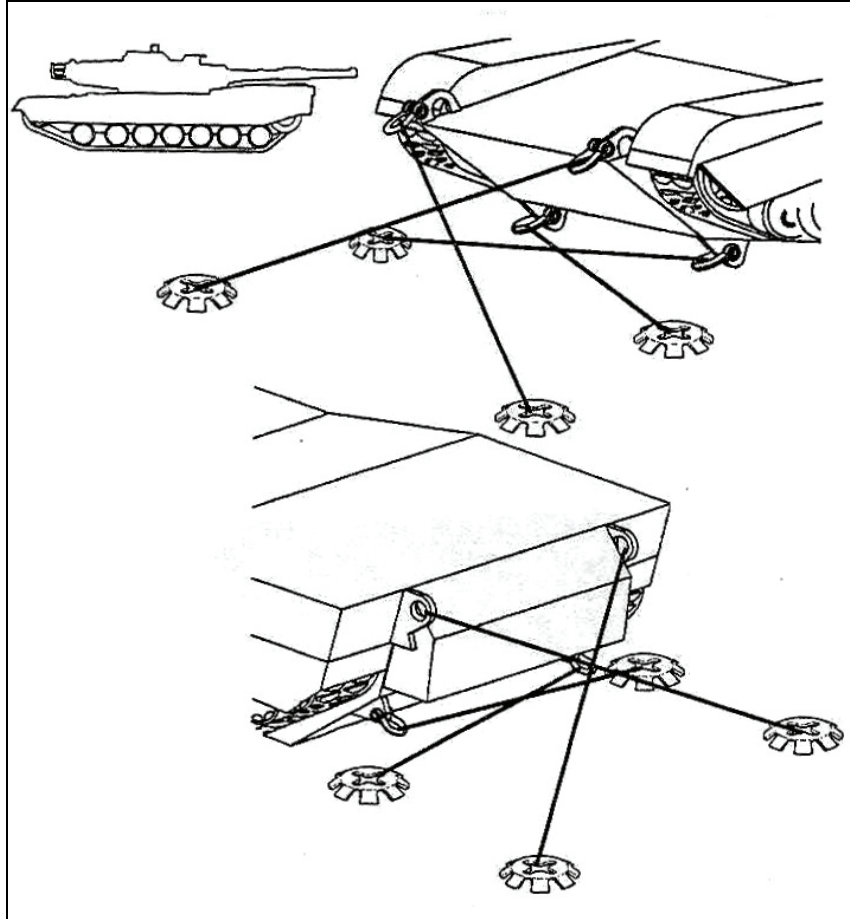


Figure 3-72. Stowing Tracked Vehicles

Performance Measures

1. Stowed wheeled vehicles on RO/RO deck.
2. Stowed tracked vehicles on RO/RO deck.

GO **NO-GO**

— —
 — —

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 55-17

Related

Subject Area 15: Initial Seamanship Maintenance

Tie Basic Seamanship Knots**551-88H-1703**

Conditions: Assigned as a cargo handler in an operational environment, given safety clothing, a length of rope for tying basic seamanship knots, FM 5-125, FM 55-17, and FM 55-501.

Standards: Tied basic seamanship knots in accordance with FM 5-125, FM 55-17, and FM 55-501.

Performance Steps

1. Tie a bowline knot (see Figure 3-73).
 - 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.

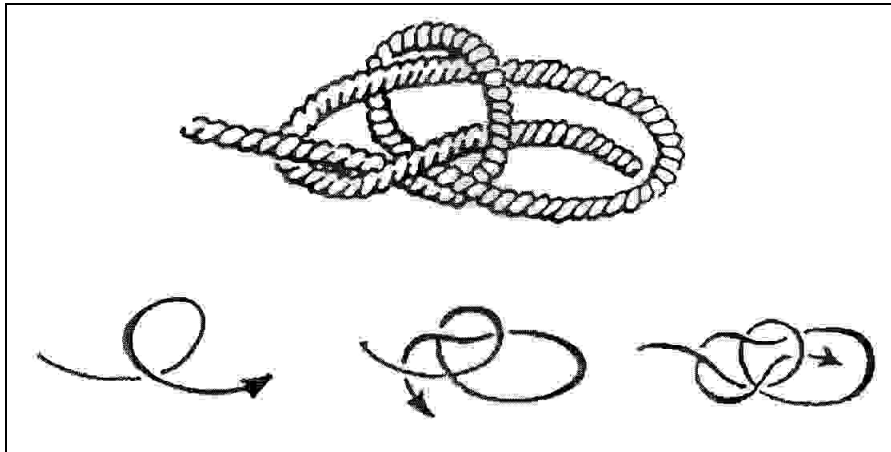


Figure 3-73. Bowline Knot

2. Tie a figure eight knot (see Figure 3-74).
 - a. Grasp the standing part of the rope in the right hand.
 - b. With the left 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.

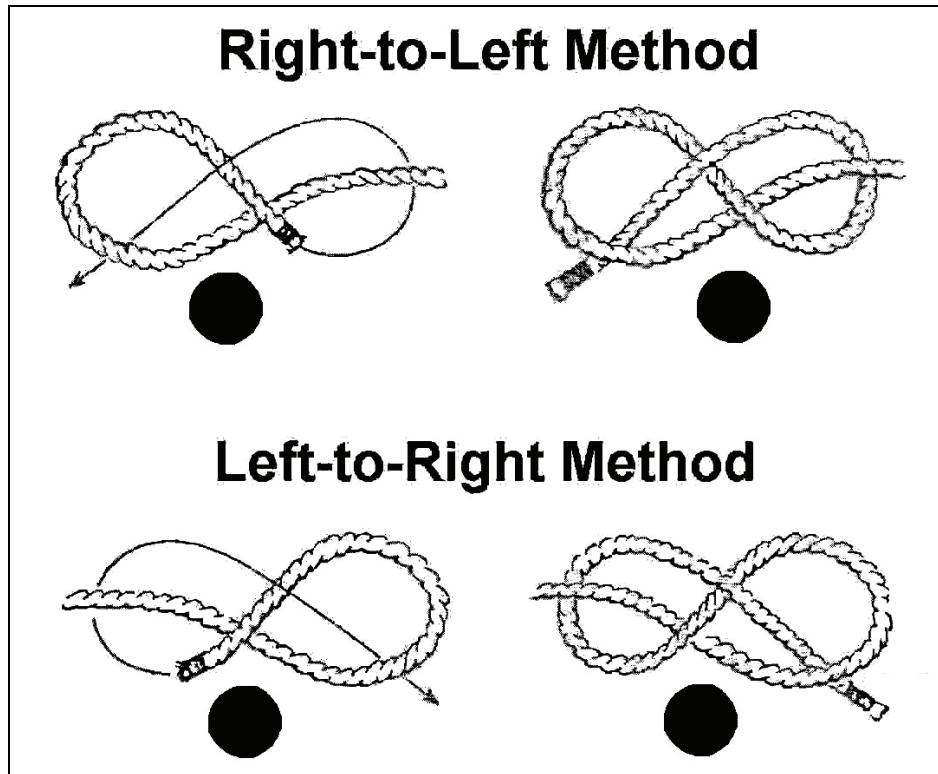


Figure 3-74. Figure Eight Knot

Performance Steps

3. Tie a square knot (see Figure 3-75).
 - 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.

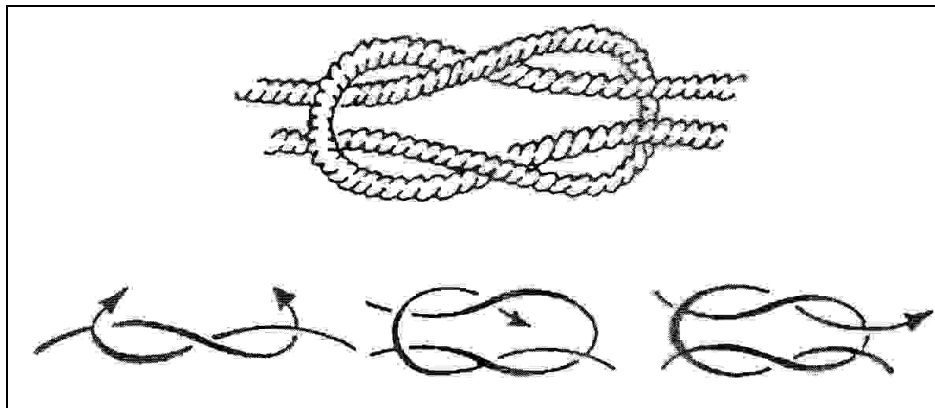


Figure 3-75. Square Knot

Performance Steps

4. Tie an overhand knot (see Figure 3-76).
 - 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 behind the standing part and pull it through the loop.
 - d. Pull the running end tight to form a knot.

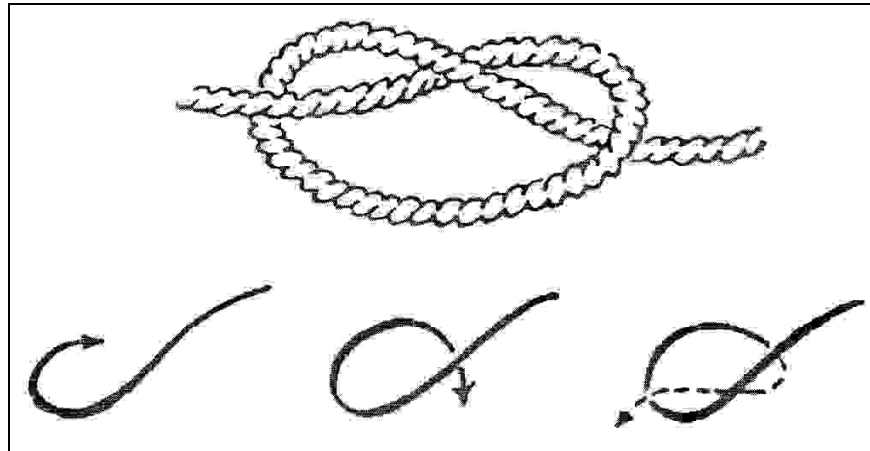


Figure 3-76. Overhand Knot

5. Tie a half hitch (see Figure 3-77).
 - a. Take the running end of the rope and make a loop.
 - 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.

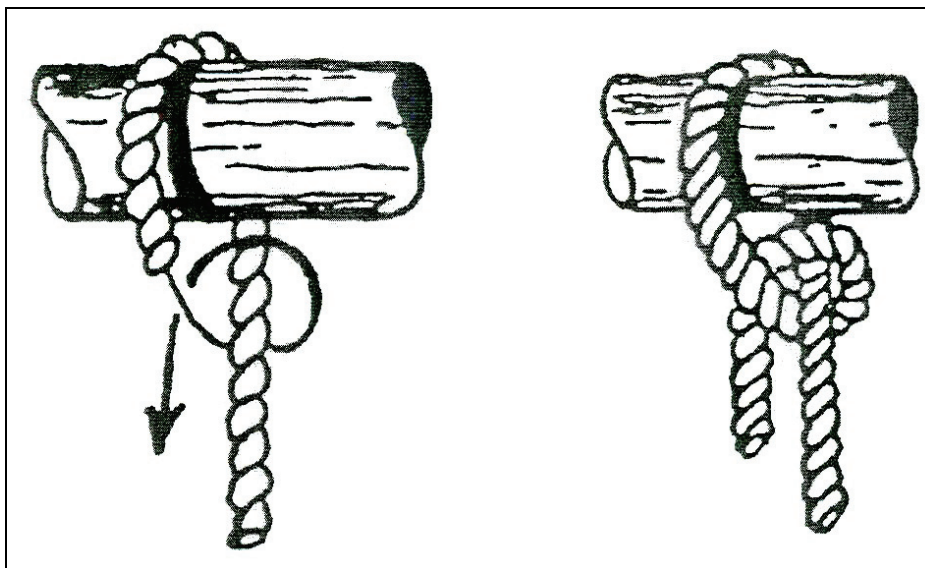


Figure 3-77. Half Hitch

Performance Steps

6. Tie a rolling hitch (see Figure 3-78).
 - 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.

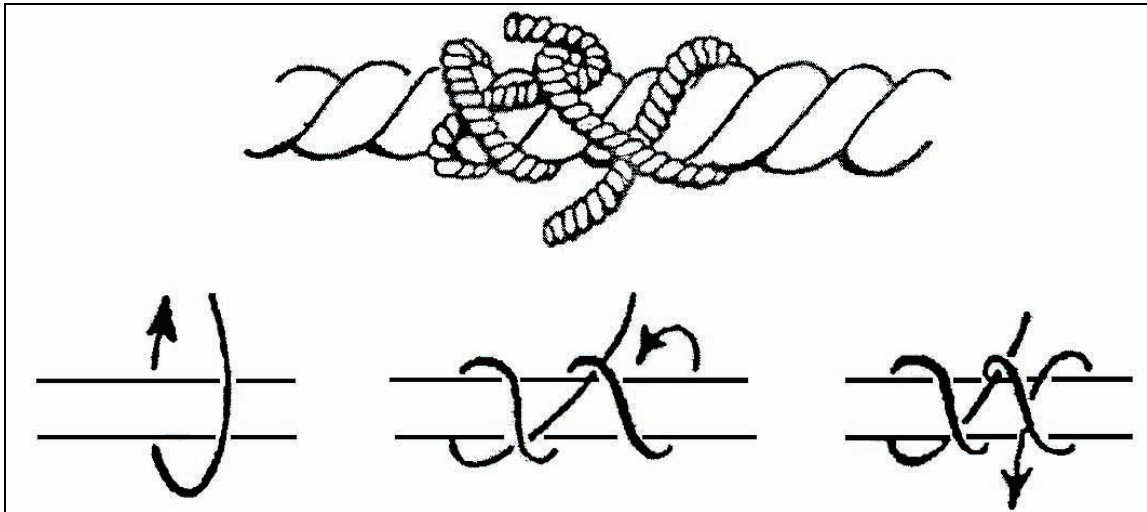


Figure 3-78. Rolling Hitch

Performance Measures

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.

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 FM 5-125
 FM 55-17
 FM 55-501

Related

Subject Area 16: Initial Drill and Survival Measures

Perform Water Survival Techniques**551-88H-1701**

Conditions: Assigned as a cargo handler in an operational environment, given a completed risk assessment, water source, vessel, life ring or flotation device, life jacket, FM 21-20, FM 55-501, and FM 55-502.

Standards: Performed water survival techniques in accordance with FM 21-20, FM 55-501, and FM 55-502.

Performance Steps

1. 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.
2. 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.
3. 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.
4. 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.

Performance Steps

5. Enter water with 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed travel stroke	_____	_____
2. Performed hanging float.	_____	_____
3. Performed rescue procedures for man overboard.	_____	_____
4. Donned a life jacket.	_____	_____
5. Entered water with life jacket on.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 FM 21-20
 FM 55-501
 FM 55-502

Related

Don Crew Work Vest
551-88H-1702

Conditions: Assigned as a cargo handler in an operational environment, conducting an emergency drill, given a crew work vest, FM 55-501, and FM 55-502.

Special Condition: The crew work vest must fit snugly against the body and be donned within two minutes.

Standards: Donned a crew work vest in accordance with FM 55-501 and FM 55-502.

Performance Steps

1. Place the white tag located on the lower back of the work vest to the inside next to the body.
2. Put arms through the arm holes.
3. Put the neck straps through the D-ring on each side of the vest and tie the straps in a bow knot.
4. Tie the chest straps in a bow knot.
5. Tie the waist strap in a bow knot.
6. Snap the belly strap.
7. Adjust the belly strap if required.
8. Pull the leg strap up between the legs.
9. Thread the end of the strap through the double D-rings and pull snug.
10. Repeat steps 8 and 9 for the other leg.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Placed the white tag located on the lower back of the work vest to the inside next to the body.	—	—
2. Put arms through the arm holes.	—	—
3. Put the neck straps through the D-ring on each side of the vest and tied the straps in a bow knot.	—	—
4. Tied the chest straps in a bow knot.	—	—
5. Tied the waist strap in a bow knot.	—	—
6. Snapped the belly strap.	—	—
7. Adjusted the belly strap if required.	—	—
8. Pulled the leg strap up between the legs.	—	—
9. Threaded the end of the strap through the double D-rings and pulled snug.	—	—
10. Repeated steps 8 and 9 for the other leg.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-501
FM 55-502

Related

Subject Area 34: Basic Cargo Operations (KALMAR-RTCH)

**Communicate with Hand and Arm Signals When Operating Rough Terrain Container Handler
551-88H-1527**

Conditions: Assigned as a cargo specialist in an operational environment, given safety clothing, a completed risk assessment, 50,000 to 53,000-pound rough terrain container handler (RTCH) with operator and container, FM 21-305, FM 21-60, and TC 55-60-17.

Standards: Communicated with RTCH operator with the use of hand and arm signals without error to prevent damage to RTCH, container, or injury to personnel in accordance with FM 21-305, FM 21-60, and TC 55-60-17.

Performance Steps

1. Use the signal to indicate STOP or DISREGARD LAST COMMAND (see Figure 3-79).

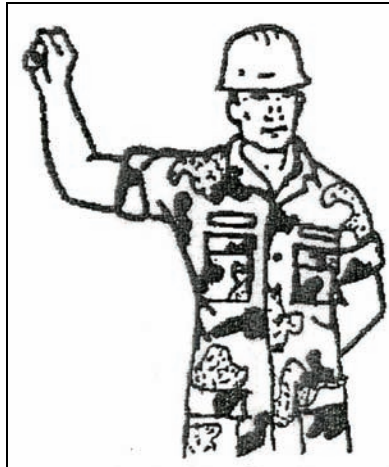


Figure 3-79. Stop or Disregard Last Command

2. Use the signal to indicate SLOW DOWN (see Figure 3-80).

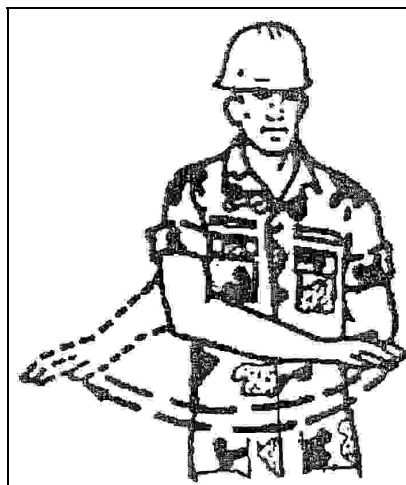


Figure 3-80. Slow Down

Performance Steps

3. Use the signal to indicate LIFT LOAD (see Figure 3-81).

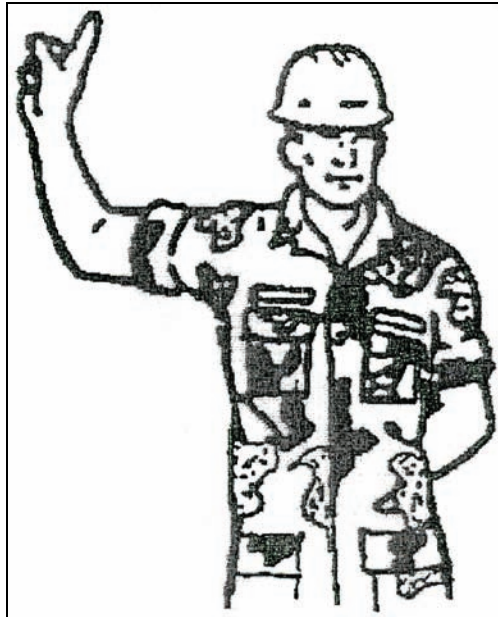


Figure 3-81. Lift Load

4. Use the signal to indicate TILT LOAD BACK (see Figure 3-82).

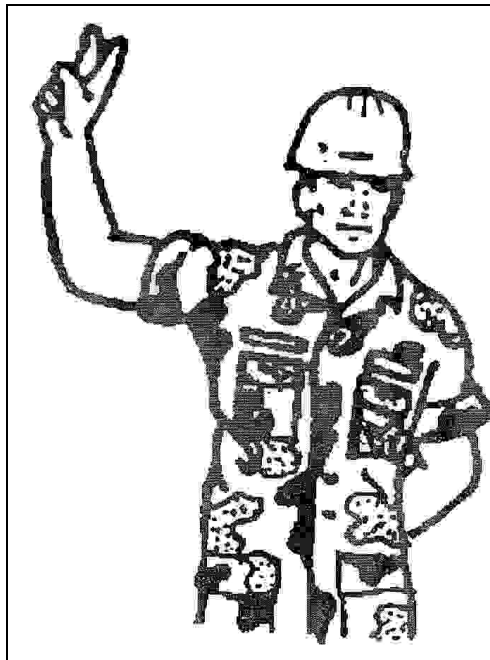


Figure 3-82. Tilt Load Back

Performance Steps

5. Use the signal to indicate TILT LOAD FORWARD (see Figure 3-83).

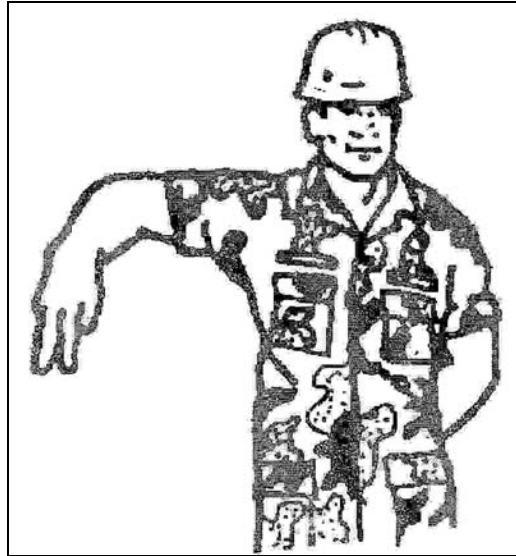


Figure 3-83. Tilt Load Forward

6. Use the signal to indicate LOWER LOAD (see Figure 3-84).

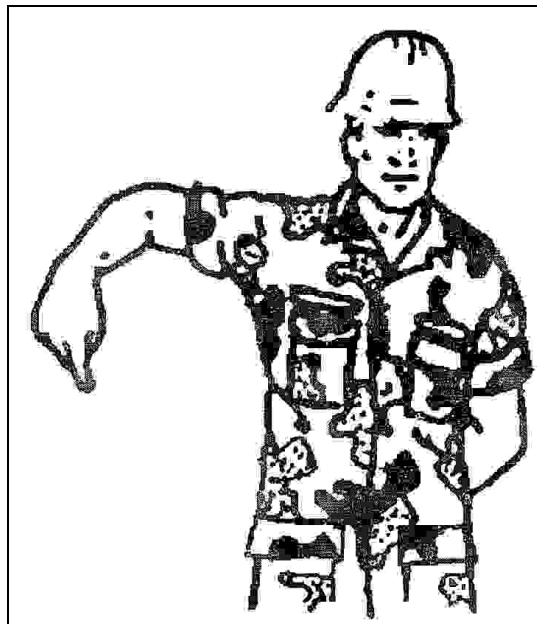


Figure 3-84. Lower Load

Performance Steps

7. Use the signal to indicate SIDE SHIFT LOAD (see Figure 3-85).

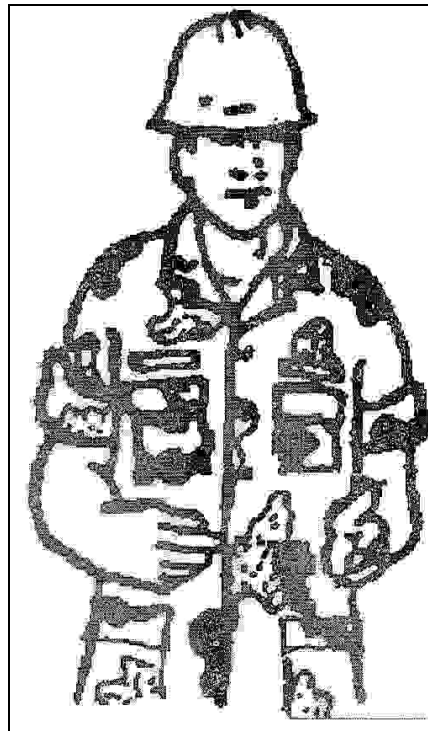


Figure 3-85. Side Shift Load

8. Use the signal to indicate TILT (OSCILLATE) LOAD TO THE SIDE (see Figure 3-86).



Figure 3-86. Tilt (Oscillate) Load to the Side

Performance Steps

9. Use the signal to indicate CUT ENGINE (engine shutdown) (see Figure 3-87).

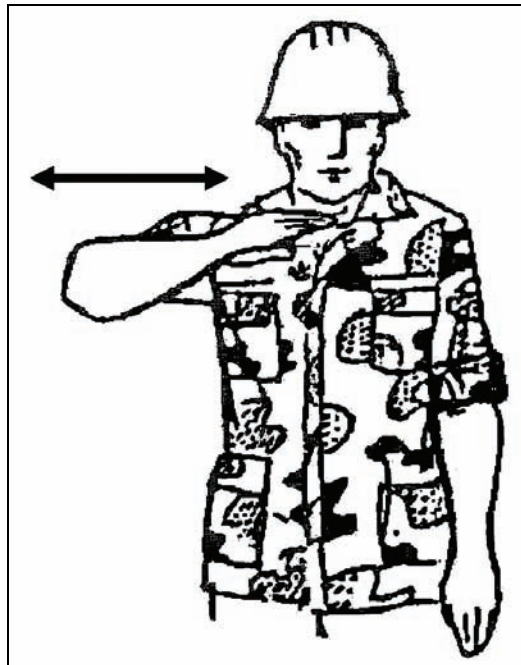


Figure 3-87. Cut Engine (Engine Shutdown)

10. Use the signal to indicate LOCK/UNLOCK tophandler bayonet locks (depending on required lock position) (see Figure 3-88).



Figure 3-88. Lock/Unlock Tophandler Bayonet Locks

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Used the signal to indicate STOP or DISREGARD LASTCOMMAND.	—	—
2. Used the signal to indicate SLOW DOWN.	—	—
3. Used the signal to indicate LIFT LOAD.	—	—
4. Used the signal to indicate TILT LOAD BACK.	—	—
5. Used the signal to indicate TILT LOAD FORWARD.	—	—
6. Used the signal to indicate LOWER LOAD.	—	—
7. Used the signal to indicate SIDE SHIFT LOAD.	—	—
8. Used the signal to indicate TILT (OSCILLATE) LOAD TO THE SIDE.	—	—
9. Used the signal to indicate CUT ENGINE (engine shutdown).	—	—
10. Used the signal to indicate LOCK/UNLOCK tophandler bayonet locks (depending on required lock position).	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 21-60

FM 21-305

TC 55-60-17

Related

Skill Level 2

Subject Area 17: Primary Cargo Operations (Air)

Supervise Hook-up Team Duties**551-88H-2501**

Conditions: Assigned as a hookup team chief in an operational environment, given a completed risk assessment, a helicopter, signalman, static wand person, hookup person, frequency modulated (FM) radio, safety equipment, static wand sling assembly, a load, assistance from a sling leg crew, a designated field site, and field manual (FM) 4-20.197.

Special Conditions: Ensure that all personnel safety warnings are observed.

Standards: Supervised hookup team duties, ensuring safety of personnel and correct use of equipment, in accordance with FM 4-20.197.

Performance Steps

1. Supervise the pre-operations 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. Appoint an outside signalman to give hand and arm signals to pilot (see Figure 3-89).

NOTE 1: Ensure the signalman knows how to give day and night signals as shown in FM 4-20.197.

NOTE 2: The inside signalman is a part of the aircrew and ensures that the aircraft is properly positioned over the load.

- i. Appoint a static wand person.
- j. Appoint a hookup person.
- k. Appoint sling leg crew.

NOTE 3: Only trained crew should be used to rig loads and hook them to the aircraft.

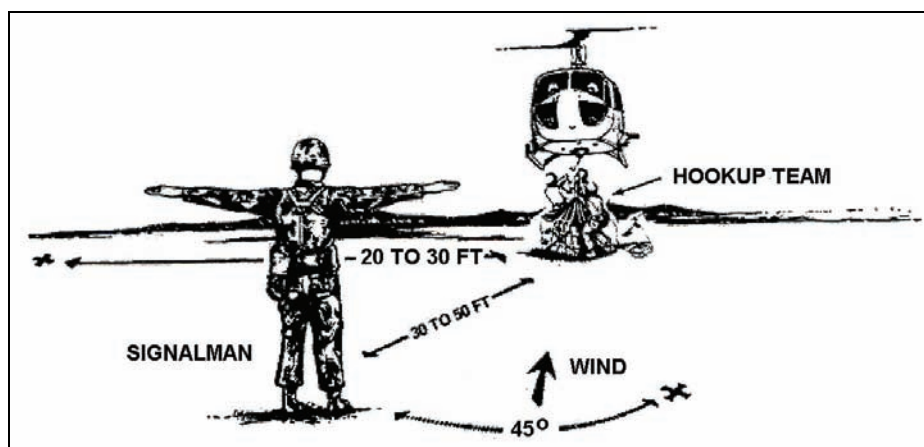


Figure 3-89. Outside Signalman

Performance Steps

2. Execute the procedures required to direct the duties of the hookup team.

a. Direct the static discharge man to properly ground the static discharge wand.

WARNING: Helicopters are susceptible to high levels of stored electrical energy. Severe electrical shock may result from improper grounding of the cargo hook system.

b. Direct the hookup 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 3-90).

d. Ensure that the hookup 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 hookup man to place the web ring or apex fitting on the cargo hook.

g. Ensure that the assistant hookup man keeps the sling legs straight.

h. Ensure that the hookup 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 hookup man off of the load to the rendezvous point.

j. Direct members of the hookup team to move quickly out from under the helicopter to the rendezvous point before the aircraft rises (see Figure 3-91).

NOTE: Direct the hookup 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.

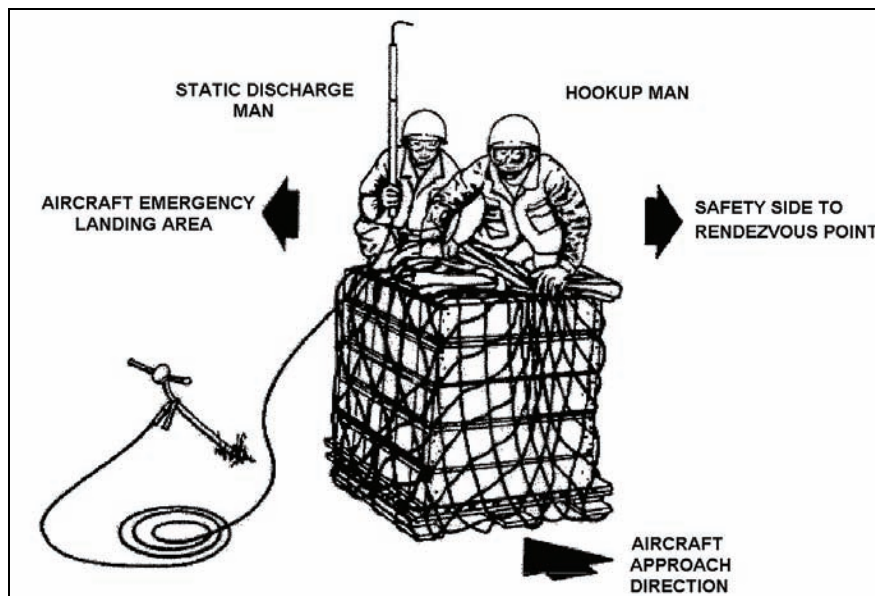


Figure 3-90. Positioning of Static Discharge Man

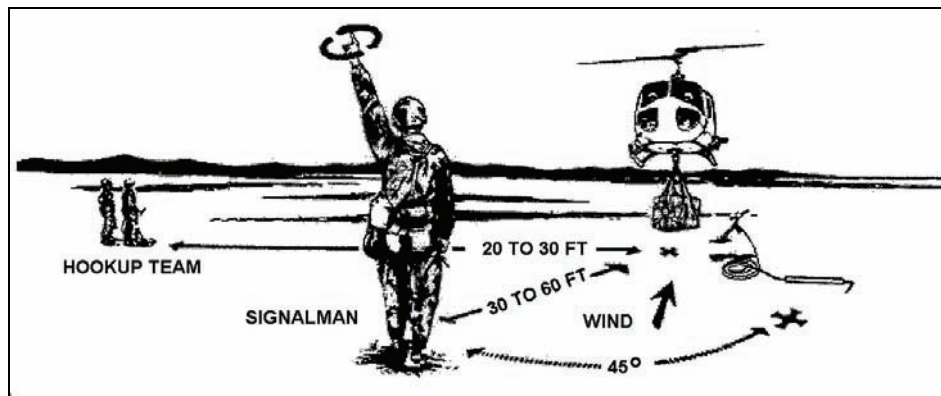


Figure 3-91. Hookup Team at Rendezvous Point

Performance Steps

3. Ensure that a Sling Load Inspection Record (DA Form 7382) 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Supervised the pre-operations checks.	—	—
2. Executed the procedures required to direct the duties of the hookup team.	—	—
3. Ensured that a Sling Load Inspection Record is completed and distributed to the appropriate personnel.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 4-20.197

Related

Signal Helicopter Pilot During Hookup

551-88H-2502

Conditions: Assigned as a signalman in an operational environment, given a completed risk assessment, safety equipment, cargo sling, hookup equipment, and FM 4-20.197.

Standards: Signaled helicopter pilot during hookup, positioned upwind of the load in the correct station for an approaching helicopter and hookup of cargo, in accordance with FM 4-20.197.

Performance Steps

1. Perform signalman duties during hookup (see Figure 3-92).
 - 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 upward.
 - (4) Move downward.
 - (5) Move right.
 - (6) Move left.
 - (7) Move forward.
 - (8) Move rearward.
 - (9) Release the sling load.
 - (10) Land.
 - d. Ensure hookup 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 "hookup up complete" signal when the hookup crew has departed from the load.
 - h. Give the "raise up" signal.
 - 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 when the load is 10 to 20 feet higher than the surrounding loads.
2. Perform signalman procedures during incorrect load (tangled sling, hook open, damaged sling) situation.
 - a. Give the pilot the "hookup complete" signal followed by the "negative" signal.
 - b. Direct the aircraft downward until the hookup personnel can correct the rigging.
 - c. When situation is corrected, direct the aircraft up again to check the load before giving the "thumbs up" 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 when the load is 10 to 20 feet higher than the surrounding loads.

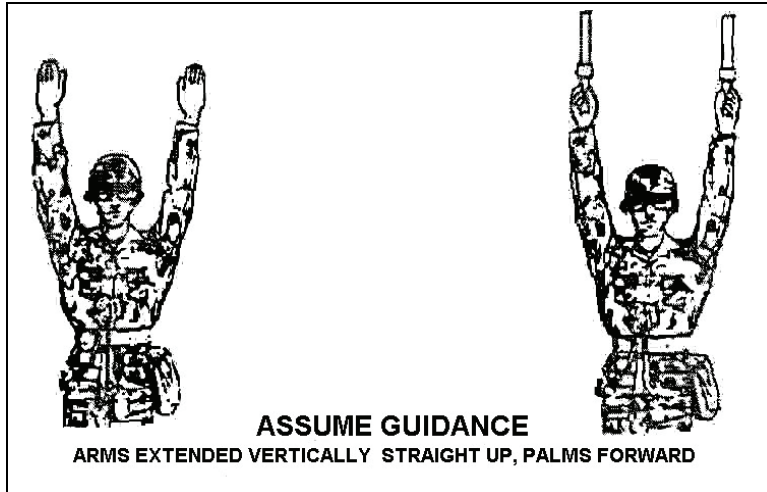


Figure 3-92. Signals During Hookup

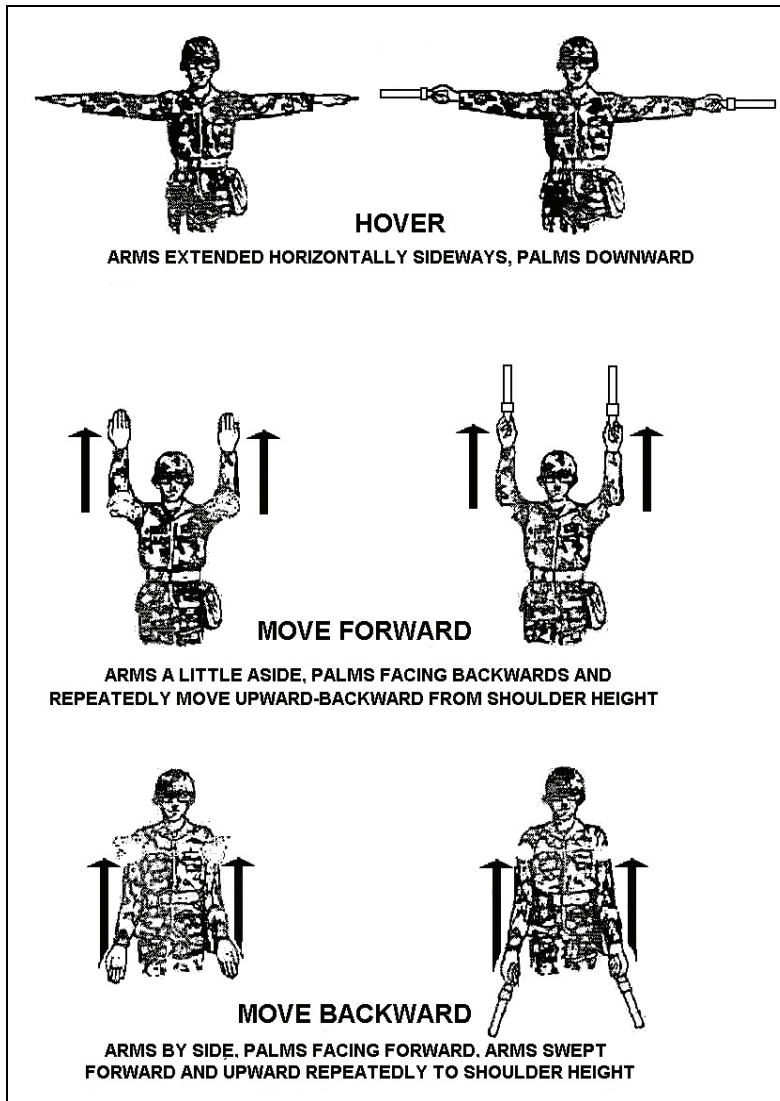


Figure 3-92. Signals During Hookup (continued)

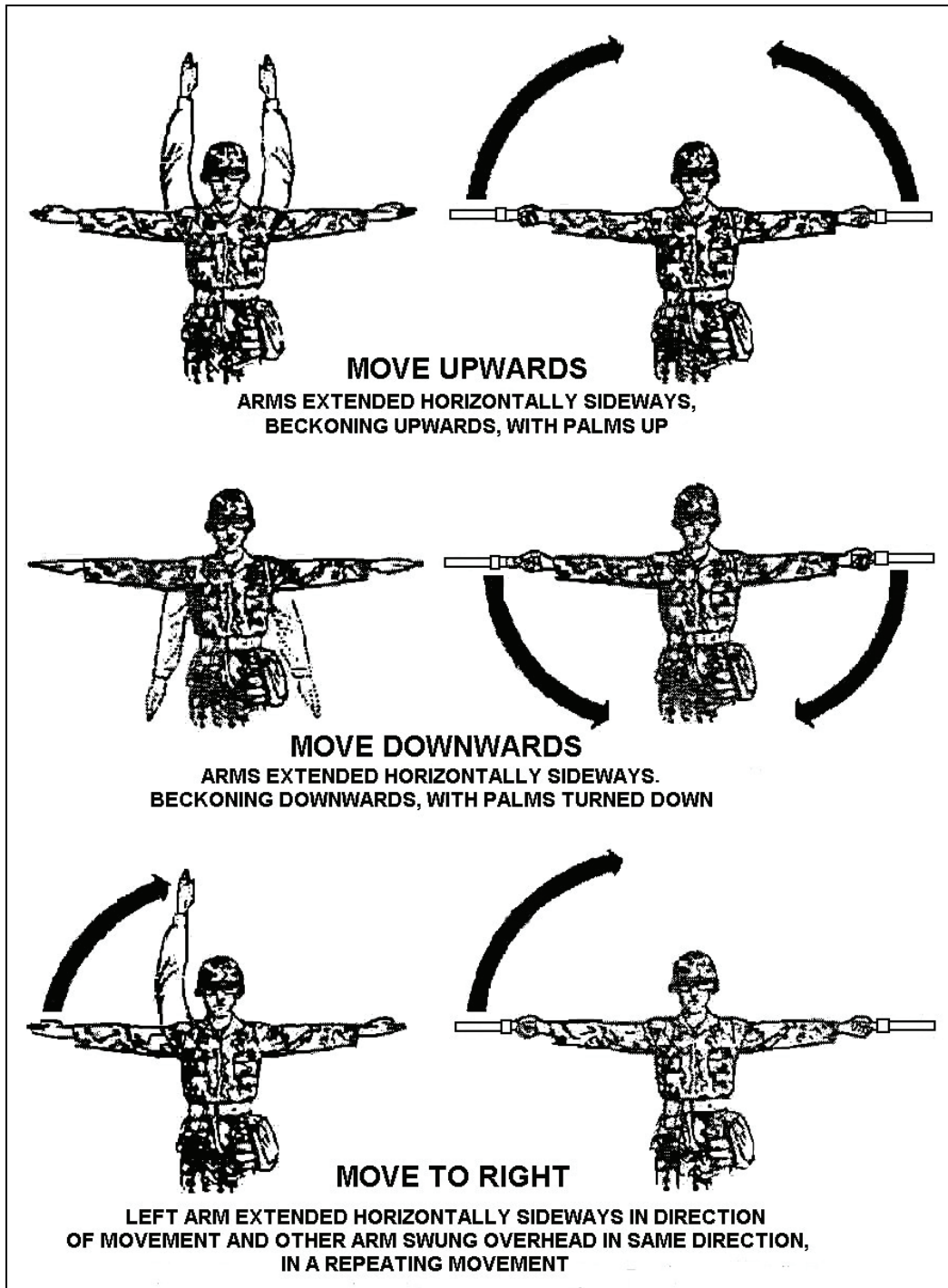


Figure 3-92. Signals During Hookup (continued)

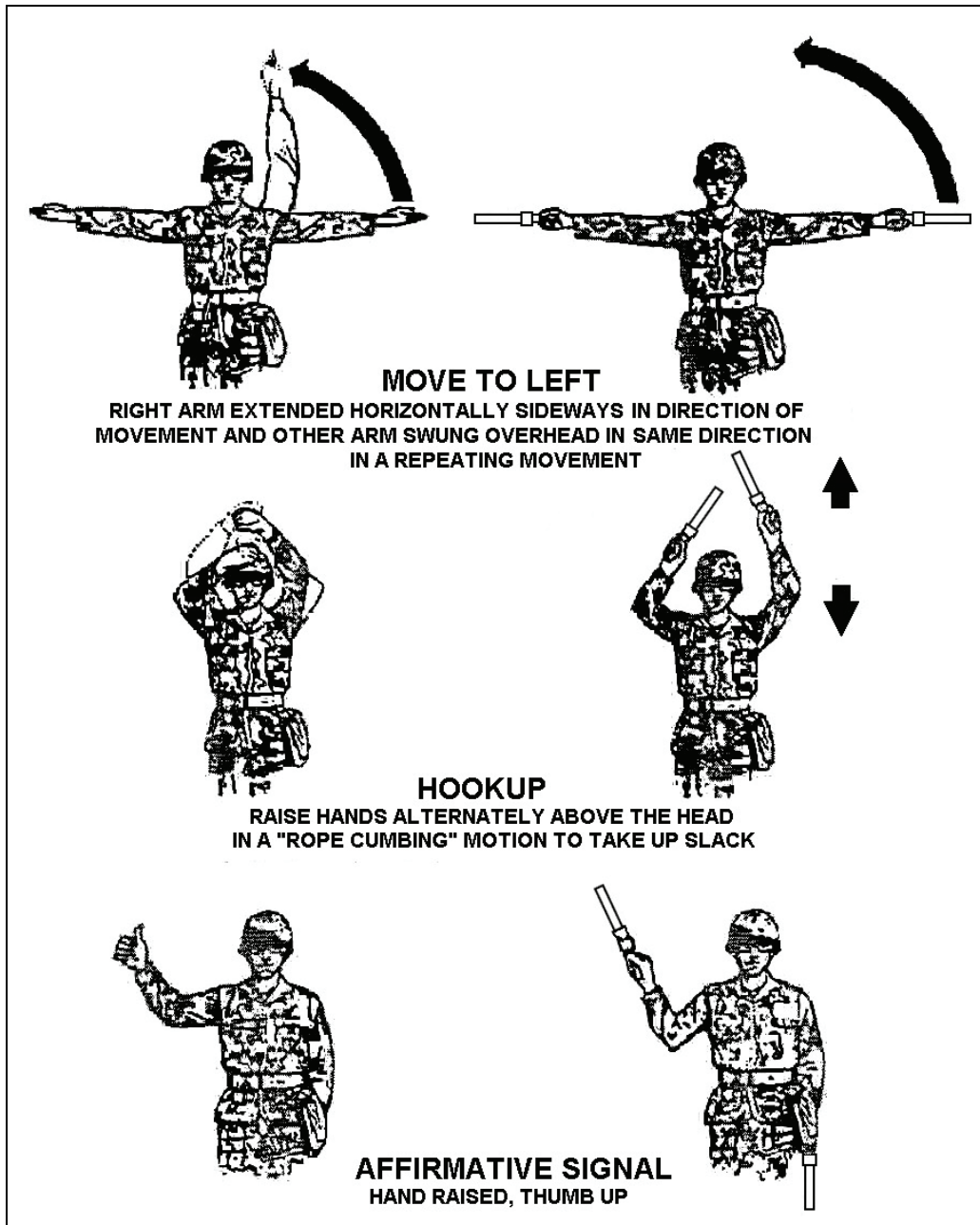


Figure 3-92. Signals During Hookup (continued)

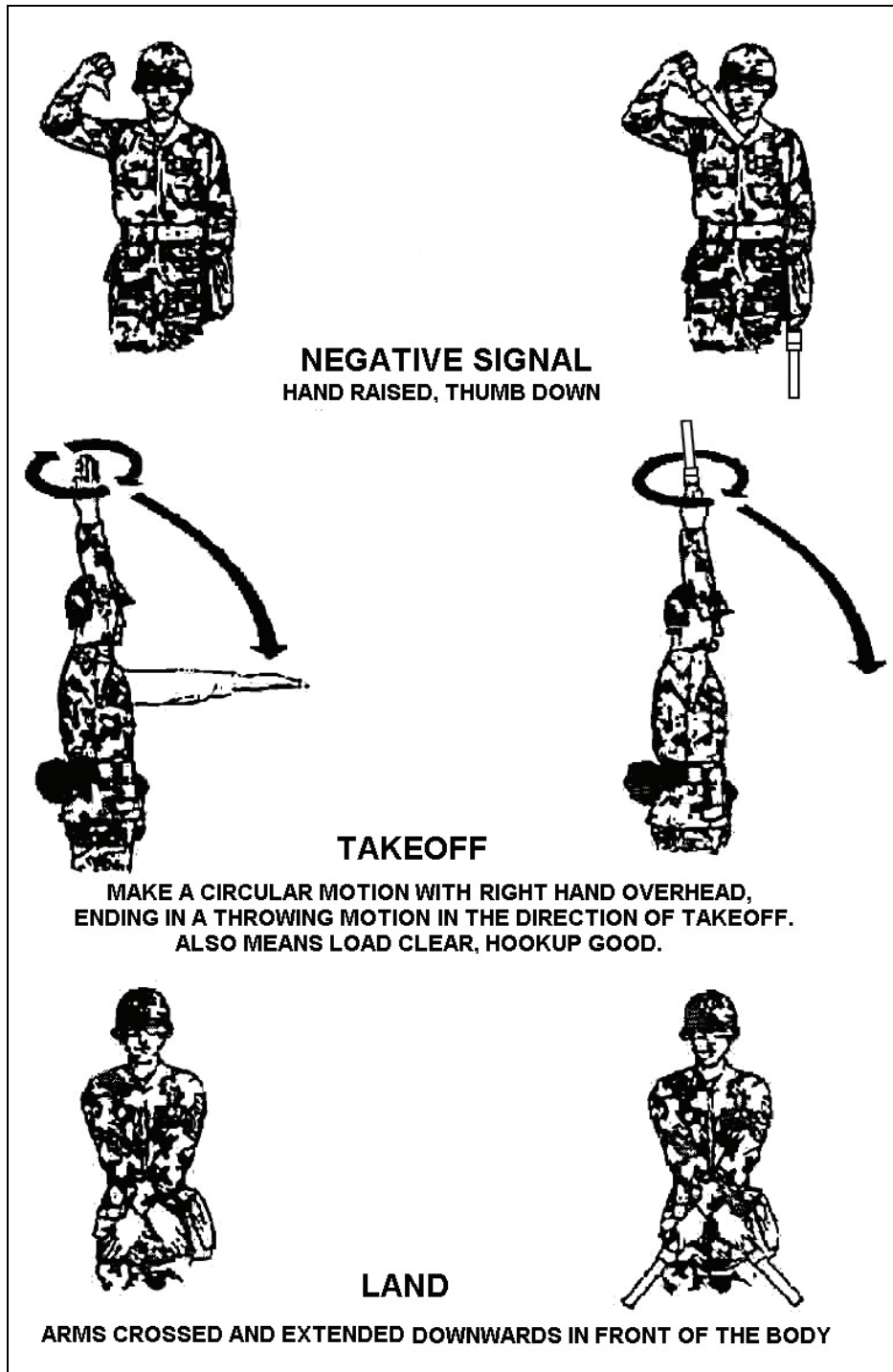


Figure 3-92. Signals During Hookup (continued)

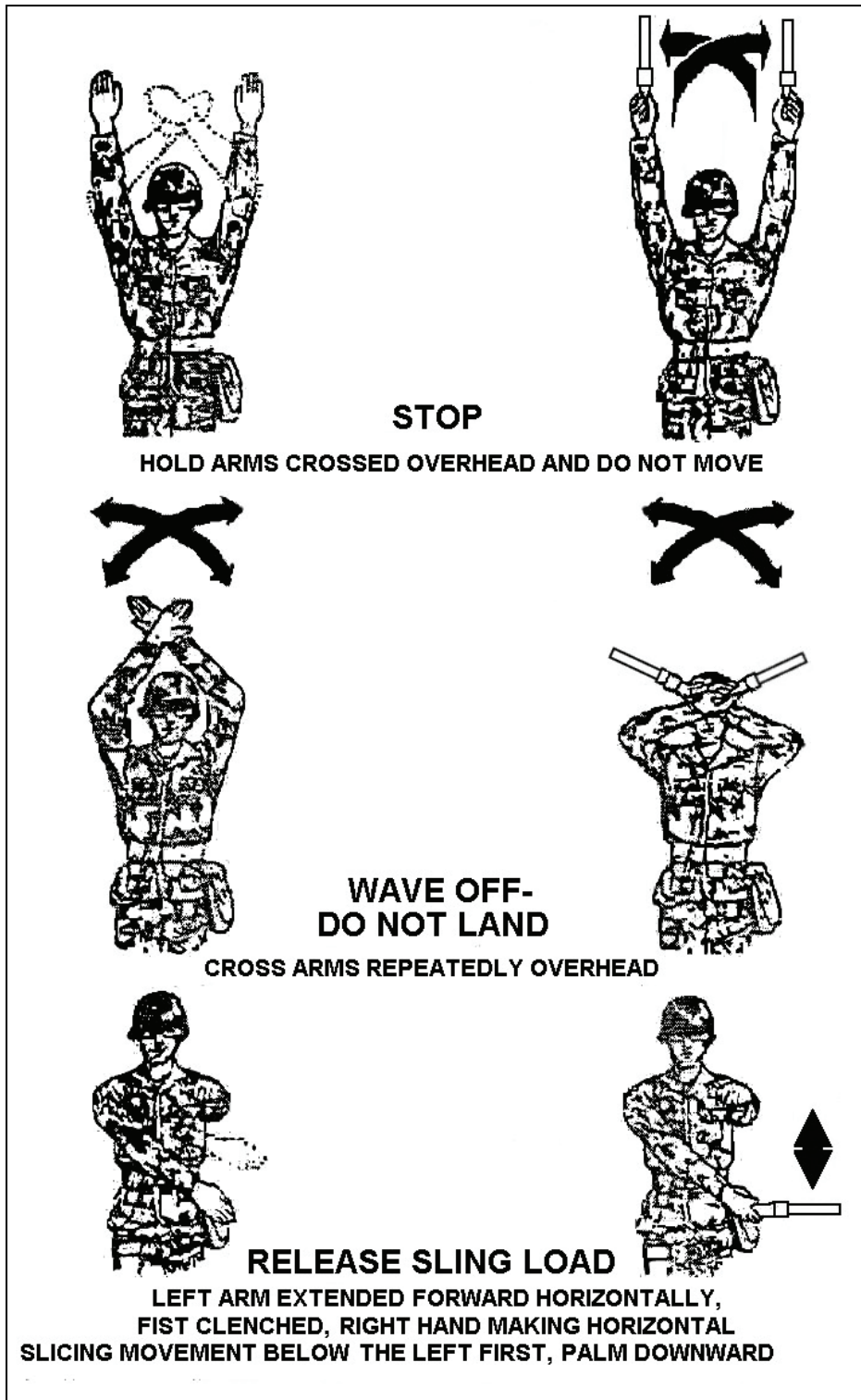


Figure 3-92. Signals During Hookup (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Performed signalman duties during hookup.	—	—
2. Performed signalman procedures during incorrect load (tangled sling, hook open, damaged sling) situation.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 4-20.197

Related

Supervise Securing of Cargo Aboard Aircraft
551-88H-2504

Conditions: Assigned as an aircraft load team chief in an operational environment, given a completed risk assessment, safety equipment, cargo load plan, standard tie-down devices, chains, cargo, FM 4-01.011, and DOD 4500.9-R, Part II.

Standards: Supervised securing of cargo aboard aircraft, ensuring proper use of aircraft tie-down devices in accordance with FM 4-01.011 and DOD 4500.9-R, Part II.

Performance Steps

1. Execute the procedures required to direct the securing of cargo aboard an aircraft.
 - a. Direct the positioning of cargo aboard the aircraft.
 - b. Direct the attachment of MB1 and MB2 tie-down devices in a symmetrical pattern and in pairs (see Figure 3-93).
 - c. 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.
 - d. Direct the attachment of the hook end of the tie-down device to the aircraft floor with the hook end pointed up (see Figure 3-94).
 - e. Direct the attachment of the chain end of the tie-down device to the cargo item.
 - f. Ensure the attachment of no more than 50 percent of required tie-down devices to vehicle axles.
 - g. Ensure the attachment of tie-down devices to strong structural points on vehicles.
 - h. Ensure, when possible, the installation of tie-down devices at 30-degree angle from the cargo floor and 30 degrees from the longitudinal axis.
 - i. Instruct team members to place chain loops against the solid part of the structure when forming chain loops around axles and bumpers.

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.

- j. Direct the attachment of chains so that they pull in a straight line and not against one another.
- k. Ensure that tie-down devices lead directly from the floor fitting to the load being restrained.
- l. Ensure the use of tie-down devices and fittings of equal strength.

2. Conduct final inspection of tie-down restraints.

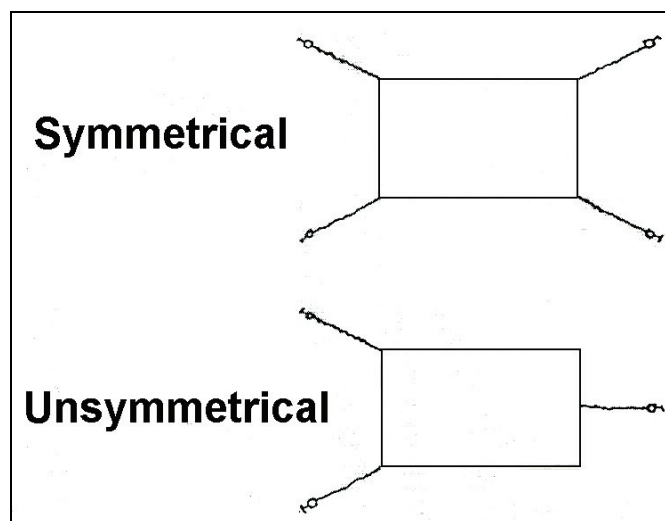


Figure 3-93. Attachment of MB1 and MB2 Tie-down Devices in a Symmetrical Pattern

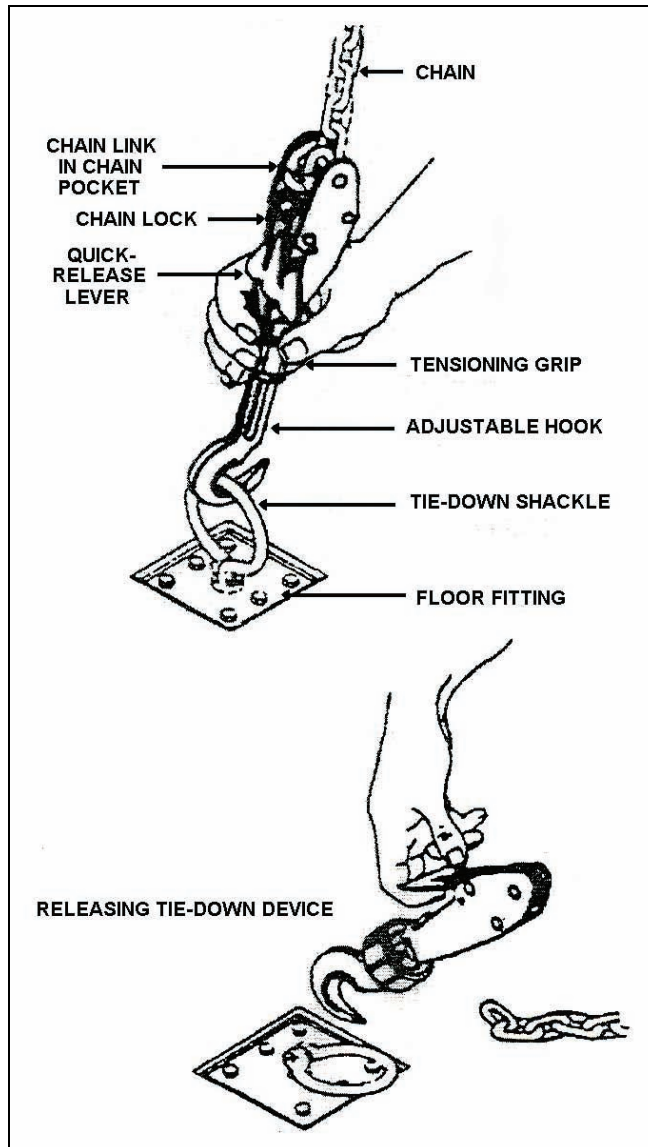


Figure 3-94. Attachment of Hook End of Tie-down Device to Aircraft Floor With Hook End Pointed Up

Performance Measures

GO **NO-GO**

- | | | |
|---|---|---|
| 1. Executed the procedures required to direct the securing of cargo aboard an aircraft. | — | — |
| 2. Conducted final inspection of tie-down restraints. | — | — |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 DOD 4500.9-R, PART II
 FM 4-01.011

Related

Rig a Single Point Load for External Air Transport

551-88H-2505

Conditions: Assigned as a member of an external sling load operation in an operational environment, given a completed risk assessment, safety equipment, pressure-sensitive tape or 1/4-inch cotton webbing, Type III nylon cord, 10,000- or 25,000-pound sling set, equipment to be rigged, FM 4-20.197, and FM 10-450-4.

Special Conditions: Ensure all personnel safety warnings are observed.

Standards: Rigged a single point load for external transport by a helicopter in accordance with FM 4-20.197 and FM 10-450-4.

Performance Steps

1. Locate the rigging procedure for the item of equipment found in FM 10-450-4 and verify that the equipment corresponds to the item nomenclature in the load description section of the rigging procedure.
 - a. Ensure that the items on the certified materials list are available before rigging the load.
 - b. Ensure that all preparation steps outlined in FM 10-450-4 are followed before rigging the load.
2. Perform the procedures required to rig a single point load for external air transport.

NOTE: Follow the rigging steps in the rigging procedure.

 - a. Prepare the load.
 - b. Remove the sling from the storage bag.
 - c. Place the apex fitting centered at the top of the load.
 - d. Route the outer sling legs and the inner sling legs to their respective lifting provisions.
 - e. Loop the free end of the chain on each sling through the lifting provision and insert the proper chain in the grabhook.
 - f. Secure any excess chain with tape or nylon cord.
 - g. 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.
3. Check the rigging to ensure it will not become entangled with the load (see Figure 3-95).
4. 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 Inspection Record must be attached to the load.

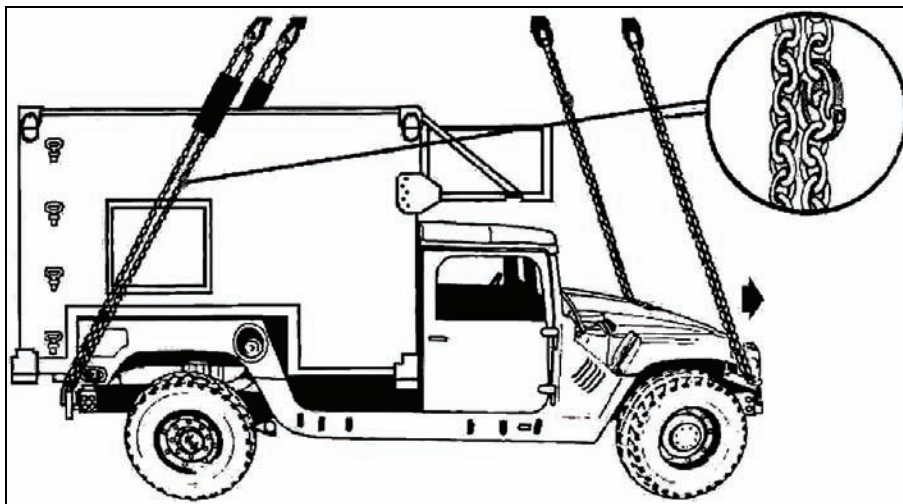


Figure 3-95. Load With Four-Lift Points

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Located the rigging procedure for the item of equipment and verified that the equipment corresponded to the item nomenclature in the load description section of the rigging procedure.	—	—
2. Performed the procedures required to rig a single point load for external air transport.	—	—
3. Checked the rigging to ensure it would not become entangled with the load.	—	—
4. Checked for untaped or unpadded load areas that could damage the slings.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 4-20.197
 FM 10-450-4

Related

Rig a Cargo Net (Helicopter)**551-88H-2506**

Conditions: Assigned as a team member of an external sling load operation in an operational environment, given a completed risk assessment, safety equipment, 5000- or 10000-pound cargo net, cargo, pressure-sensitive tape or 1/4-inch cotton webbing, Type III nylon cord, 10,000- or 25,000-pound sling set, and FM 4-20.197.

Standards: Rigged a cargo net (helicopter) in accordance with FM 4-20.197.

Performance Steps

1. Perform the procedures required to rig a cargo net (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, 2, 3, and 4. 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 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 3-96).

NOTE: All loads rigged must be inspected by a certified Sling Load Inspector and a copy of the Sling Inspection Record must be attached to the load.

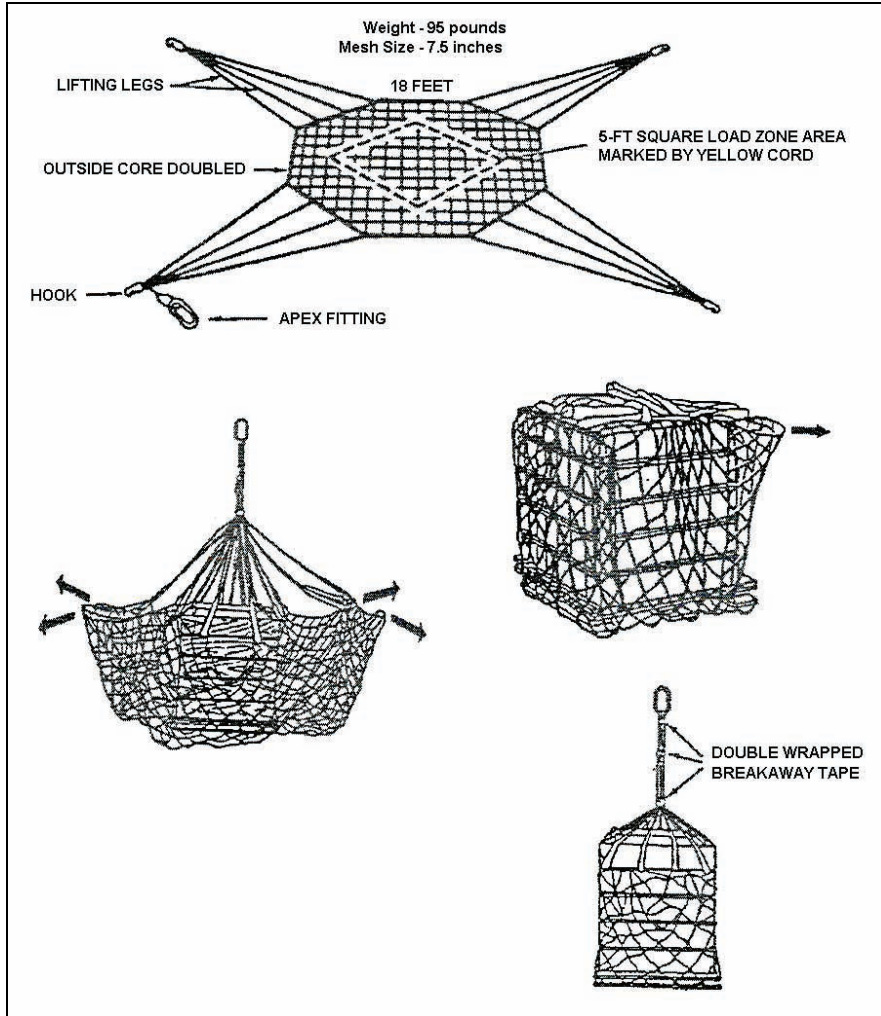


Figure 3-96. Apex Fitting, Netting, and Taping

Performance Measures

1. Performed the procedures required to rig a cargo net (helicopter).
2. Made a final inspection of the apex fitting, netting, and taping before hookup to the aircraft, ensuring the net and load was secure.

GO **NO-GO**

— —
 — —

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 4-20.197

Related

Inspect Vehicles for Air Movement

551-88H-2507

Conditions: Assigned as a load team chief in an operational environment, given a completed risk assessment, safety briefing, vehicles loaded with secondary loads, tie-down equipment, DD Form 2133 (Joint Airlift Inspection Record), DOD 4500.9-R, Part III, and TM 38-250.

Standards: Inspected vehicles for air movement ensuring that all vehicles are properly prepared in accordance with DOD 4500.9-R, Part III and TM 38-250.

Performance Steps

1. Execute 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. Execute 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 3-97).

JOINT AIRLIFT INSPECTION RECORD <small>(See instructions on back.)</small>							PAGE 1 OF 1 PAGES
1. UNIT BEING AIRLIFTED <i>403rd Trans Co., Fort Bragg</i>			2. DEPARTURE AIRFIELD <i>Praps AFB</i>		3. DATE (YYYYMMDD) <i>20060528</i>		
4. AIRCRAFT TYPE AND MISSION NUMBER <i>C-130 36Q 3209</i>		5. LOAD/CHALK NO. <i>G-934</i>	6. START TIME <i>0600</i>	7. COMPLETE TIME <i>0930</i>	8. TALCE/CFE <i>327-5000</i>		
LEGEND (Mark blocks after each item as follows)				INCREMENT (SERIAL/BUMPER NUMBER AND TYPE)			
✓ - SATISFACTORY X - UNSATISFACTORY IF NOT APPLICABLE, LEAVE BLANK							
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/CLEVISSES							
a. SERVICEABLE							
b. SAFETY PIN ATTACHED (Safety chains)				✓			
25. VEHICLE 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 (Flyaway)							
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.)							
41. REMARKS <i>M35 (117) Fuel Leak (Fuel Pan) -- Leak Corrected</i>							
THE ABOVE LISTED ITEMS HAVE BEEN INSPECTED FOR PROPER SHIPPING CONFIGURATION.							
42. DEPLOYING FORCE REPRESENTATIVE (Signature/Rank/Unit of Assignment) <i>Ryan Miller 1SFC/403rd Trans Co., Fort Bragg</i>				43. MOBILITY FORCE INSPECTOR (Signature/Rank/Unit of Assignment)			
DD FORM 2133, OCT 1998				PREVIOUS EDITION IS OBSOLETE.			

Figure 3-97. Sample of DD Form 2133 (Front)

INSTRUCTIONS	
<u>1. RESPONSIBILITIES</u>	
1.1.	Qualified TALCE/CDF or aerial port personnel are responsible for acceptance of cargo for airlift.
1.2.	The deploying unit is responsible for the preparation of cargo, including weighing, marking, palletization, and the preparation of all documentation.
1.3.	The joint inspection, including documentation and inspection of all items prepared for air shipment, must be accomplished prior to loading. This inspection will be performed by qualified TALCE/CDF or aerial port personnel with a representative from the transported force.
<u>2. INSPECTION PROCEDURES</u>	
2.1.	All inspections will be conducted by qualified inspectors and transported force representatives. The TALCE/CDF or aerial port representative accepting cargo for air shipment must have completed hazardous materials inspector training required by paragraph 1.17.3, AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19F/DLAM 4145.3. The completed form will indicate to the aircraft loadmaster that the required inspection has been accomplished.
2.2.	This form will be used as the source document for joint inspection. Three copies will be completed for each aircraft load and sign by the appropriate personnel.
(1)	One signed copy will be attached to the aircraft cargo manifest.
(2)	One signed copy for the TALCE/CDF or aerial port station file.
(3)	One signed copy for the transported force.
<u>3. PREPARATION INSTRUCTIONS</u>	
3.1. Heading.	
(1)	Block 1, Unit Being Airlifted. Enter the numerical designation and geographic location of the military unit responsible for the equipment being airlifted. For example, 1st Tactical Fighter Wing, Langley AFB VA.
(2)	Block 2, Departure Airfield. Enter the name of the facility the airlifted unit is departing, i.e., Langley AFB VA.
(3)	Block 3, Date. Day, month and year that the inspection is accomplished.
(4)	Block 4, Aircraft Type and Mission Number. Enter the aircraft type on which the equipment is to be loaded and the airlift mission number as designated in the plan or operations order.
(5)	Block 5, Load/Chalk Number. Enter the deploying force assigned aircraft load number that establishes the desired load movement sequence.
(6)	Block 6, Start Time. Enter the local time that the inspection was started.
(7)	Block 7, Complete Time. Enter the local time that the load was checked, and is ready for movement.
(8)	Block 8, TALCE/CDF. Enter the numerical designation of the unit that has TALCE/CDF or aerial port responsibility for the operating location.
3.2. Body.	
(1)	Enter the increment/serial/bumper number and type of equipment in the appropriate block. The legend for completing the inspection is contained in the block on the left. Annotate the appropriate entry in the proper column. Make only one entry in each inspection block for each item.
(2)	Enter items not initially accepted in the remarks section and indicate corrective action.
(3)	Blocks 42 and 43. Signature must be legible. Indicate the rank and unit of assignment of the individual signing the form.

DD FORM 2133 (BACK), OCT 1998

Figure 3-97. Sample of DD Form 2133 (Back) (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to inspect vehicles for air movement.	—	—
2. Executed the procedures required to inspect vehicle loads and tie-down restraints.	—	—
3. Ensured correction of any deficiencies found in the procedures stated in steps 1 and 2 and ensured that the deficiencies are annotated on the DD Form 2133.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

DD FORM 2133

DOD 4500.9-R, PART III

TM 38-250

Related

Supervise Marking Center of Balance for a Multi-axle or Tracked Vehicle
551-88H-2508

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, safety equipment, multi-axle vehicle, tracked vehicle, portable scales, pencil, worksheet, tape measure, chalk, calculator, wooden beam, FM 4-01.011, and FM 55-17.

Standards: Supervised marking center of balance for a multi-axle or tracked vehicle in accordance with FM 4-01.011 and FM 55-17.

Performance Steps

1. Ensure portable scales are serviceable and zeroed.
 2. Instruct personnel to determine the weight of a multi-axle vehicle by weighing all axles (W1, W2, W3), using the prescribed procedures.
 - a. Instruct 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. Instruct the driver to remount vehicle and drive forward until the intermediate axle is centered on the scales.
 - g. Instruct 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 rear axle on both sides of the vehicle.
 - j. Write rear axle weight (RAW) on the masking tape or write on vehicle with a piece of chalk (example: RAW 3,700 pounds).
 - k. Instruct the driver to remount vehicle and drive forward until the vehicle has cleared the scales.
- NOTE: If enough portable scales are available the vehicle can be taken onto the scales one at a time
3. Instruct personnel to obtain vehicle distances (D1, D2, D3) for a multi-axle vehicle using the prescribed procedures.
 - a. Enter distance on the worksheet as D1 in inches (example: D1 = 0 inches).
 - b. Using a tape measure, measure from the reference data line (front axle) to the center of the intermediate axle wheel hub.
 - c. Enter distance on the worksheet as D2 in inches (example: D2 = 54 inches).
 - d. Using a tape measure, measure from the reference data line (front axle) to the center of the rear axle wheel hub.
 - e. Enter distance on the worksheet as D3 in inches (example: D3 = 104 inches).
 4. Instruct 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 (front axle) to tandem midpoint (see Figure 3-98).
 - b. For tandem axles with separation that exceeds 48 inches, compute axle distances separately (see Figure 3-99).

Example: Formula for 3-axle vehicle:

$$[(W1 \times D1) + (W2 \times D2) + (W3 \times D3)] / \text{Gross Weight} = \text{CB}$$

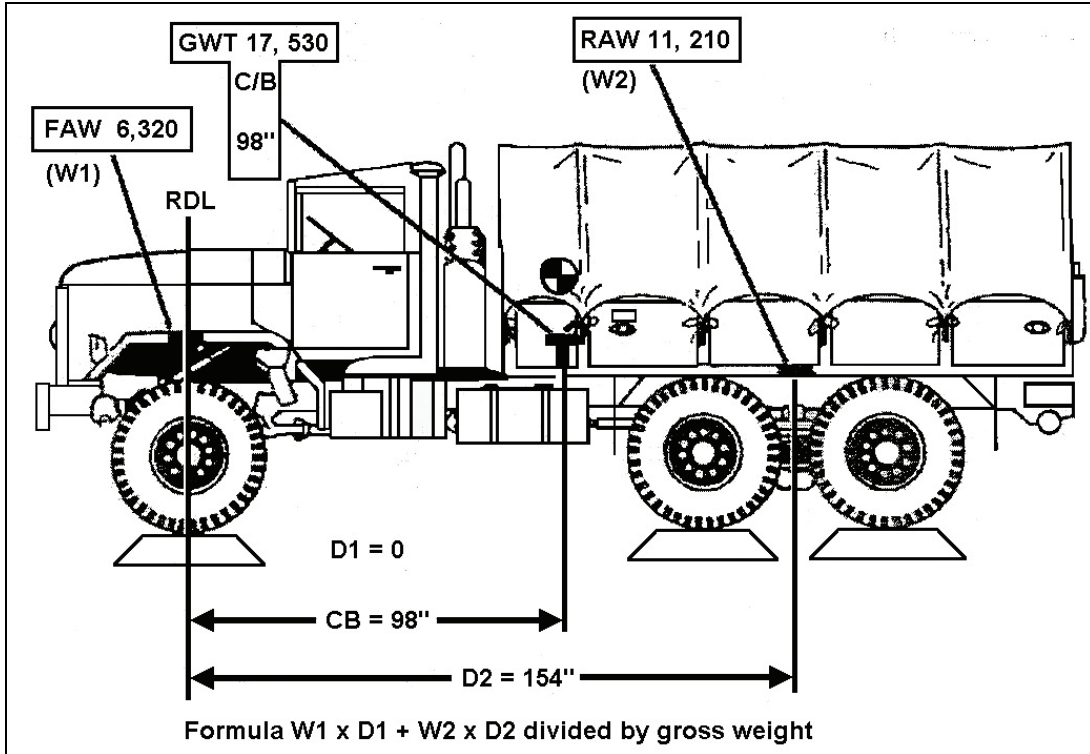


Figure 3-98. Computing CB from RDL (Front Axle) to Tandem Midpoint

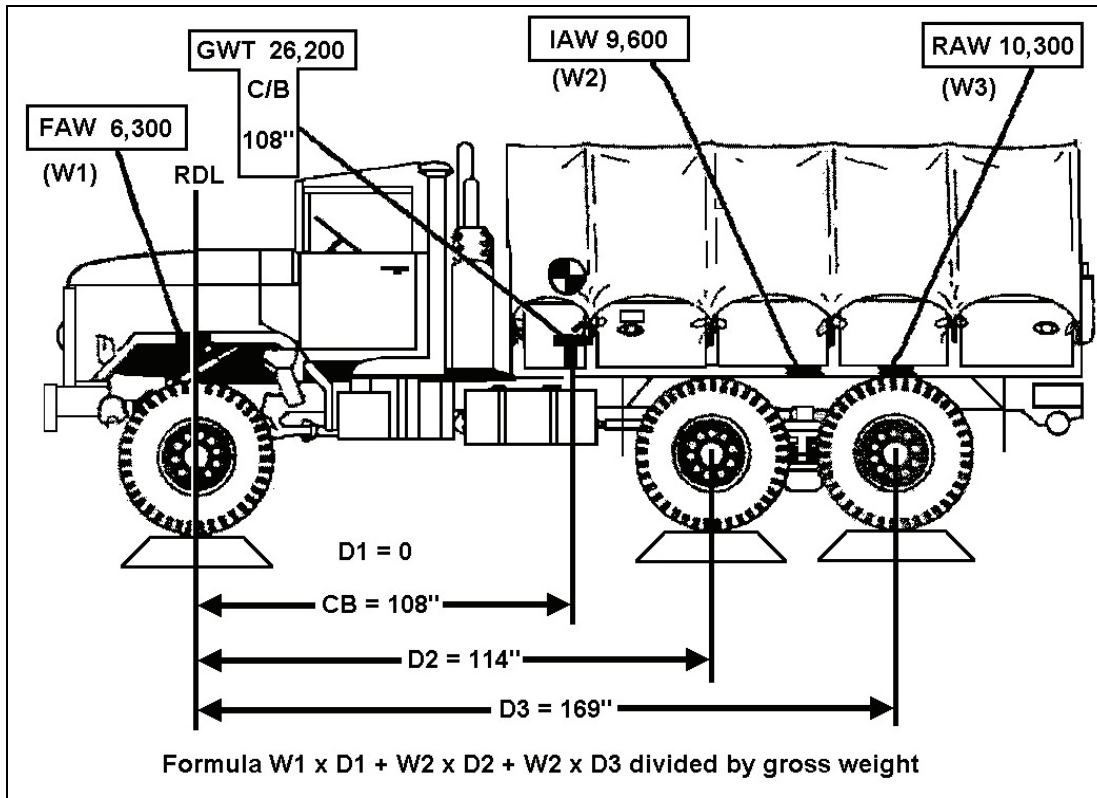


Figure 3-99. Computing Tandem Axles Separately With Separation that Exceeds 48 Inches

Performance Steps

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).

Example Computation: $2,900 (W1) \times (D1) = 0 (MOMENTS)$; $= 2,900 (W2) \times 54 (D2) = 156,000 (MOMENTS)$; $+ 3,700 (W3) \times 104 (D3) = 384,800 (MOMENTS)$.

Add axle weights together: $2,900 + 2,900 + 3,700 = 9,500$ lbs (gross weight).

Add moments together: $0 + 156,600 + 384,800 = 541,400$.

Divide moments by the gross weight: $541,000 / 9,500 = 56.9$ inches. Rounded off to nearest inch 57 inches. CB = 57 inches.

6. Direct personnel to mark center of balance for a multi-axle vehicle using the prescribed procedures.
 - a. Measure back from reference data line (front axle) 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 3-100).

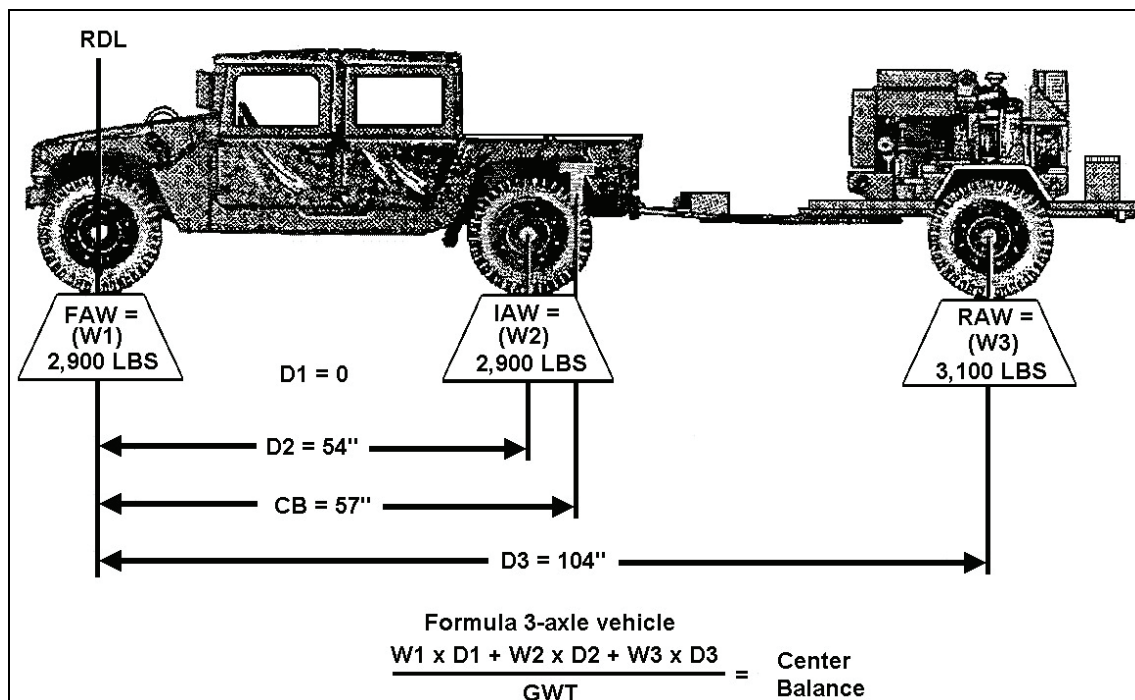


Figure 3-100. Writing Letters CB on Vertical Portion of T-shape and Annotate the CB in Inches

Performance Steps

7. Direct personnel to determine the weight of a tracked vehicle using prescribed procedures (see Figure 3-101).
 - a. Instruct driver to drive vehicle onto a platform scale large enough to accommodate the entire vehicle.
 - b. Record weight of tracked vehicle.

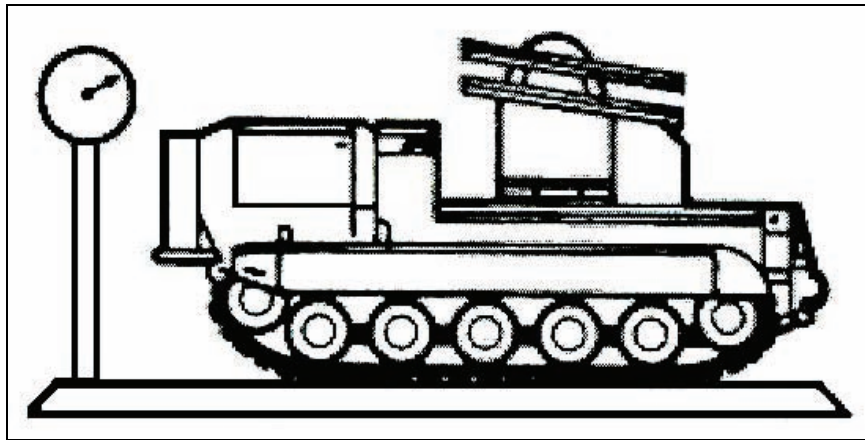


Figure 3-101. Determining the Weight of a Tracked Vehicle

8. Direct personnel to determine the center of balance of a tracked vehicle using prescribed procedures (see Figure 3-102).
 - a. Instruct 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.

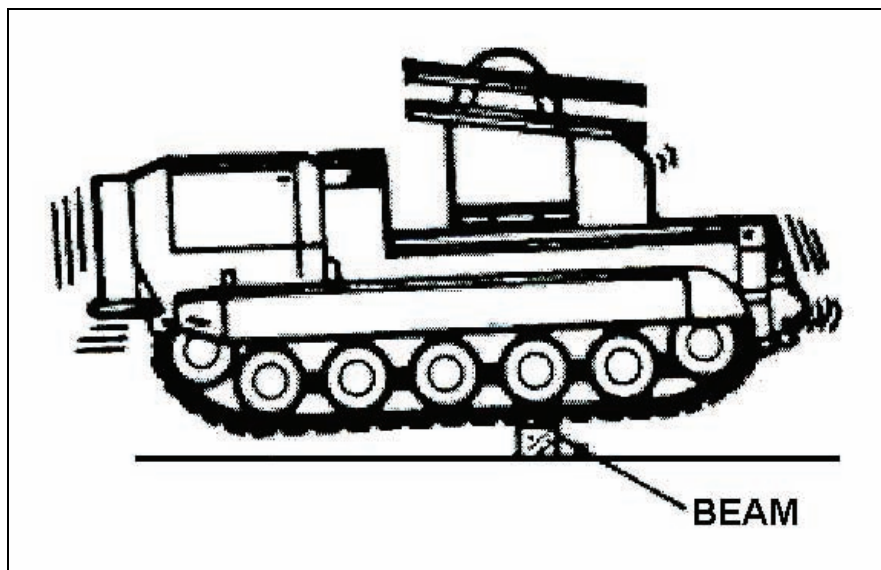


Figure 3-102. Determining the Center of Balance of a Tracked Vehicle

Performance Steps

9. Direct personnel to mark the center of balance and gross weight of a tracked vehicle using prescribed procedures (see Figure 3-103).

NOTE: Use appropriate materials when marking vehicles.

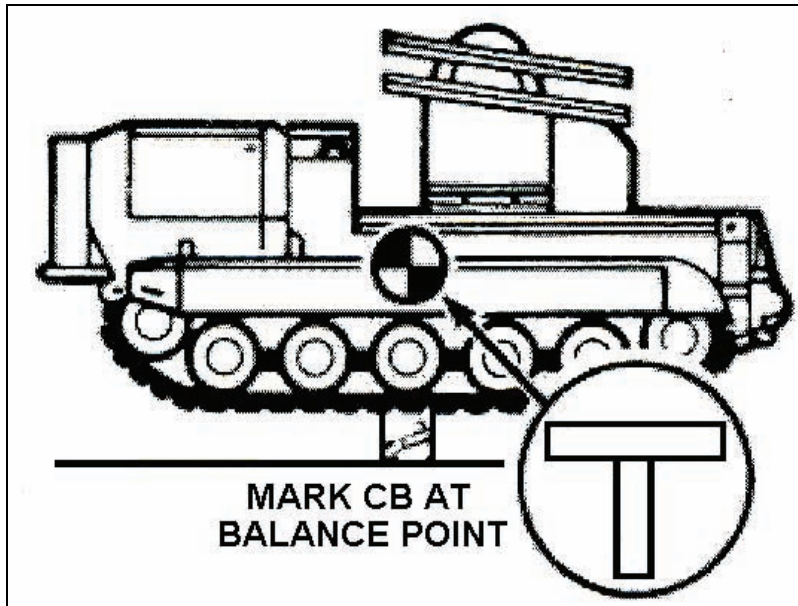


Figure 3-103. Marking the CB and Gross Weight of a Tracked Vehicle

Performance Measures

1. Ensured portable scales were serviceable and zeroed.
2. Instructed personnel to determine the weight of a multi-axle vehicle by weighing all axles (W1, W2, W3), using the prescribed procedures.
3. Instructed personnel to obtain vehicle distances (D1, D2, D3) for a multi-axle vehicle using the prescribed procedures.
4. Instructed 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.

GO NO-GO

—	—
—	—
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—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 4-01.011

FM 55-17

Related

Supervise Storage of 463L Pallet System 551-88H-2510

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, safety equipment, 463L pallets, 463L pallet top and side nets, dunnage, storage facility, and FM 55-17.

Standards: Supervised storage of 463L Pallet System in accordance with FM 55-17.

Performance Steps

1. Instruct personnel concerning basic storage guidelines for 463L pallets.
 - a. Ensure that unserviceable pallets are never stored
 - b. Ensure that pallets are cleaned before being placed in storage.
 - c. Ensure that the aluminum rails on all sides of the pallet have been checked for separation.
 - d. Ensure that the pallet surface has been checked for bowing.
 - e. Ensure that the pallet has been checked for missing or bent tie-down rings.
 - f. Ensure that the indents (notches) on the aluminum side rails have been examined for distortion. Distorted notches will hamper the effective locking of the pallet into the pallet position.
2. Instruct personnel to lay out three-point dunnage, using one of the three acceptable methods:
 - a. Wooden 4x4's 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 3-104).

NOTE: Tally the number of pallets stored and report the total to immediate supervisor.

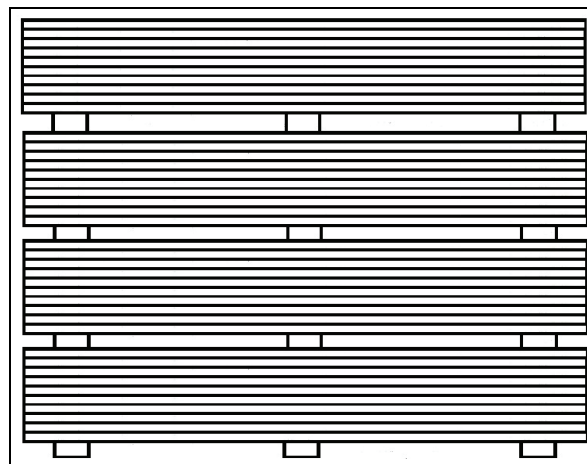


Figure 3-104. Pallets Stacked 40 High

Performance Steps

6. Direct personnel to lay out each complete set of nets (one top and two side nets) (see Figure 3-105).

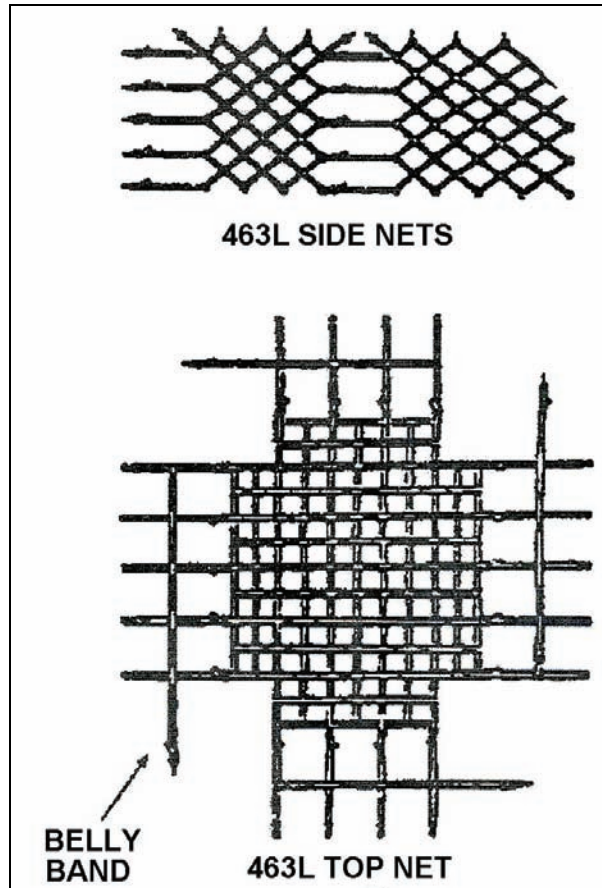


Figure 3-105. Nets Laid Out

7. Direct personnel to inspect each set of nets.
- Check for broken, frayed, or separated webbing/straps.
 - Check for missing rings, buckles, or attaching hooks.
 - 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 in accordance with prescribed guidelines.
- Stack and store nets in sets, in a cool, dry, well-ventilated storage area with overhead cover.
 - Keep nets away from heat, direct sunlight, and damp areas.
 - Keep nets away from acid, batteries, chemicals and alkalis.
 - Do not place nets on cement, wood, or asphalt floors.

Performance Steps

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. Record and report the number of unserviceable nets to pallet and net control and request replacement nets.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Instructed personnel concerning basic storage guidelines for 463L pallets.	—	—
2. Instructed 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.	—	—
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 in accordance with prescribed guidelines.	—	—
11. Reported activities to supervisor.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Supervise Building a 463L Pallet
551-88H-2512

Conditions: Assigned as a load team chief in an operational environment, given a completed risk assessment, safety equipment, 463L pallet, dunnage, top and side nets, cargo, FM 4-01.011, and FM 55-17.

Standards: Supervised the building of a 463L pallet in accordance with FM 4-01.011 and FM 55-17.

Performance Steps

1. Direct the procedures required to inspect 463L pallets for serviceability.
 - a. Show personnel how 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. Distorted notches will hamper the effective locking of the pallet into the pallet position.
 - i. Direct personnel to repeat steps 1 through 8 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 build a 463L pallet (see Figure 3-106).
 - 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 build the load to form a cube or pyramid shape (as much as possible).

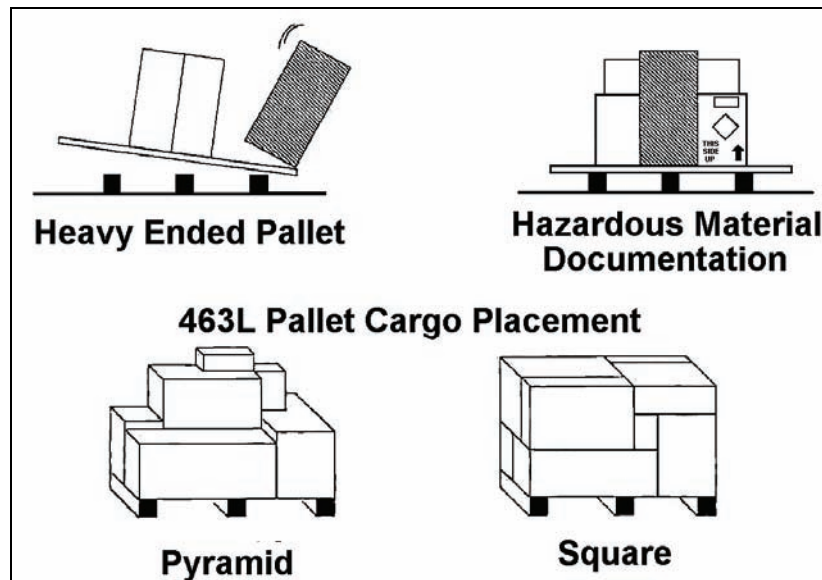


Figure 3-106. Building a 463L Pallet

Performance Steps

3. Direct the procedures required to secure cargo to the pallet
 - a. Instruct 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; or 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 3-107) and the top net (see Figure 3-108) 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 3-109).
- 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 8 Gs when properly installed.

- g. Instruct 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.

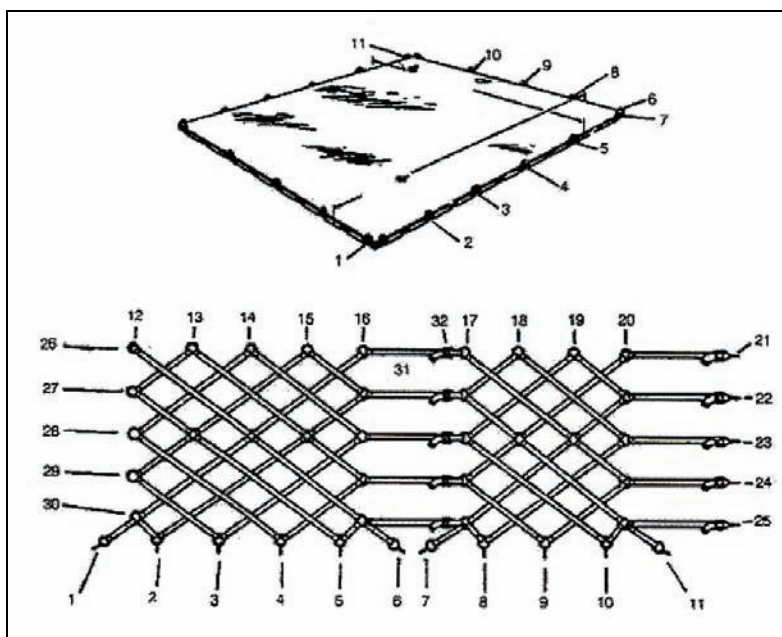


Figure 3-107. Laying Out the Two Side Nets

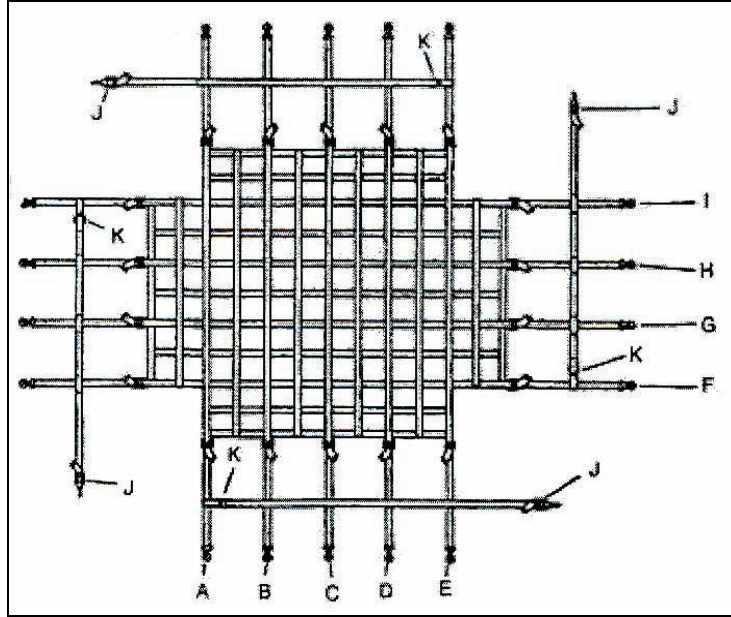


Figure 3-108. Laying Out the Top Net

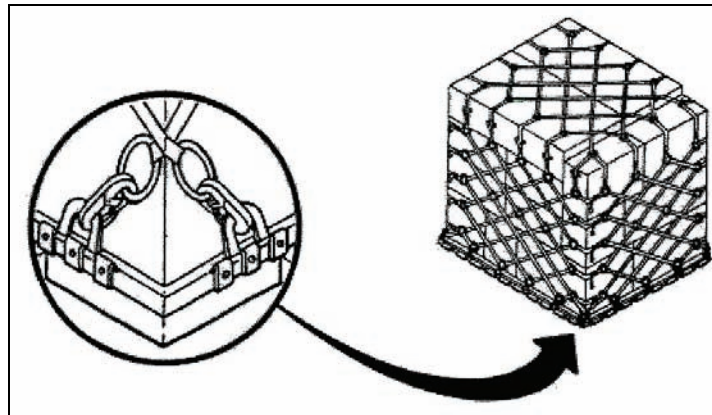


Figure 3-109. Attaching the Top Net to the Side Nets by Hooks and Rings

Performance Measures

1. Directed the procedures required to inspect 463L pallets for serviceability.
2. Directed the procedures required to build a 463L pallet.
3. Directed the procedures required to secure cargo to the pallet.
4. Inspected loaded pallet to ensure compliance with guidelines.

GO NO-GO

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—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 4-01.011

FM 55-17

Related

Subject Area 18: Primary Maintenance & Rigging Operations

Rig Yard-and-Stay With a Double Purchase**551-88H-2517**

Conditions: Assigned as a hatch gang member in an operational environment, given a completed risk assessment, safety briefing, safety equipment, cargo, ship's gear, two 12- or 14-inch blocks, 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), and FM 55-17.

Standards: Rigged yard-and-stay with a double purchase in accordance with FM 55-17.

Performance Steps

1. Perform the procedures required to rig a yard-and-stay with a double purchase (see Figure 3-110).
NOTE: Ensure the guys and preventers are in excellent condition and are equalized as much as possible.
 - a. Reeve the ends of the cargo runners through 12- and 14-inch blocks.
 - b. Shackle the ends of each cargo runner to the doubling-up pad eyes.
 - c. Secure the ends of the cargo to the booms, if the booms are equipped with doubling-up pad eyes.
 - d. 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.
 - e. Marry the two blocks together.
 - f. Raise the booms to the desired height.
 - g. Spot the booms for regular yard-and-stay operation.
2. Correct any deficiencies found in the procedures stated in step 1.

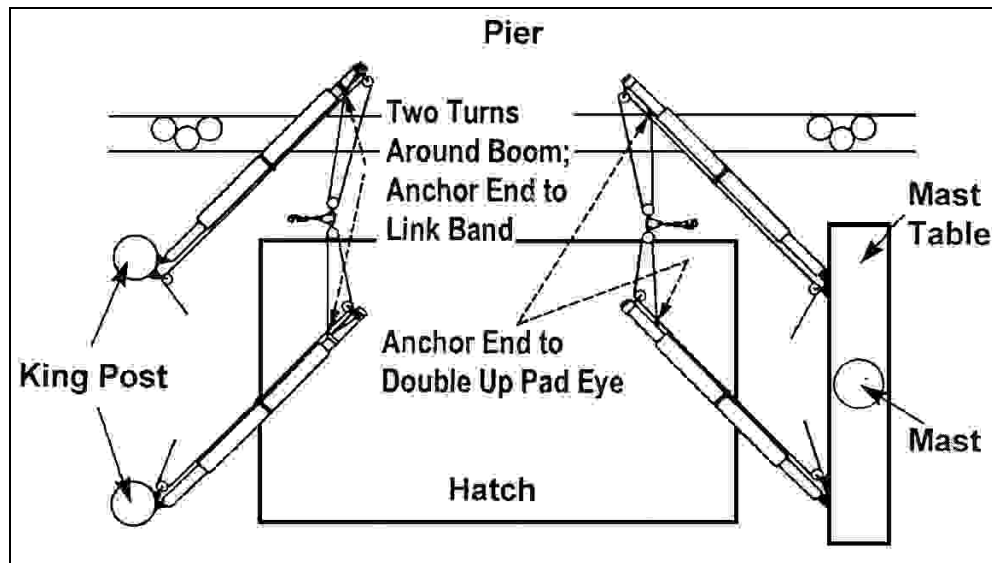


Figure 3-110. Rigging a Yard-and-Stay With a Double Purchase

Performance Measures

GO **NO-GO**

- | | | |
|---|-------|-------|
| 1. Performed the procedures required to rig a yard-and-stay with a double purchase. | _____ | _____ |
| 2. Corrected any deficiencies found in the procedures stated in step 1. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Supervise the Preparation of the Three Standard Rigs of Cargo Booms

551-88H-2518

Conditions: Assigned as a hatch foreman aboard a cargo vessel in an operational environment, given safety equipment, ship's gear, FM 5-125, and FM 55-17.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Supervised the preparation of the three standard rigs of cargo booms, ensuring proper positioning and correct rigging in accordance with FM 5-125 and FM 55-17.

Performance Steps

1. Supervise the rigging of a yard-and-stay rig (see Figure 3-111).
 - a. Instruct gang to 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. Extend this line of sight to the bulwark of the ship.
 - c. Stand under the head of the stay boom and look to the heel of the yard boom. Instruct gang to secure the guy where the line of sight extends to the bulwark.

NOTE: Make on-the-spot corrections.

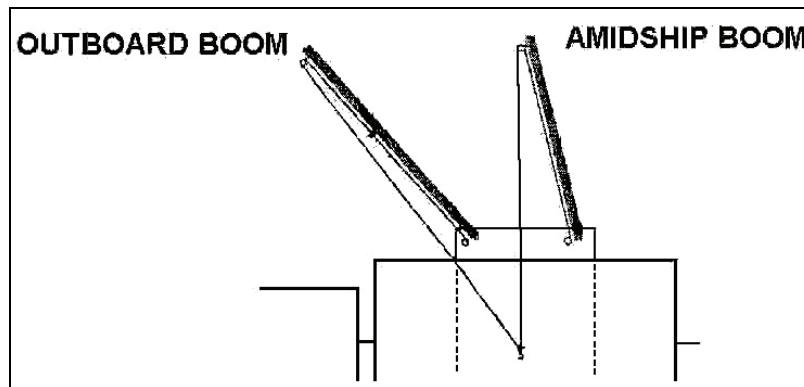


Figure 3-111. Rigging of Yard-and-Stay Rig

Performance Steps

2. Supervise the rigging of a west coast rig (see Figure 3-112).
 - a. Instruct gang to position the yard boom over the pier.
 - b. Instruct gang to 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.

NOTE: Make on-the-spot corrections.

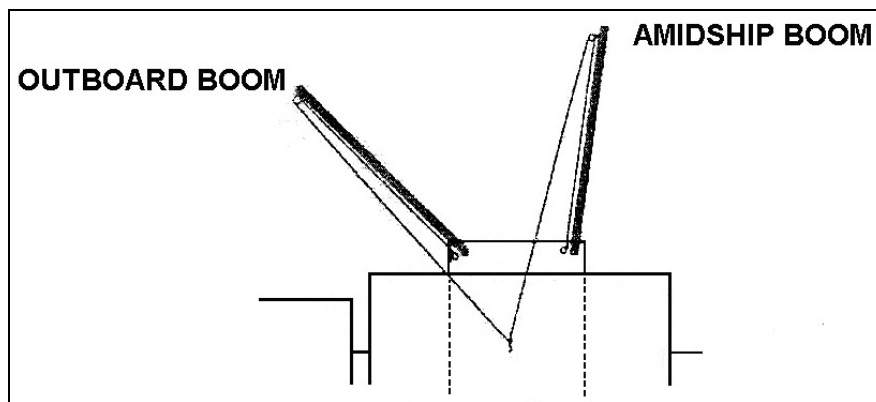


Figure 3-112. Rigging of West Coast Rig

3. Supervise the rigging of a wing-and-wing rig (see Figure 3-113).
 - a. Instruct gang to 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.

NOTE: Make on-the-spot corrections.

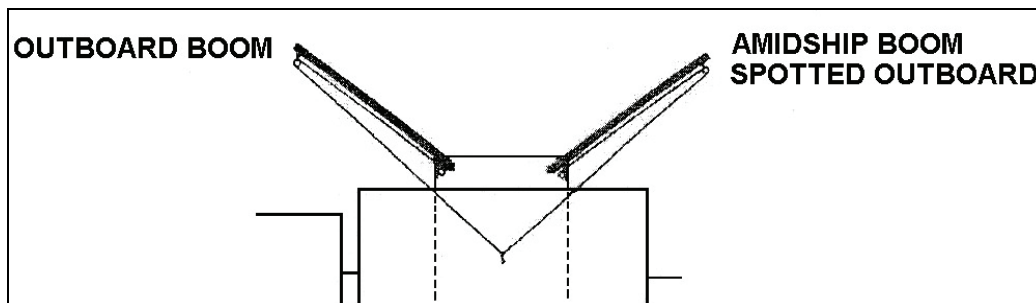


Figure 3-113. Rigging of Wing-and-Wing Rig

Performance Measures

1. Supervised the rigging of a yard-and-stay rig.
2. Supervised the rigging of a west coast rig.
3. Supervised the rigging of a wing-and-wing rig.

GO **NO-GO**

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Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**FM 5-125
FM 55-17**Related**

Supervise the Rigging of Four Booms with a Block-in-Bight 551-88H-2519

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment and safety briefing, safety equipment, ship's gear, two 12- to 14-inch traveling blocks, four shackles, and FM 55-17.

Special Conditions: 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.

Standards: Supervised the rigging of four booms with a block-in-bight, ensuring proper positioning and correct rigging in accordance with FM 55-17.

Performance Steps

1. Execute the procedures required to direct the rigging of four booms with a block-in-bight (see Figure 3-114).
 - a. 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.
 - b. 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.
 - c. 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.
 - d. Direct the hatch gang to marry two blocks together for a regular yard-and-stay operation.
 - e. Direct the hatch gang to spot the booms for a regular yard-and-stay operation.
 - f. Direct the hatch gang to equalize the guys and preventers.
2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

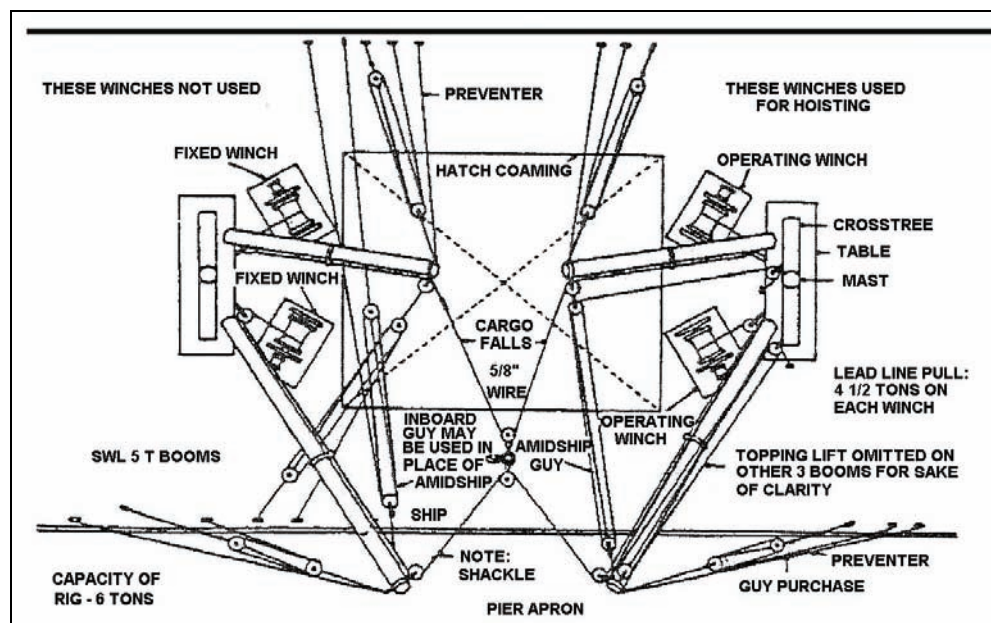


Figure 3-114. Rigging of Four Booms With a Block-in-Bight

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the rigging of four booms with a block-in-bight.	—	—
2. Ensured the correction of any deficiencies found in the procedures stated in step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Supervise the Rigging of Four Booms Doubled Up on a Double-Rig Hatch

551-88H-2521

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment and 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, two 1-inch wire straps, and FM 55-17.

Special Conditions: Lifts are to be handled up to the safe working load (SWL) of two booms and exceeding the SWL of smaller cargo runners.

Standards: Supervised the rigging of four booms doubled up on a double-rig hatch for loading or unloading a heavy lift in accordance with FM 55-17.

Performance Steps

1. Execute the procedures required to direct the rigging of four booms doubled up on a double-rig hatch (see Figure 3-115).
 - a. Direct the hatch gang to reeve the runners through a 12- to 14-inch block and double up the runners.
 - b. 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.
 - c. Direct the hatch gang to marry the doubling-up blocks to the hatch boom, as in step b.
 - d. Direct the hatch gang to shackle the two blocks together using at least a 1 1/4-inch shackle.
 - e. Check all the guys and preventers to ensure they are equalized and correctly placed.
 - f. Check booms to ensure they are equipped with either inboard or amidship guys.
 - g. Direct the hatch gang to spot the booms for the regular yard-and-stay operation.
2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

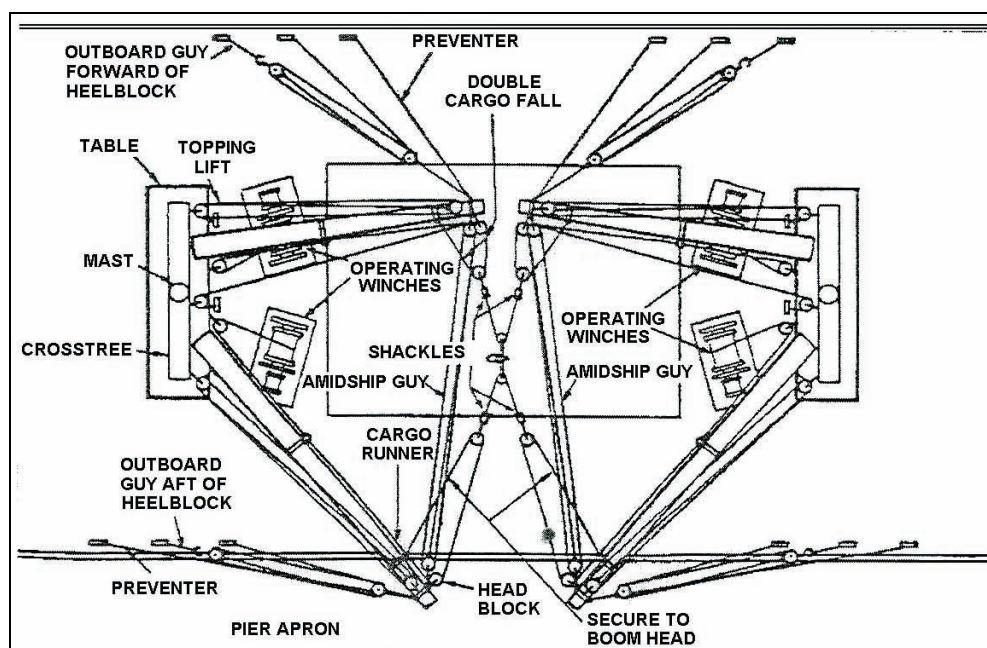


Figure 3-115. Rigging of Four Booms Doubled Up On a Double-rig Hatch

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the rigging of four booms doubled up on a double-rig hatch.	—	—
2. Ensured the correction of any deficiencies found in the procedures stated in step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

FM 55-17

Related

Supervise Application of Wire Rope Clips Needed for Lashing Cargo
551-88H-2522

Conditions: Assigned as a hatch foreman in an operational environment at a terminal, an outport, or aboard a cargo vessel, given safety equipment, wire rope, wire rope clips, crescent wrench, slide caliper, and FM 5-125.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Supervised application of wire rope clips needed for lashing cargo in accordance with FM 5-125.

Performance Steps

1. Direct the application of wire rope clips needed for lashing cargo.
 - a. Measure the diameter of the wire rope using a slide caliper (see Figure 3-116).
 - b. Compute the number of wire clips needed by using 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: $3 \times 5/8 + 1 = 15/8 + 8/8 = 23/8 = 2 \text{ } 7/8 = 3$ clips.
 - c. Instruct personnel to apply the clips, spacing them about six rope diameters apart (see Figure 3-117).
 - d. Instruct personnel to tighten clips as follows: Apply tension to the clips farthest from the eye; tighten the clips in order, working toward the eye or thimble.
 - e. Check the lashing for tightness.
2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

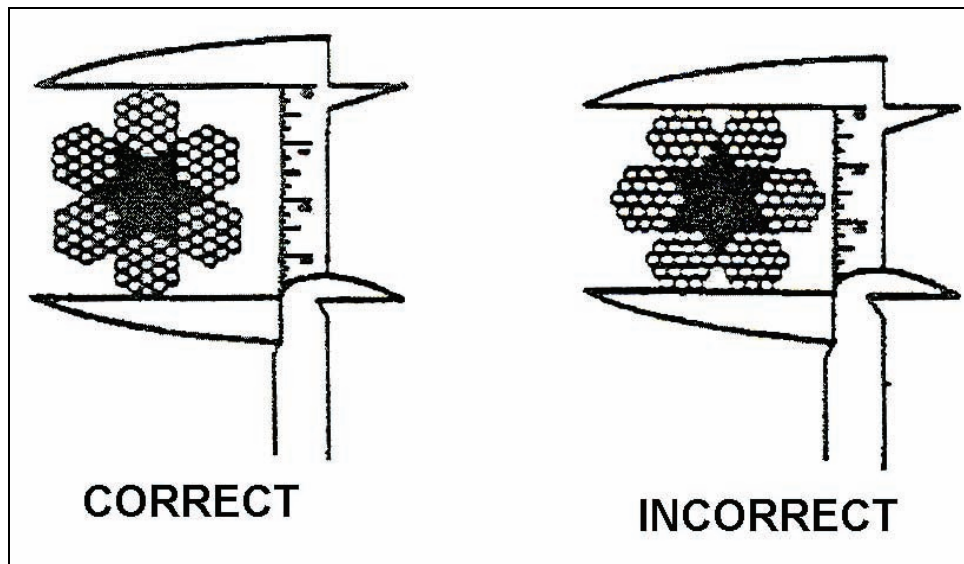


Figure 3-116. Using a Slide Caliper

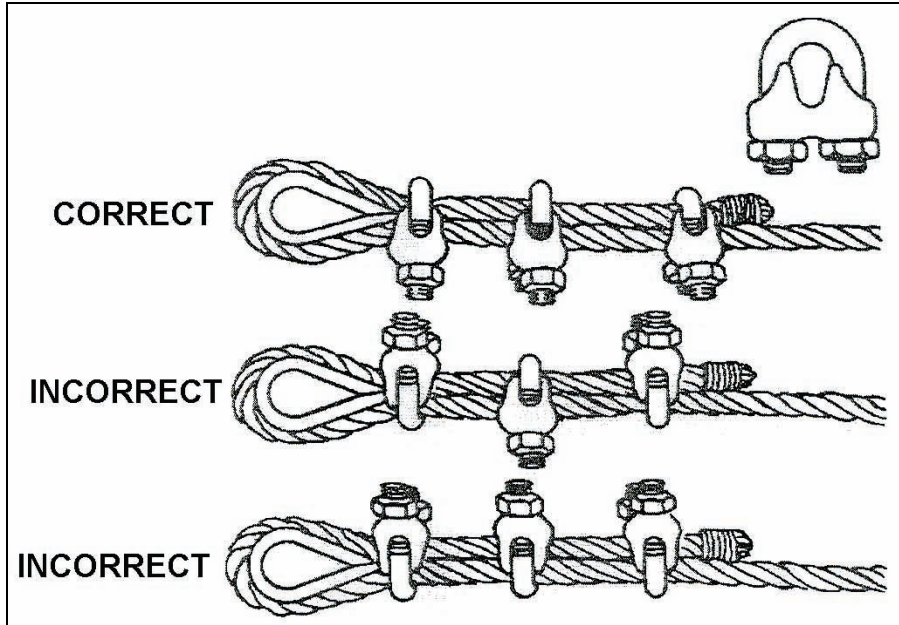


Figure 3-117. Applying and Spacing Clips

Performance Measures

1. Directed the application of wire rope clips needed for lashing cargo.
2. Ensured the correction of any deficiencies noted in the execution of procedures stated in step 1.

GO

NO-GO

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— —

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 5-125

Related

Supervise Inspection of Cargo Handling Gear

551-88H-2523

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety equipment, fiber ropes, wire ropes, chains, shackles, cargo hooks, lubricant, FM 5-125, and FM 55-17.

Standards: Supervised the inspection of cargo handling gear, ensuring all unserviceable cargo-handling gear is turned in or disposed of and that no unserviceable gear will be used for cargo operations in accordance with FM 5-125 and FM 55-17.

Performance Steps

1. Direct personnel to inspect fiber rope for serviceability.
 - a. Direct personnel to slightly untwist strands to open the rope.
 - b. Direct personnel to check the inside of the rope for mildew, musty odor, and sawdust-like material.
 - c. Direct personnel to check the inner fibers of each strand for dark stains, broken strands, and broken yarns.
 - d. Direct personnel to check the central core for signs of being overstrained.
 - e. Direct personnel to 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. Ensure personnel check wire rope for frayed, kinked, worn, corroded, or flattened sling spots.
 - b. Ensure personnel examine 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. Ensure personnel replace the tag on rope found to be unserviceable.
 - d. Ensure personnel replace wire rope if found to be unserviceable.
3. Direct personnel to inspect cargo hooks and chains for serviceability and storage.
 - a. Ensure personnel examine each link and cargo hook of the chain assembly for dents, cracks, sharp nicks or cuts, and worn surfaces.
 - b. Ensure personnel check the small radius fillets at the neck of the hook for any deviation from the original inner arc.
 - c. Ensure personnel check the chain links for stretching or distortion.
 - d. Ensure personnel check the hook and chain for rust and paint.
 - e. Ensure personnel remove rust and paint from the hook and chain.
 - f. Ensure personnel apply a light coat of lubricant to all chain links and cargo hooks in preparation for storage.
 - g. Ensure personnel store the hook and chain in a dry, well-ventilated place.
 - h. Ensure personnel report unserviceable chain to the cargo equipment supervisor for repair.
4. Direct personnel to inspect shackles and chain slings for serviceability.
 - a. Ensure personnel inspect shackles to ensure that pins are straight and screwed in.
 - b. Ensure personnel inspect chain slings for signs of stretching.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Directed personnel to inspect fiber rope for serviceability.	—	—
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 5-125
FM 55-17

Related

Supervise Topping Booms Equipped with Multiple-Topping Lifts (Boom in Cradle)
551-88H-2526

Conditions: Assigned as a hatch foreman in an operational environment, given safety equipment, ship's gear, and FM 55-17.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Supervised topping booms equipped with multiple topping lifts in accordance with FM 55-17.

Performance Steps

1. Execute the procedures required to direct topping booms equipped with multiple topping lifts (see Figure 3-118).
 - a. Assign personnel to winches, guys, runners, topping lift wire, and cathead.
 - b. Direct the hatch gang to lay the topping lift wire along the deck or over the rail.
 - c. Assign one member of the hatch gang to take five turns with the topping lift wire around the cathead in the opposite direction from the runner.
 - d. Direct the winch operator to raise the boom to the desired height.
 - e. Direct the winch operator to raise the boom to the desired height.
 - f. Assign one member of the hatch gang to remove the topping lift wire from the cathead and secure it to the topping lift chain.
 - g. Direct the hatch gang to swing the booms to the working position.
2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

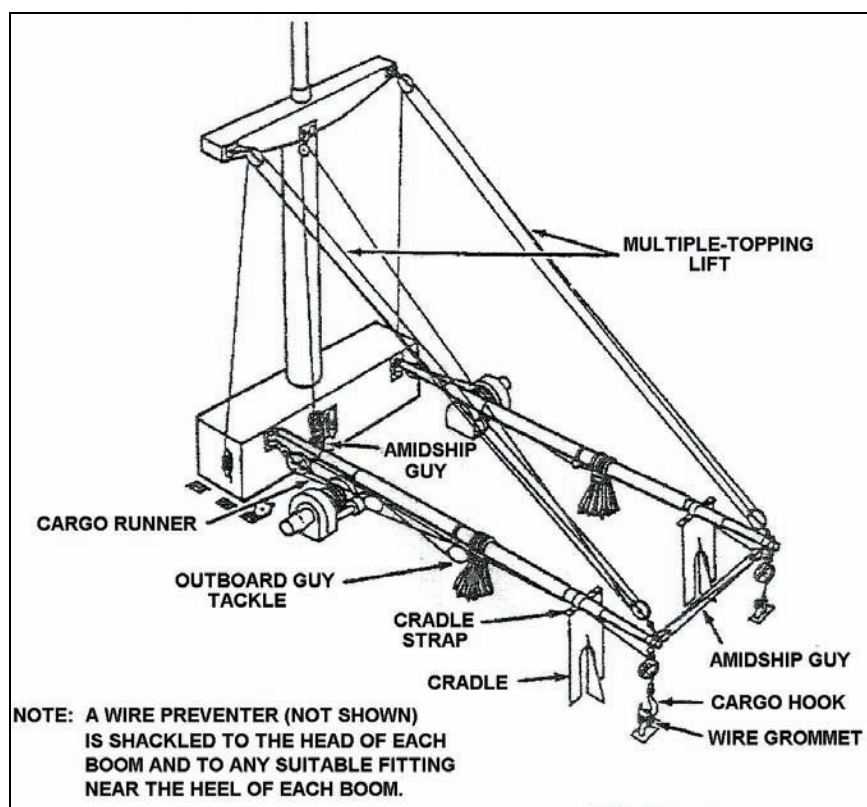


Figure 3-118. Direct Topping Booms Equipped With Multiple Topping Lifts

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct topping booms equipped with multiple topping lifts.	—	—
2. Ensured the correction of any deficiencies found in the procedures stated in step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Subject Area 19: Primary Cargo Documentation

Perform Cargo Planning Calculations**551-88H-2520**

Conditions: Assigned as a hatch foreman in an operational environment at a terminal, an outport, or aboard a cargo vessel, 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, DD Form 1387 (Military Shipping Label), and FM 5-125.

Standards: Performed cargo planning calculations, ensuring accuracy, in accordance with FM 5-125.

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) ($SWC = D^2$, where $D = \text{diameter}$). Example: $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$, $SWC = \frac{1}{4}$ 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: $SWC = 8D^2$. Square the diameter (multiply it by itself). Example: $\frac{1}{2}$ inch diameter rope $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$.
 - 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: $\frac{1}{4} \times 8 = 8/4 = 2$; $SWC = 2$ 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 6 (constant).

NOTE 1: Rounding down to tenths of a STON provides a greater margin of safety; for example, $3.43 = 3.4$; $3.47 = 3.4$.

NOTE 2: The formula for figuring the SWC of chains is as follows: $SWC = D^2 \times 6$ (SF) = STONs; $BS = 6(SF) \times 5 = 30$ STONs.

Where: $SWC = \text{safe working capacity}$, $D^2 = \text{diameter squared}$, $SF = \text{safety factor}$, $STON = \text{short ton}$, $BS = \text{breaking strength}$.

4. Compute tension of slings.
 - a. Multiply the weight of the load by the length of the slings (see Figure 3-119).
 - 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. $T = W \times L / N \times V$; Where: $T = \text{tension on a single leg}$, $W = \text{weight of the load}$, $N = \text{number of slings}$, $L = \text{length of sling leg}$, $V = \text{vertical distance of sling}$.

Example: $1,800 \times 8 / 2 \times 6 = 14,400 / 12 = 1,200$ pounds; Where: $W = 1,899$ pounds, $N = 2$ legs, $L = 8$ feet, $V = 6$ feet.

- d. Mark the sling with the SWC which (in this example) = 1,200 pounds.

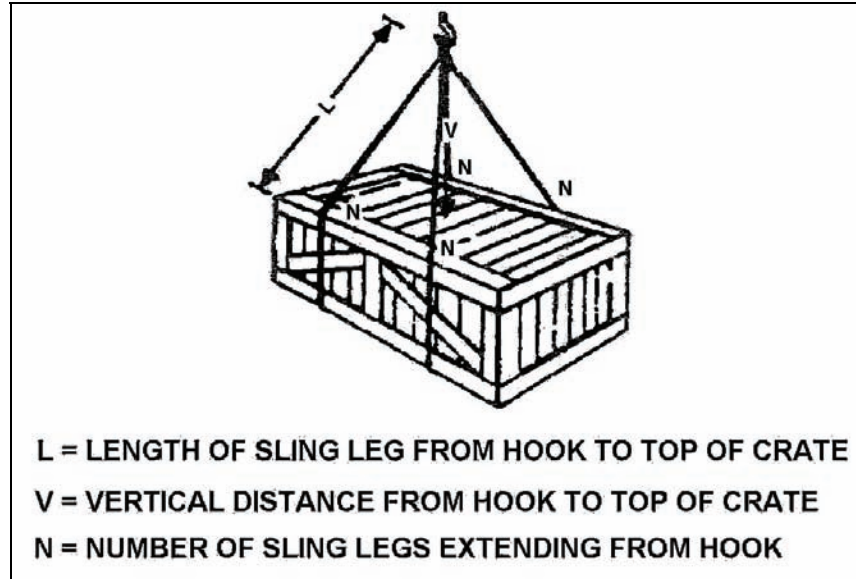


Figure 3-119. Multiplying Weight of the Load by the Length of the Slings

Performance Steps

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 LTs into STONs: Multiply the number of LTs by 1.12 STONs (example: 500 LTs x 1.12 STONs = 560 STONs).
 - b. Convert STONs into LTs: Divide the number of STONs by 1.12 (example: 560 STONs divided by 1.12 = 500 LTs).
 - 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 DD FORM 1387
 FM 5-125

Related

Locate Cargo Designated for Discharge 551-88H-2524

Conditions: Assigned as a hatch foreman in an operational environment, given safety equipment, cargo, cargo stowage plan, and FM 55-17.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Located cargo designated for discharge in accordance with FM 55-17.

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 3-120) for the hatch to which assigned.
 - c. Compare codes shown in the hatch diagram with the code for the port.

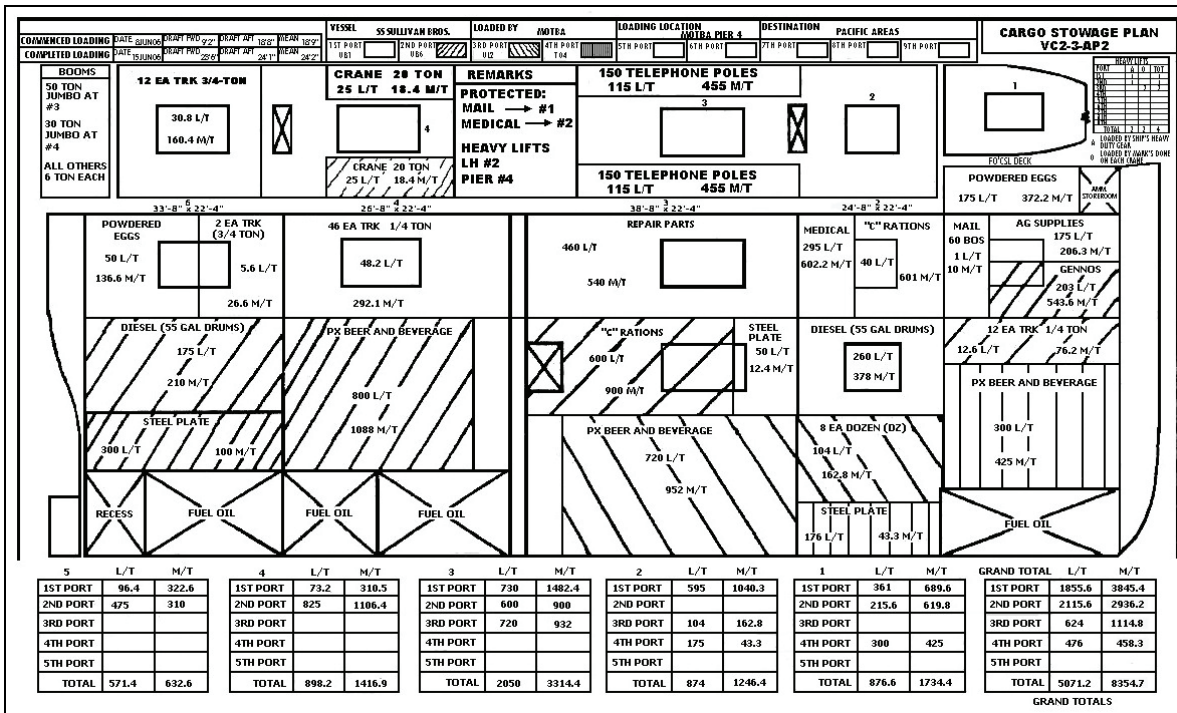


Figure 3-120. Stowage Plan

Performance Steps

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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Review Cargo Markings to Facilitate Handling

551-88H-2525

Conditions: Assigned as a hatch foreman in an operational environment at a terminal or outport, given safety equipment, cargo with markings, DD Form 1387 (Military Shipment Label), DOD 4500.32-R, Volume I, and FM 55-17.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Reviewed cargo markings to facilitate handling, ensuring that all cargo is properly sorted by the consignee and is properly categorized in accordance with FM 55-17.

Performance Steps

1. Check for the application of the procedures for the proper use of cargo markings to facilitate handling.
 - a. Check the use of the standard addressing marking on DD Form 1387 when sorting or stowing cargo to facilitate handling (see Figure 3-121).
 - b. Check the expeditious handling of cargo marked with code 999 (expedited handling) in the required delivery date (RDD) block of DD Form 1387.
 - c. Check the use of the project code, if any, to aid in keeping components together for tallying and port clearance.
 - d. Check the use of the TO 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.
 - e. In an overseas area, check for use of the "Ultimate Consignee" or "Mark For" block to determine storage or stowage location.
 - f. Check the use of 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.
 - g. Check the inspection of containers for labels or markings to find out whether or not the containers contain dangerous or hazardous material.
 - h. Check the annotation of special handling, identification data, and storage location.
 - i. Check that personnel comply with the requirement to use precautionary, special handling labels, and markings. This reduces damage to cargo and danger to personnel.
 - j. Check the use of category symbols, and label colors when supplies are being sorted by commodity or when there is an urgent need for a specific item.
2. Annotate and report deficiencies.

MILITARY SHIPMENT LABEL		<i>Form Approved. OMB No. 0704-0188</i>
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
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 3-121. Use of the Standard Addressing Marking

Performance Measures

1. Checked for the application of the procedures for the proper use of cargo markings to facilitate handling.
2. Annotated and reported deficiencies.

GO **NO-GO**

____ ____
____ ____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- DD FORM 1387
- DOD 4500.32-R, VOL I
- FM 55-17

Related

Subject Area 20: Primary Cargo Operations (Ship and Shore)

**Determine Materials-Handling Equipment Required for Operations
551-88H-2503**

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment, safety equipment, cargo vessel, cargo, prestowage plan or stowage plan, material handling equipment (MHE), and FM 55-17.

Standards: Determined type and quantity of MHE required for operations, in accordance with FM 55-17.

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 to load or discharge the type of cargo at assigned hatch using the following prescribed criteria.
 - a. Use gas or electric forklifts to handle cargo on the pier and in the warehouse.
 - b. Use gas or electric forklifts aboard a vessel to handle itemized cargo.
 - c. Use only electric forklifts to handle ammunition.
 - d. Use warehouse tractors to push or tow equipment.
 - e. Use warehouse tractors and trailers to transport cargo over smooth surfaces.
 - f. Use cranes to discharge heavy lifts above the capacity of the ship's gear or in place of the ship's gear.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Subject Area 21: Primary Hagglands Crane Operations

Supervise Preventive Maintenance Checks and Services
551-88H-2402

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety equipment, a Hagglands crane, DA Form 2404 (Equipment Inspection and Maintenance Worksheet), and Hagglands Crane Operator's Manual.

Standards: Supervised preventive maintenance checks and services for the Hagglands crane in accordance with Hagglands Crane Operator's Manual.

Performance Steps

1. Execute the procedures required to direct the performance of preventive maintenance checks and services for the Hagglands crane.
 - a. Direct crane operators to check oil levels and oil level sight glass.
 - b. Direct crane operators to check oil filter indicators for clogging.
 - c. Direct crane operators to ensure brake setting indicator is in the correct position.
 - d. Direct crane operators to check wire ropes for fraying, kinking, worn spots, or flattened spots.
 - e. Direct crane operators to check slewing lock levers for proper engaging and disengaging.
 - f. Direct crane operators to check slewing lock pin for rust or distortion.

NOTE: Ensure personnel start the feed pump 24 hours before operation during winter months, and place the WINTER/SUMMER switch on WINTER if the outside temperature is below 40 degrees. Place switch on SUMMER if the outside temperature is above 40 degrees.

2. Direct personnel to annotate deficiencies on DA Form 2404 and report them to the hatch foreman or the ship's mate.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the performance of preventive maintenance checks and services for the Hagglands crane.	—	—
2. Directed personnel to annotate deficiencies on DA Form 2404 and report them to the hatch foreman or the ship's mate.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

<p>Required DA FORM 2404 HAGGLUNDS CRANE OPERATOR'S MANUAL</p>	<p>Related</p>
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**Supervise Preparation of Haggglunds Crane for Operations
551-88H-2403**

Conditions: Assigned as a section chief in an operational environment, given safety equipment, a Haggglunds crane, DA Form 2404 (Equipment Inspection and Maintenance Worksheet), and Haggglunds Crane Operator's Manual.

Special Conditions: Risk assessment and safety briefing conducted prior to task.

Standards: Supervised preparation of Haggglunds crane for operators in accordance with Haggglunds Crane Operator's Manual.

Performance Steps

1. Execute the procedures required to direct the performance of preoperational checks for the Haggglunds crane.
 - a. Ensure that the ship is not listing more than 5 degrees.
 - b. Direct personnel to check the hydraulic oil level by looking through the sight glass indicator on the oil tank to ensure the oil level is just below the maximum mark.
 - c. Ensure personnel start the feed pump 24 hours before operation, during the winter months, and place the WINTER/SUMMER switch on WINTER if the outside temperature is below 40 degrees. Place switch on SUMMER if the outside temperature is above 40 degrees.

NOTE: This step is rated only in winter months.

- d. Direct personnel to check the brake indicators (point and scale), ensuring that the pointers do not register in the red.
 - e. Direct personnel to check hook blocks, ensuring that wires run correctly through the sheaves.
 - f. Direct personnel to unclamp jib (boom) from parking stand or to release hook from pad eye.
 - g. Direct personnel to check cab control levers, ensuring that they are in the NEUTRAL position.
2. Direct personnel to annotate deficiencies on DA Form 2404 and report them to the hatch foreman or the ship's mate.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the performance of preoperational checks for the Haggglunds crane.	—	—
2. Directed personnel to annotate deficiencies on DA Form 2404 and report them to the hatch foreman or the ship's mate.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
DA FORM 2404	
HAGGLUNDS CRANE OPERATOR'S MANUAL	

Supervise Stowing and Unstowing Haggglunds Crane in Parking Support
551-88H-2404

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety equipment, a Haggglunds crane, and Haggglunds Crane Operator's Manual.

Standards: Supervised stowing and unstowing of Haggglunds crane in parking support in accordance with Haggglunds Crane Operator's Manual.

Performance Steps

1. Execute the procedures required to direct the unstowing of the Haggglunds crane in parking support.
 - a. Ensure the boom is unclamped.
 - b. Direct the operator to start the Haggglunds crane and turn the single/twin selector to the SINGLE position.
 - c. Direct the crew to remove the hook from the fastening device and slightly raise the hook.
 - d. Direct the operator to raise the boom (jib) to the desired height.
 - e. Direct the operator to slew the crane toward the area of operation.

2. Execute the procedures required to direct the stowing of the Haggglunds crane in parking support.
NOTE: The Haggglunds crane is put in the Park Support position after operation; therefore this task will start with the unstowing of the Haggglunds crane from the Park Support position.

- a. Direct the operator to start the Haggglunds crane.
- b. Direct the operator to slew (swing) the crane into the stowage position
- c. Direct the operator to lower the hook slowly.
- d. Direct the operator to lower the boom (jib) until it stops.
- e. Direct the operator to turn on the boom (jib) radius bypass switch and hold it in position.
- f. Direct the operator to lower the boom (jib) slowly onto the parking support.
- g. Direct the operator to lower the cargo hook to the cargo hook fastening device that locks the boom (jib) in the parking support and place the hook in the locking device.
- h. Direct the operator to slack off on the cargo hook to prevent stress to the wire sheaves and winches.
- i. Direct the operator to stop the motor of the crane and switch off all accessories.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the unstowing of the Haggglunds crane in parking support.	—	—
2. Executed the procedures required to direct the stowing of the Haggglunds crane in parking support.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
HAGGLUNDS CRANE OPERATOR'S MANUAL	

**Supervise Setup Procedures on Haggglunds Crane for Single Mode Operations
551-88H-2405**

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety briefing, safety equipment, a Haggglunds crane, and Haggglunds Crane Operator's Manual.

Standards: Supervised setup procedures on a Haggglunds crane for single mode operations in accordance with Haggglunds Crane Operator's Manual.

Performance Steps

1. Execute the procedures required to direct the setup procedures on a Haggglunds crane for single mode operations (see Figure 3-122).
 - a. Direct the crane operator to switch the SINGLE/TWIN control to SINGLE.
 - b. Direct personnel to disengage the slew (swing) lock lever.
 - c. Direct the crane operator to start the crane.
 - d. Check to ensure that the crane operator uses the luffing/swing control lever to raise, lower, and swing the boom (jib).
 - e. Check to ensure that the crane operator uses the hoisting control lever to raise or lower the cargo hook.
 - f. Check to ensure that the crane operator positions both control levers in the NEUTRAL position to stop the movement of the boom (jib) and raise and lower the cargo hook.
 - g. Direct the crane operator to turn on the EMERGENCY SHUTDOWN switch if the low oil light comes on.

2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

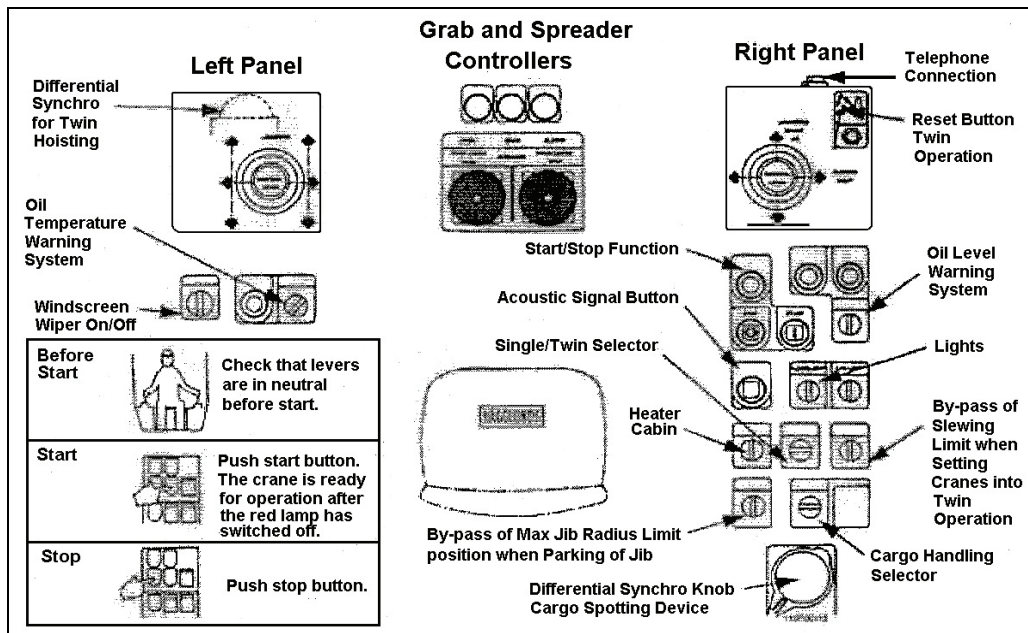


Figure 3-122. Setup Procedures for Single Mode Operations

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the setup procedures on a Haggglunds crane for single mode operations.	—	—
2. Ensured the correction of any deficiencies found in the procedures stated in step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

HAGGLUNDS CRANE OPERATOR'S
MANUAL

Related

**Supervise Setup Procedures on Haggglunds Crane for Twin Mode Operations
551-88H-2406**

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety briefing, safety equipment, a Haggglunds crane, and Haggglunds Crane Operator's Manual.

Standards: Supervised setup procedures on a Haggglunds crane for twin mode operations in accordance with Haggglunds Crane Operator's Manual.

Performance Steps

1. Assign an assistant crane operator to assist the master crane operator.
2. Execute the procedures required to direct the setup procedures on a Haggglunds crane for twin mode operations.
 - a. Direct the crane operator to start slave/single crane.
 - b. Direct the slewing/swinging of the slave crane next to the master crane.
 - c. 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.
 - d. Direct the crane operator to shut down the slave/single crane and move over the master crane.
 - e. Direct the crane operator to place the single/twin control switch to the twin mode.
 - f. Direct the crane operator to start the cranes from the master crane to begin operations.
 - g. Direct the signalman to hoist the hook and raise the boom (jib).
 - h. Direct the operator to slew (swing) the crane 360 degrees in either direction.
 - i. Direct the operator to synchronize the booms by using the twin reset button and moving the booms up and down until both booms move together at the same height.
 - j. 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.
 - k. 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Assigned an assistant crane operator to assist the master crane operator.	—	—
2. Executed the procedures required to direct the setup procedures on a Haggglunds crane for twin mode operations.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
HAGGLUNDS CRANE OPERATOR'S MANUAL	

**Supervise Spreader Operations with Hagglands Crane using 20-and 40-foot Spreader
551-88H-2407**

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety briefing, safety equipment, a Hagglands crane, 20- and 40-foot spreaders, TM 10-3990-204-12&P, and Hagglands Crane Operator's Manual.

Standards: Supervised spreader operations with Hagglands crane using 20- and 40-foot spreaders in accordance with TM 10-3990-204-12&P and Hagglands Crane Operator's Manual.

Performance Steps

1. Execute the procedures required to direct spreader operations with a Hagglands crane using 20- and 40-foot spreaders.
 - a. Direct personnel to attach tag lines to the spreader frame.
 - b. Direct personnel to attach the spreader to the cargo hook.
 - c. Direct the operator to wait for the signalman's signal to hoist.
 - d. Direct the operator to move the spreader horizontally until alignment of the flippers make contact with the sides and ends of the container.
 - e. Direct the signalman to signal the operator to lower the spreader onto the container.
 - f. Ensure all four spreader bayonet cones enter all four container corner fittings evenly.
 - g. Instruct 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 Hagglands crane.

- h. Direct the operator to hoist the container when the signalman gives the signal.
- i. Direct the operator to move the container to the designated stowage area of the vessel.
- j. 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.
- k. Direct the operator to lower the container slowly into the hatch or onto the deck when the signalman gives the signal.
- l. 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 Hagglands crane.

2. Ensure the correction of any deficiencies found in the procedures stated in step 1.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct spreader operations with a Hagglands crane using 20- and 40-foot spreaders.	—	—
2. Ensured the correction of any deficiencies found in the procedures stated in step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
HAGGLUNDS CRANE OPERATOR'S MANUAL TM 10-3990-204-12&P	

**Supervise Opening of Hatch Covers
551-88H-2408**

Conditions: Assigned as hatch gang supervisor in an operational environment, given a completed risk assessment, assigned hatch, a hatch gang, a signalman, a safety briefing, safety clothing, a crane with operator, and FM 55-50.

Standards: Supervised opening/closing of a hatch aboard a cargo vessel in accordance with FM 55-50.

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 man 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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.	—	—

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-50

Related

Supervise Loading of Flatracks Aboard a Cargo Vessel
551-88H-2409

Conditions: Assigned as a hatch gang supervisor in an operational environment given a completed risk assessment, hatch gang, safety briefing, safety clothing, flatracks, taglines, and FM 55-17.

Standards: Supervised loading/discharge of a loaded flatrack aboard a cargo vessel in accordance with FM 55-17.

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 flatracks.
4. Ensure that tag lines are attached to the flatrack.
5. Ensure personnel receive direction for the lowering of 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Ensured personnel followed directions on attaching the spreader to the hook.	—	—
2. Ensured that the spreader was positioned over the flatrack (load) or hatch (discharge).	—	—
3. Ensured personnel received direction in placement of the folding flap of the flatrack back onto flatracks.	—	—
4. Ensured that tag lines were attached to the flatrack.	—	—
5. Ensured personnel received direction for the lowering of 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 (loading) or the hatch (discharging).	—	—
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Supervise Stowage of Containers Aboard a Cargo Vessel 551-88H-2412

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment, ship's gear, tag lines, containers, lashing equipment, and FM 55-17.

Special Conditions: 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.

Standards: Ensured hatch gang members properly stowed containers aboard a cargo vessel in accordance with FM 55-17.

Performance Steps

1. Ensure personnel check twist locks to make sure they engage and disengage (see Figure 3-124).
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 3-125).
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 3-126).
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.

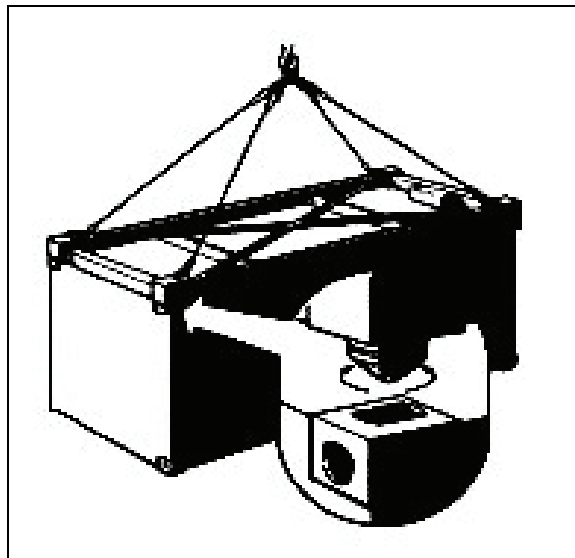


Figure 3-124. Twist Locks

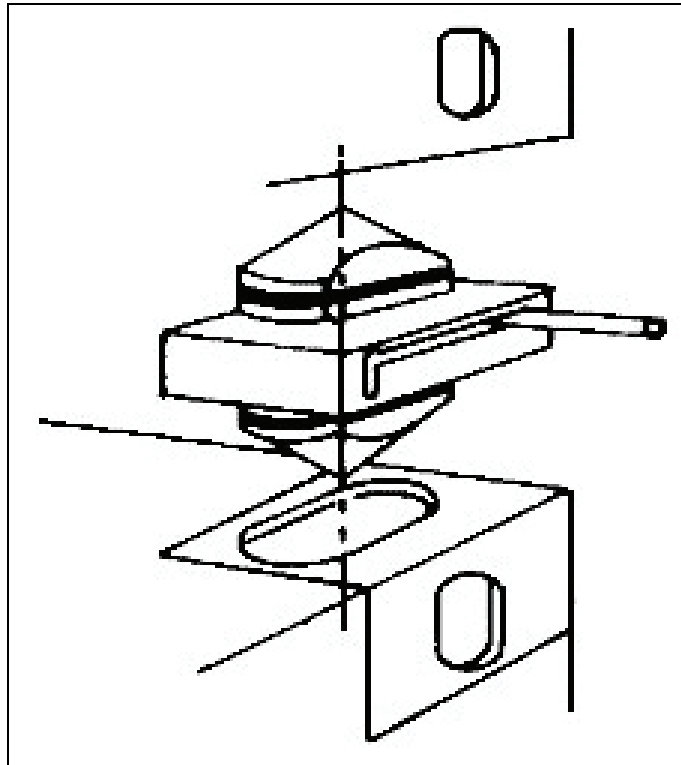


Figure 3-125. Stack Fitting Twist Lock Devices

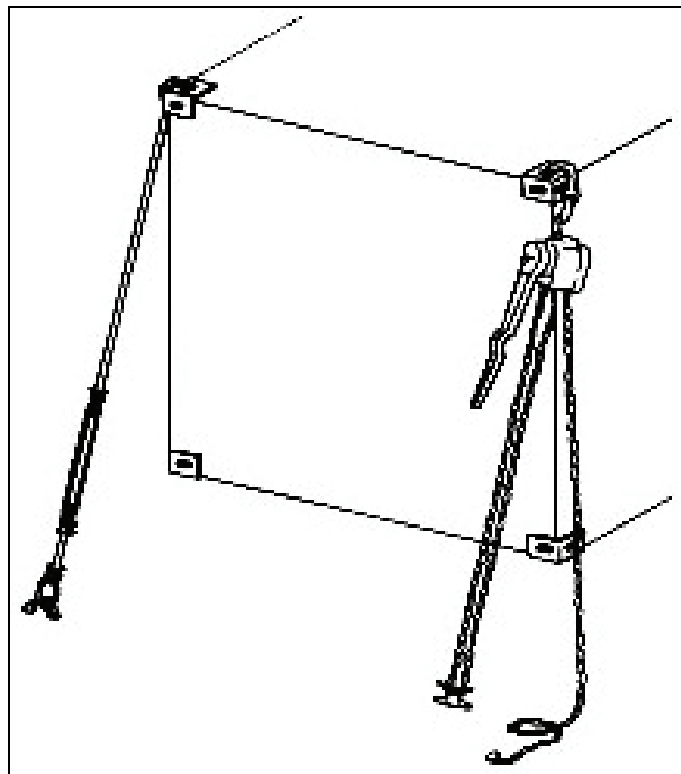


Figure 3-126. Lashing Assemblies

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References
Required
 FM 55-17

Related

Subject Area 22: Primary 40-Ton Crane Operations

Signal Crane Operator Using Standard Hand Signals
551-88H-2601

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a 40-ton crane with operator, safety briefing, safety clothing, and TM 5-3810-306-10.

Standards: Performed hand signals without error and injury to personnel or damage to equipment or cargo in accordance with TM 5-3810-306-10.

Performance Steps

1. Check to see that the swing of the crane will not bring the boom tip within 10 feet of power lines.
NOTE: One workman on the job should be designated as signalman; operators should obey signals from him only. A signal to stop should be obeyed no matter who gives it.
2. Check to see that the boom and the counterweight are clear of all obstructions and people before signaling the operator to swing the boom.
3. Check 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.
4. Check to see that the boom is clear of overhead obstructions before signaling operator to raise the boom.
5. Check 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.
6. Check to see that there is no one underneath the hook or load who would be endangered before signaling operator to lower the hook.
7. Inform the operator, whenever possible, of the weight of heavy lifts when going from light to heavy lifts.
8. Coordinate with the crane operator to find a safe working capacity of the crane at the radius being used.
9. Position yourself so that you are visible to the operator while giving all signals.
10. Tell the operator to secure the crane when there will be lengthy delays, such as lunch breaks or cargo securing operations.
11. Signal the operator to stop immediately upon observing any safety hazards.
12. Inform the hatch foreman immediately if any safety hazards arise.
13. Use the correct signals to accomplish steps 1 through 12 (see Figure 3-127).

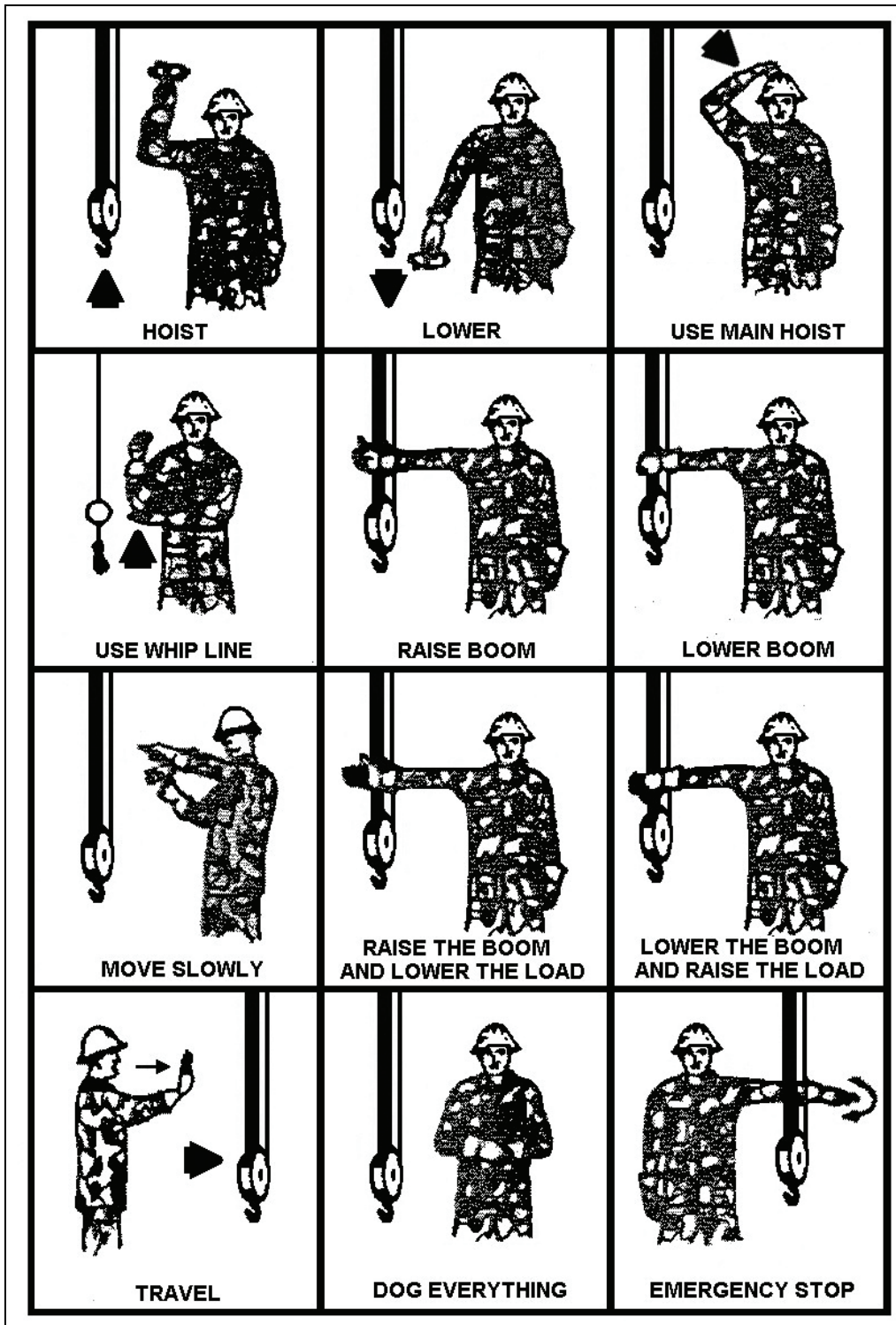


Figure 3-127. Standard Crane Hand Signals

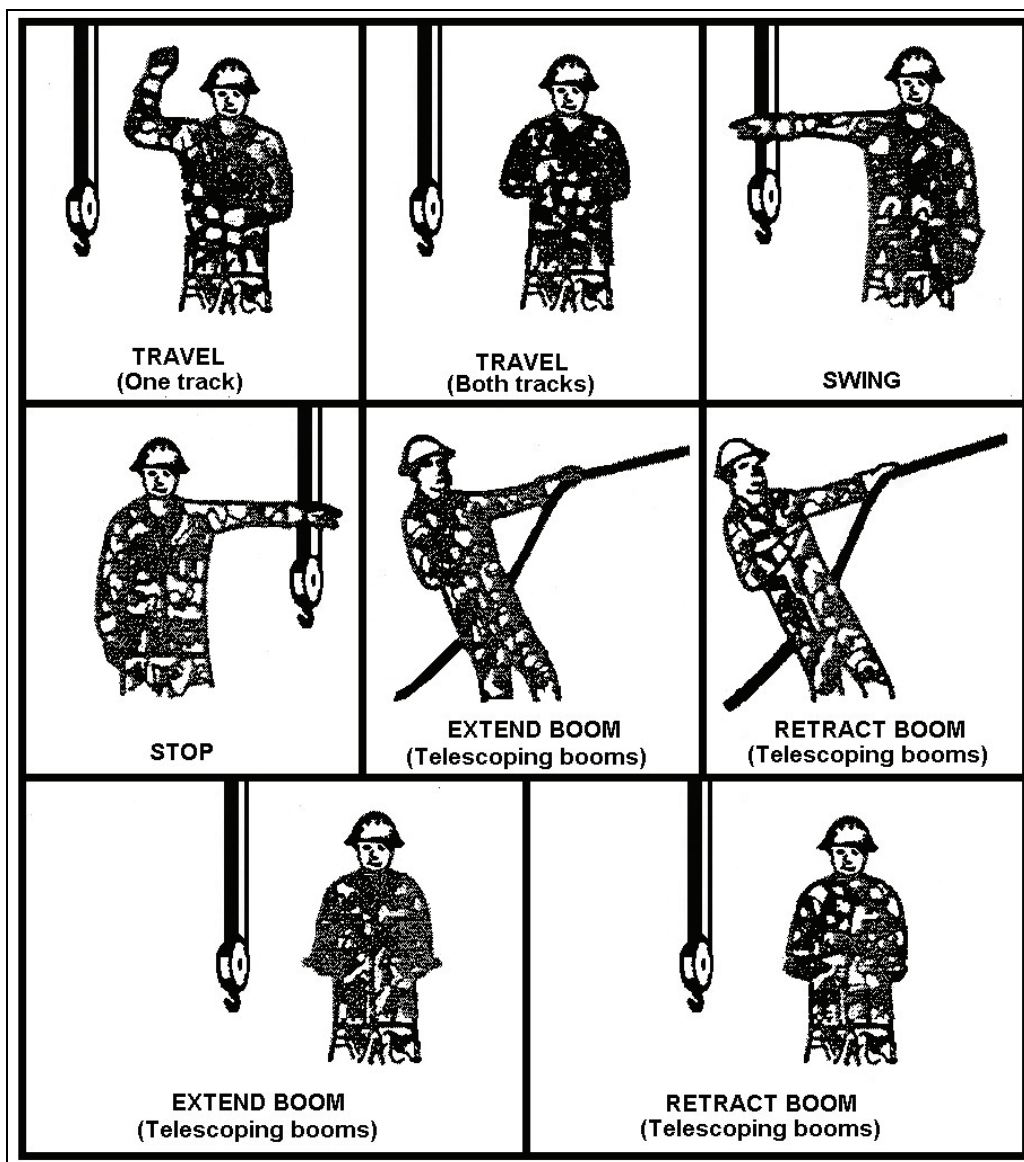


Figure 3-127. Standard Crane Hand Signals (continued)

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Checked to see that the swing of the crane would not bring the boom tip within 10 feet of power lines.	—	—
2. Checked to see that the boom and the counterweight were clear of all obstructions and people before signaling the operator to swing the boom.	—	—
3. Checked to see that all personnel were clear of the under carriage and the path of the crane if the crane's location was to be changed.	—	—
4. Checked to see that the boom was clear of overhead obstructions before signaling operator to raise the boom.	—	—
5. Checked to see that the cargo handlers were aware of his intentions and that the load was slung correctly before signaling the operator to raise the hook.	—	—

Performance Measures	<u>GO</u>	<u>NO-GO</u>
6. Checked to see that there is no one underneath the hook or load who would be endangered before signaling operator to lower the hook.	—	—
7. Informed the operator, whenever possible, of the weight of heavy lifts when going from light to heavy lifts.	—	—
8. Coordinated with the crane operator to find a safe working capacity of the crane at the radius being used.	—	—
9. Positioned yourself so that you were visible to the operator while giving all signals.	—	—
10. Told the operator to secure the crane when there will be lengthy delays, such as lunch breaks or cargo securing operations.	—	—
11. Signaled the operator to stop immediately upon observing any safety hazards.	—	—
12. Informed the hatch foreman immediately if any safety hazards arose.	—	—
13. Used the correct signals to accomplish steps 1 through 12.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
TM 5-3810-306-10

Related

Supervise Rough Terrain Container Crane (RTCC) Operations

551-88H-2607

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, a signalman, operator's manual, tag lines with handlers, RTCC operator and assistant operator, safety clothing, an RTCC and container to load/off-load, a designated off-load area, TM 5-3810-306-10, and Grove Manufacturers Manuals 1-187-000004-1 and 7-187-000004-2.

Standards: Supervised the lifting, loading/unloading, and driving of a load/container to a designated unloading point using an RTCC without damage to container, container crane, or injury to personnel in accordance with manufacturers' manuals.

Performance Steps

1. Supervise operator lifting a container with a 40-ton RTCC 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.

2. Supervise 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 between 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 between 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.

3. Supervise 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.

Performance Steps

- 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.

Performance Measures

GO **NO-GO**

- | | | |
|---|---|---|
| 1. Supervised operator lifting a container with a 40-ton RTCC. | — | — |
| 2. Supervised operator driving a RTCC with a load (pick and carry). | — | — |
| 3. Supervised RTCC operator shutdown procedures. | — | — |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- GROVE MANUFACTURER MANUAL 1-187-000004-1
- GROVE MANUFACTURER MANUAL 7-187-000004-2
- TM 5-3810-306-10

Related

Subject Area 23: Primary Cargo Operations (Ship)

Supervise Stowage of General Cargo as Assigned Hatch**551-88H-2509**

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a safety briefing, hatch gang, ship's gear, general hatch set, dunnage, cooping, shoring, lashing materials, safety clothing, and FM 55-17.

Standards: Ensured general cargo stowage and securing was conducted in accordance with FM 55-17.

Performance Steps

1. Check to ensure 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 to ensure that the cargo is stowed so that it may 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Checked to ensure that the cargo space was being used properly.	—	—
2. Checked the placement of cargo and ensured it would not be damaged by movement of the vessel at sea	—	—
3. Checked to ensure that the cargo was stowed so that it may 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References
Required
FM 55-17

Related

Supervise Stowage of Wheeled and Tracked Vehicles on RO/RO Deck**551-88H-2513**

Conditions: Assigned as a cargo supervisor in an operational environment, aboard a Roll-on/Roll-off (RO/RO) vessel, given a completed risk assessment, traffic control plan, RO/RO flow plan, stowage plan, wheeled and tracked vehicles, lashing materials, and FM 55-17.

Standards: Supervised the stowage of wheeled and tracked vehicles on a RO/RO deck in accordance with FM 55-17.

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. 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 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 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 are moved vehicles to be stored on the main deck aft (MDA) 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 so long as they 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, or 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Directed the stowage of vehicles on the lower decks.	—	—
2. Directed the stowage 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.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Attach Semiautomatic Toplift Spreader Devices to Container 551-88H-2516

Conditions: Assigned as a hatch gang supervisor in an operational environment, given a completed risk assessment, a safety briefing, safety clothing, container, a semiautomatic toplift spreader device, a winch, winch operator, and FM 55-60.

Standards: Ensured that all twist locks on the spreader device engaged the top corner fittings of the container before it was hoisted and that the bottom twist locks were disengaged from the trailer or chassis before hoisting, using correct hand and arm signals to the winch operator in accordance with FM 55-60.

Performance Steps

1. Instruct personnel to attach the toplift spreader to the cargo hook.
2. Signal the winch operator to hoist the toplift spreader.
3. Signal the winch operator to lower the toplift spreader device onto the container (see Figure 3-128).
4. Ensure that the toplift spreader device is secured to the four corners of the container.
5. Instruct the operator to engage the twist locks.
6. Instruct the operator to disengage the container bottom twist locks.
7. Signal the winch operator to hoist container.

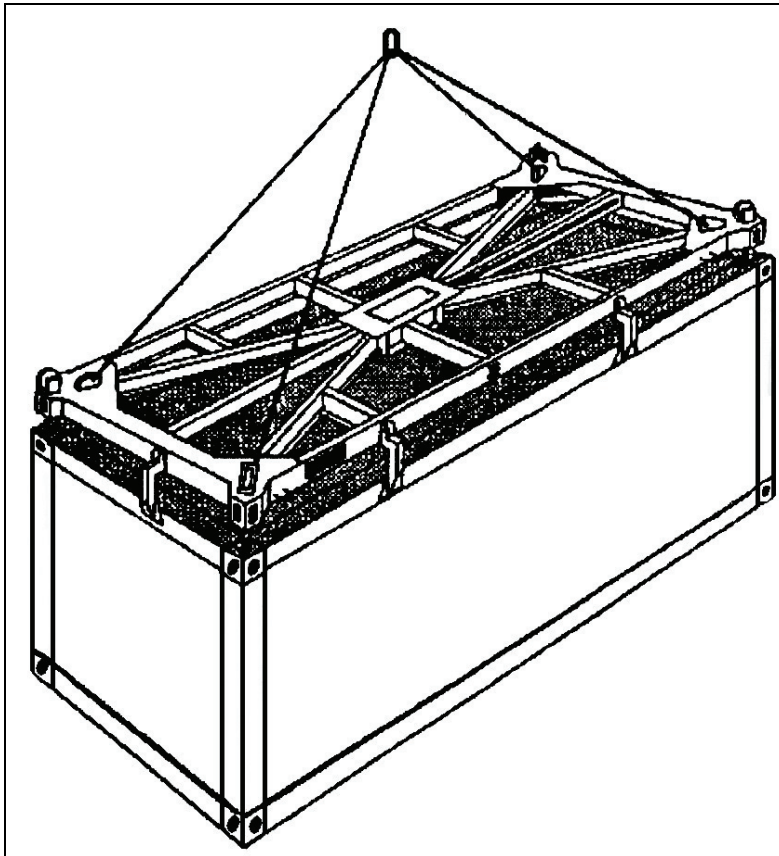


Figure 3-128. Attaching a Semiautomatic Toplift Spreader Device to a Container

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Instructed personnel to attach the toplift spreader to the cargo hook.	—	—
2. Signaled the winch operator to hoist the toplift spreader.	—	—
3. Signaled the winch operator to lower the device to the container.	—	—
4. Ensured that the toplift spreader device was secured to the four corners of the container.	—	—
5. Instructed the operator to engage the twist locks.	—	—
6. Instructed the operator to disengage the container bottom twist locks.	—	—
7. Signaled the winch operator to hoist the container.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-60

Related

Supervise Winch Operations

551-88H-2528

Conditions: Assigned as a cargo specialist in an operational environment, given a completed risk assessment, a safety briefing, hatch gang, winch, winch operator cargo to load/unload, and FM 55-17.

Standards: Ensured winch operations were conducted in accordance with FM 55-17.

Performance Steps

1. Inspect winches to ensure runners are wound in the correct direction and are free of foreign objects.
NOTE: The hatch foreman is required to make on-the-spot corrections during winch operations.

2. Direct winch operator to open ventilator cover and ensure the ventilator safety pin pops out.
NOTE: If the ventilator safety pin does not pop out, you may have to pull it out.

3. Ensure operator turns each power switch to the ON position one at a time.

4. Ensure operator pushes winch control to the lowering position to remove the cargo hook from the pad eye.

5. Ensure operator actuates winch controls to confirm winches are running smoothly.

6. Check to ensure that operating safety procedures are followed by observation.

7. Direct operator to plumb the draft before hoisting the cargo.

8. Check to ensure that the signalman is giving correct standard hand signals to the winch operator.

9. Check to ensure that the signalman is visible to the winch operator at all times during the operation.

10. Check the winch operator for smoothness of operation and ability to control the swing of the draft.

11. Check to ensure that the winch operator turns the switch to OFF before leaving winch controls.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Inspected winches to ensure runners were wound in the correct direction and were free of foreign objects.	—	—
2. Directed winch operator to open ventilator cover and ensured the ventilator safety pin popped out.	—	—
3. Ensured operator turned each power switch to the ON position one at a time.	—	—
4. Ensured operator pushed winch control to the lowering position to remove the cargo hook from the pad eye.	—	—
5. Ensured operator actuated winch controls to confirm winches were running smoothly.	—	—
6. Checked to ensure that operating safety procedures were followed by observation.	—	—
7. Directed operator to plumb the draft before hoisting the cargo.	—	—
8. Checked to ensure that the signalman gave correct standard hand signals to the winch operator.	—	—
9. Checked to ensure that the signalman was visible to the winch operator at all times during the operation.	—	—

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
10. Checked the winch operator for smoothness of operation and ability to control the swing of the draft.	—	—
11. Checked to ensure that the winch operator turned the switch to OFF before leaving winch controls.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

FM 55-17

Related

Supervise Stowage of Wheeled and Tracked Vehicles Aboard a Cargo Vessel (Breakbulk)
551-88H-2529

Conditions: Assigned as a section chief in an operational environment, given a completed risk assessment, safety briefing, hatch gang to supervise, prestowage plan, cargo vessel (breakbulk), cooping and shoring set, dunnage, lashing materials, and FM 55-17.

Standards: Supervised stowage of wheeled and tracked vehicles aboard a cargo vessel to prevent movement and damage to vehicles or cargo vessel in accordance with FM 55-17.

Performance Steps

1. Supervise stowage of wheeled vehicle(s) aboard a cargo vessel.
 - a. Ensure each vehicle land in the hold so that it is headed in the direction of stowage.
 - b. Ensure members of a hatch gang, release the brake and steer while rest of gang pushes or uses a drag line to spot the vehicle(s).
 - c. Ensure vehicle(s) are stowed in a fore-and-aft direction and set vehicle handbrake, unless the foreman specifies an athwartship direction.
 - d. Ensure both sides, the fronts, and the backs of vehicle(s) are blocked
 - e. Ensure vehicle(s) are brace to the bulkhead, stanchions, or other blocked vehicles.
 - f. Ensure blocking is use to shore up the bumper or chassis to relieve tension from vehicle(s).
 - g. Ensure each vehicle is restrained using lashing equipment.
2. Supervise stowage of tracked vehicles aboard a cargo vessel
 - a. Ensure members lay a solid floor or planking not less than 2 inches thick.
 - b. Ensure members of a hatch gang, land each vehicle in the hold so that it is headed in the direction of stowage.
 - c. Ensure vehicle(s) move from the square of the hatch to its stow location. If vehicle(s) is inoperable, use a dragline.
 - d. Ensure vehicle(s) is stowed in a fore-and-aft direction, controlling the direction of vehicle(s) by breaking or releasing the tracks.
 - e. Ensure vehicle(s) are secure by placing gear lever in NEUTRAL (multifuel) and engaging the handbrake (for gasoline driven vehicles, leave the vehicle(s) in gear with handbrake set).
 - f. Ensure movable turrets are locked or lashed.
 - g. Ensure vehicle(s) weighing less than 18 tons is secured 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. Ensure vehicle(s) is lashed with at least four wire turnbuckles or with a quick-release chain lashing.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Supervised stowage of wheeled vehicles aboard a cargo vessel.	—	—
2. Supervised stowage of tracked vehicles aboard a cargo vessel.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

**Supervise Donning Crew Work Vest
551-88H-2530**

Conditions: Assigned as a section chief in an operational environment, given a crew work vest, life jacket, crewman, and FM 55-502.

Standards: Supervised donning a crew work vest in accordance with FM 55-502.

Performance Steps

1. Supervise donning of the crew work vest.

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.

- 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 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 pull snug.
- j. Ensure steps h and i are repeated for the other leg.

Performance Measures

GO NO-GO

- | | | |
|--|-------|-------|
| 1. Supervised donning of the crew work vest. | _____ | _____ |
| 2. Supervised donning of the life jacket. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-502

Related

**Supervise Safety Procedures in the Handling of Dangerous or Hazardous Cargo
551-88H-2531**

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment, safety briefing, safety clothing, dangerous or hazardous cargo; CFR 46, Part 146, and Volume 2, CFR 49, Parts 100 thru 199.

Standards: Supervised safety procedures in the handling of dangerous or hazardous cargo ensuring availability of fire fighting equipment, personnel complying with NO SMOKING signs, and the inspecting for fire hazards in accordance with CFR 46, Part 146, and Volume 2, CFR 49, Parts 100 thru 199.

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. Instruct hatch gang members on the safe handling and slinging of cargo.
 - g. Instruct 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
CFR 46	
CFR 49	

Determine Compatibility of Dangerous or Hazardous Cargo
551-88H-2532

Conditions: Assigned as a hatch foreman in an operational environment, given a completed risk assessment, safety clothing, dangerous or hazardous cargo; CFR 46, Parts 146 thru 150.150 and Volume 2, CFR 49, Parts 100 thru 185.

Standards: Determine compatibility of dangerous or hazardous cargo with 100 percent accuracy in accordance with CFR 46, Parts 146 thru 150.150, and Volume 2, CFR 49, Parts 100 thru 185.

Performance Steps

1. Determine compatibility of dangerous or hazardous cargo.
 - a. 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.
 - b. Locate the DOT class of the other commodity to be stowed on the left side of the compatibility chart.
 - c. Draw an imaginary line on the compatibility chart horizontally and vertically from the two classes of commodities to be stowed.
 - d. Determine from looking at the point where the two lines intersect, whether the two commodities may be stowed together.
 - e. Notify the appropriate authority if discrepancies exist.
2. Correct any deficiencies found in the procedures stated in step 1.
 - a. The operator of a vessel must carry on board a copy of a letter or message to indicate that pairs of selected items are carried on board as an exception.
 - b. The commandant authorizes, on a case by case basis, exceptions to the rule in this subpart under the following conditions (see CFR 46, Parts 146 thru 150.150).
 - (1) When two cargoes shown to be incompatible in Figure 3-129 meet the standards for a compatible pair, or
 - (2) When two cargoes shown to be compatible in Figure 3-129 meet the standards for an incompatible pair.

CARGO COMPATIBILITY	REACTIVE GROUPS	CARGO 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																					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	X	3
4. ORGANIC ACIDS		X						X	X	X													4
5. CAUSTICS		X	X	X	X								X	X									5
6. AMMONIA		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	7
8. ALKANOL AMINES		X	X	X	X								X	X	X	X	X	X	X	X	X	X	8
9. AROMATIC AMINES		X	X	X									X	X									9
10. AMIDES		X	X	X			X						X										10
11. ORGANIC ANHYDRIDES		X	X	X			X	X	X	X													11
12. ISOCYANATES		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	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						X										20
21. PHENOLS, CRESOLS		X	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 3-129. Cargo Compatibility Chart

Performance Measures

GO NO-GO

- 1. Determined compatibility of dangerous or hazardous cargo. _____
- 2. Corrected any deficiencies found in the procedures stated in step 1. _____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
CFR 46
CFR 49

Related

Subject Area 25: Primary Cargo Operations (Rail)

**Compute Blocking and Bracing Materials Required for Rail Movement
551-88H-2305**

Conditions: Assigned as a team chief in an operational environment, given a completed risk assessment, pen or pencil, paper, tape measure, safety clothing, designated area, Transportation Coordinator's Automated Information for Movement System II (TC-AIMS II) access, TM 55-2200-001-12, and FM 4-01.011.

Standards: Computed blocking and bracing materials required for rail movement in accordance with TM 55-2200-001-12 and FM 4-01.011.

Performance Steps

1. Check unit TC-AIMS II report to determine what vehicles are listed.
2. List blocking and bracing material requirements for vehicles on TC-AIMS II report.
3. List vehicles not on TC-AIMS II report and compute blocking and bracing material requirements.
4. Prepare to allow for sufficient amounts of materials if units are required to construct patterns of blocking and bracing materials according to AAR rules.
5. Submit a request for blocking and bracing to the installation transportation officer (ITO). If there is no ITO, submit the request for blocking and bracing materials to the shipping activity or responsible supply agency.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Checked unit TC-AIMS II report to determine what vehicles are listed.	—	—
2. Listed blocking and bracing material requirements for vehicles on TC-AIMS II report.	—	—
3. Listed vehicles not on TC-AIMS II report and compute blocking and bracing material requirements	—	—
4. Prepared to allow for sufficient amounts of materials if units are required to construct patterns of blocking and bracing materials according to AAR rules.	—	—
5. Submitted a request for blocking and bracing to the installation transportation officer (ITO). If there was no ITO, submitted the request for blocking and bracing materials to the shipping activity or responsible supply agency.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 4-01.011
TM 55-2200-001-12

Related

**Supervise Rail Loading Operations
551-88H-2306**

Conditions: Assigned as a load team supervisor in an operational environment, given wheeled and tracked vehicles, railcars, load plan, bracing, blocking, and tie-down equipment, Association of American Railroads (AAR) Interchange Rules, TM 55-2200-001-12, and FM 55-17.

Standards: Supervise rail loading operations in accordance with AAR Interchange Rules governing the loading of commodities on railcars.

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: Instruct guides not to walk backwards on the railcars.
5. Monitor 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 in accordance with 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Ensured vehicles arriving at the ramp are 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 flatcar that the vehicles were being driven onto.	—	—

Performance Measures	<u>GO</u>	<u>NO-GO</u>
6. Ensured that vehicles were positioned in their allocated spaces on the railcar in accordance with 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

AAR INTERCHANGE RULES
FM 55-17
TM 55-2200-001-12

Related

Supervise Loading of Cargo In and Out of Containers

551-88H-2527

Conditions: Assigned as a cargo specialist in an operational environment given a completed risk assessment, a safety briefing, DD Form 1384 (Transportation Control and Movement Document), cargo to be loaded, cargo handling personnel, container, All Terrain Lifter Army System (ATLAS) forklift or M4K forklift, safety clothing, and FM 55-17.

Standards: Ensured cargo was properly loaded in/unloaded out of containers and noted any discrepancies in accordance with FM 55-17.

Performance Steps

1. Inspect container for serviceability.

NOTE: Performance Steps 1 through 12 pertains to the loading of containers.

2. Check that the container selected is suited to the type of cargo being loaded.
3. Instruct personnel to load like cargo together to make maximum use of container space.
4. Instruct 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. Instruct 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: Instruct 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.

NOTE: Ensure that hazardous material (HAZMAT) warning labels are attached (if required).

11. Check to ensure that the seal is applied to doors and that the seal number is annotated on DD Form 1384.
12. Instruct 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 pertains 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 damages to cargo and for securing measures, noting the discrepancies on DD Form 1384.

Performance Steps

16. Oversee cargo-checking procedures as cargo is being removed from a container.
17. Inspect the interior of a 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 to ensure that discrepancies noted in the cargo-checking or handling procedures are corrected immediately.
19. Report any damages or shortages to the Section noncommissioned officer in charge (NCOIC).

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Inspected container for serviceability.	—	—
2. Checked that the container selected was suited to the type of cargo being loaded.	—	—
3. Instructed personnel to load like cargo together to make maximum use of container space.	—	—
4. Instructed personnel that heavy items and wet commodities are to be placed on the floor of the container and light and dry commodities are 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. Instructed personnel that discrepancies noted in cargo-checking or handling procedures be corrected immediately and shortages, overages, and damages are 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 to ensure that the seal was applied to doors and that the seal number was annotated on DD Form 1384.	—	—
12. Instructed 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.	—	—

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 to ensure that discrepancies noted in the cargo-checking or handling procedures were corrected immediately.	—	—
19. Reported any damages or shortages to the Section NCOIC.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Skill Level 3

Subject Area 3: Initial Cargo Checking Operations

Protect Cargo Against Pilferage**551-88H-3505**

Conditions: Assigned as a cargo section chief in an operational environment, given cargo, tally sheet, DD Form 1384 (Transportation Control and Movement Document), clipboard, pen or pencil, cargo security policies, directives, and SOPs; DOD 4500.9-R, Part II, FM 3-19.30, DOD 5100.76-M, and FM 55-17.

Standards: Assigned as a cargo section chief in an operational environment, given cargo, tally sheet, DD Form 1384, clipboard, pen or pencil, cargo security policies, directives, and SOPs; DOD 4500.9-R, Part II, FM 3-19.30, DOD 5100.76-M, and FM 55-17.

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 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 demountable 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.

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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- DOD 4500.9-R, PART II
- DOD 5100.76-M
- FM 3-19.30
- FM 55-17

Related

Subject Area 26: Basic Cargo Operations (Air)

Supervise Helicopter External Sling Load Operations**551-88H-3501**

Conditions: Assigned as a cargo supervisor in an operational environment, given a completed risk assessment, sling load inspection record, safety clothing and equipment, helicopter, external load, cargo hook, static discharge wand, FM 4-20.197, FM 10-450-4, and FM 10-450-5.

Standards: Supervised helicopter external sling load operations in accordance with FM 4-20.197, FM 10-450-4, and FM 10-450-5.

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 Hook-up Team is provided a copy of the Sling Load Inspection Record (DA Form 7382; see Figure 3-130).
 - 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 hook-up sling loads to a helicopter.
 - f. Ensure safe use of material handling equipment (MHE) equipment at all times.
3. Brief hook-up 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 have 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 do not exceeds maximum angle of approach.

Performance Steps

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. Monitor the operation to verify that the static discharge wand is being used to discharge the static electricity.
 - b. Monitor 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. Monitor the operation to ensure that the hookup man kneels on top of the load on the rendezvous point side of the load.
 - b. Monitor 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. Monitor the operation to ensure that the hookup man departs the load on the rendezvous point side and moves from directly below the helicopter.
 - d. Monitor the operation to ensure that the Hookup team moves to the rendezvous point when the signalman gives the affirmative signal to the pilot.
 - e. Monitor 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 (see Figure 3-130).

SLING LOAD INSPECTION RECORD			
For use of this form, see FM 4-20.197; the proponent agency is TRADOC.			
1. SUPPORTED UNIT <i>ADFSD</i>	2. ITEM DESCRIPTION AND SERIAL/ BUMPER NO. <i>HMMWV ADFSD-14</i>	3. WEIGHT <i>5,200</i>	
4. SUPPORTING AVIATION UNIT <i>3/157TH AVN</i>	5. TYPE AIRCRAFT <i>UH-60</i>	6. RIGGED IAW FM NO. <i>FM 4-20.198</i>	
INITIAL ONLY ITEMS APPLICABLE TO YOUR SPECIFIC LOAD		LOAD RIGGED BY	LOAD INSPECTED BY
7. VEHICLE OR LOAD			
A. CORRECTLY POSITIONED		<i>gg</i>	<i>gqW</i>
B. EMERGENCY BRAKE SERVICEABLE AND SET		<i>gg</i>	<i>gqW</i>
C. FUEL LEVEL NOT TO EXCEED 3/4 TANK		<i>gg</i>	<i>gqW</i>
D. PREPARED AND PADDED IAW THE APPROPRIATE FM		<i>gg</i>	<i>gqW</i>
8. SLING SET			
A. CORRECT NUMBER AND SIZE (10K OR 25K) <i>10K</i>		<i>gg</i>	<i>gqW</i>
B. INSPECTED FOR SERVICEABILITY IAW FM 4-20.197		<i>gg</i>	<i>gqW</i>
C. SLING LEGS PROPERLY ROUTED AND ATTACHED TO LIFT POINTS		<i>gg</i>	<i>gqW</i>
D. CORRECT LINK COUNT FRONT AND REAR <i>F-80 R-3</i>		<i>gg</i>	<i>gqW</i>
E. CHAIN SECURED IN GRAB LINK		<i>gg</i>	<i>gqW</i>
F. EXCESS CHAIN TIED OR TAPED (10 links or more)		<i>gg</i>	<i>gqW</i>
G. BREAKAWAY TIES INSTALLED		<i>gg</i>	<i>gqW</i>
H. APEX ATTACHED		<i>gg</i>	<i>gqW</i>
I. APEX SPACER INSTALLED		<i>gg</i>	<i>gqW</i>
J. REACH PENDANT INSTALLED		<i>gg</i>	<i>gqW</i>
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			
11. REMARKS:			
12. LOAD RIGGED BY:			
a. UNIT (Print) <i>ADFSD</i>	b. NAME (Print) <i>JACKSON, JOE</i>	c. INITIALS <i>gg</i>	d. RANK <i>SSG</i>
e. SIGNATURE <i>Joe Jackson</i>		f. DATE (YYYYDDMM) <i>1 JUL 05</i>	
13. LOAD INSPECTED BY:			
a. UNIT (Print) <i>ADFSD</i>	b. NAME (Print) <i>WILSON, JONATHAN</i>	c. INITIALS <i>gqW</i>	d. RANK <i>SPC</i>
e. SIGNATURE <i>Jonathan Wilson</i>		f. DATE (YYYYDDMM) <i>01 Jul 05</i>	

DA FORM 7382, JULY 2005

DA FORM 7382-R, MAR 97, MAY BE USED UNTIL EXHAUSTED.

APD V1.00

Figure 3-130. Sample of DA Form 7382

Performance Measures	<u>GO</u>	<u>NO-GO</u>
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 hook-up 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 arrives.	—	—
6. Coordinated with HST team leader to ensure that the Hookup man stands on the load after the nose of the helicopter passes 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 4-20.197
 FM 10-450-4
 FM 10-450-5

Related

**Prepare 463L Pallet/Net Report
551-88H-3504**

Conditions: Assigned as a cargo load team chief in an operational environment, given a custodial log or other inventory log, the previous month's report, a monthly physical inventory, pen or pencil, FM 55-17 and DOD 4500.9-R, Part II.

Standards: Prepared 463L pallet/net report, ensuring accuracy and legibility, in accordance with FM 55-17 and DOD 4500.9-R, Part II.

Performance Steps

1. Enter administrative information on the sample pallet and net log (see Figure 3-131).
 - a. Enter reporting unit, address, and date.
 - b. Enter 2400 ZULU date prepared, as the first Tuesday of the month.

(1) BASE, PALLET AFB			(2) ACTIVITY 1ST TRAFFIC MANAGEMENT BR.			
JULIAN DATE (3)	ASSET TYPE (4)	GAIN/LOSS (5)	REASON/MANIFEST NO. (6)	IF OTHER THAN MANIFEST, LIST NAME, RANK, SSN, DUTY STATION, DUTY PHONE (7)	SIGNATURE (OTHER THAN MANIFEST) (8)	REMARKS (9)
8276	Pallet (LG) Set	- 2	C-130 - download 3, picked up 5 Manifest: ABC			Signature receipt on manifest
8276	Pallet Set	- 1	Picked up palletized cargo	Jones, John J. CPT, USA 127-30-8276 Boondocks Det. 12 Phone: 567-8910	<i>John J. Jones</i>	Will return pallet with shipment on 8285 day
8277	Pallet	+ 1	Turned in by SSG White, FMS, found on station			Will hold to fill shortage and includes in monthly report
8277	Chain Devices (10k)	- 6 Sets	Vehicle operations to tie-down load	Smith, Jack, SSG, USAF 123-45-6789, 1st Veh. Ops. Ext. 5678	<i>Jack Smith</i>	Will return 8277 day
8309	Pallet Sets	+ 2	Manifest XYZ. Replaced those shorted on manifest ABC			
8310	Pallet Sets	+ 1	Boondocks AFB returned loaned pallet set			

Figure 3-131. Sample Pallet and Net Log

2. Enter the number of operational and war reserve material (WRM) 463L pallets, top nets, and side nets authorized.
3. Enter the number of operational and WRM 463L pallets and nets on hand during the current month as determined by conduct of inventory.
 - a. Enter only serviceable assets.
 - b. Explain any differences between the last month's and current month's report.
 - c. Include quantities loaned on receipt in remarks section.
 - d. Omit quantities borrowed on receipt.
4. Enter the number of pallets and nets being repaired at depot and base level.

Performance Steps

5. Enter the number of pallets and nets that were damaged on base or post during the reporting month.
NOTE: Describe the type of damage.

6. Enter the number of pallets and nets that were condemned as damaged during the reporting month.

7. Enter the quantity of pallets and nets loaned on receipt.

8. Enter the quantity of new, repaired, or redistributed pallets and nets received.

NOTES: List any additional remarks. Do not enter the quantity of pallets and nets borrowed on receipt.

Evaluation Preparation: Prepared 463L pallet/net report, ensuring accuracy and legibility, in accordance with DOD 4500.9-R, Part II and FM 55-17.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Entered administrative information on the custodial log or other inventory control log.	—	—
2. Entered the number of operational and war reserve material (WRM) 463L pallets, top nets, and side nets authorized.	—	—
3. Entered the number of operational and WRM 463L pallets and nets on hand during the current month.	—	—
4. Entered the number of pallets and nets being repaired at depot and base level.	—	—
5. Entered the number of pallets and nets that were damaged on base or post during the reporting month.	—	—
6. Entered the number of pallets and nets that were condemned as damaged during the reporting month.	—	—
7. Entered the quantity of pallets and nets loaned on receipt.	—	—
8. Entered the quantity of new, repaired, or redistributed pallets and nets received.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

DOD 4500.9-R, PART II
FM 55-17

Related

Supervise Aircraft Load Teams

551-88H-3512

Conditions: Assigned as a cargo load team chief in an operational environment, given a completed risk assessment, safety briefing, tie-down restraints, vehicles, manifests, DD Form 1387-2 (Special Handling Data/Certification), cargo, loadmaster, additional personnel, means of communication, FM 4-01.30, FM 55-17, and DOD 4500.9-R, Part III.

Standards: Supervised aircraft load teams, ensuring all cargo was secured aboard the aircraft in accordance with FM 4-01.30, FM 55-17, and DOD 4500.9-R, Part III.

Performance Steps

1. Allocate 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 3-132).
9. Instruct 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 MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	2. NET QUANTITY PER PACKAGE 12 gallons	3. TRANSPORTATION CONTROL NO. 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		
9. ADDRESS OF SHIPPER Charleston AFB, South Carolina	10. TYPED NAME, SIGNATURE AND DATE SFC J. J. Bond, 23 June 2007 <i>J. J. Bond</i>	
DD FORM 1387-2, NOV 2004		
PREVIOUS EDITION IS OBSOLETE.		
Form Approved/OMB No. 0704-0188 Adobe Professional 7.0		

Figure 3-132. Sample of DD Form 1387-2

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Allocated 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 if a safety hazard existed; resuming operations only after the safety hazard has been corrected.	___	___
5. Ensured all equipment and supplies were properly restrained in the aircraft.	___	___
6. Coordinated with the airlift control element (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. Instructed personnel not to load hazardous cargo that did not have a DD Form 1387-2.	___	___
10. Conducted a preflight briefing for all accompanying troops if 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
DD FORM 1387-2	
DOD 4500.9-R, PART III	
FM 4-01.30	
FM 55-17	

Direct Dangerous or Hazardous Cargo Operations for Air Movement
551-88H-3519

Conditions: Assigned as a cargo section chief in an operational environment, given a completed risk assessment, safety briefing, dangerous or hazardous cargo, fire fighting equipment, local SOP, tie-down equipment, load plan, DD Form 1387-2 (Special Handling Data/Certification), CFR 49, Parts 100 thru 149, FM 55-17, and TM 38-250.

Standards: Directed dangerous or hazardous cargo operations for air movement in accordance with FM 55-17 and TM 38-250.

Performance Steps

1. Execute the procedures required to direct dangerous or hazardous cargo operations for air movement.
 - a. Ensure dangerous or hazardous cargo is compatible.
 - b. Direct the inspection of dangerous or hazardous cargo for damage, punctures, distortions, dents, and leakage.
 - c. Ensure that the container unit and pallet loads in the cargo compartment are positioned so that the DD Form 1387-2 (see Figure 3-133) and hazard labels are visible to air crews and loading personnel.
 - d. Ensure safety precautions are observed according to local SOP and dangerous/hazardous cargo safety instructions.
 - e. Ensure adequate fire fighting equipment is available.
 - f. Ensure that an Air force technical representative is present when handling dangerous or hazardous cargo.
 - g. Direct that dangerous and hazardous cargo is stowed in accordance with the approved load plan and that only authorized tie-down materials are used.

2. Ensure on-the-spot correction of any deficiencies found in the procedures stated in Step 1.

SPECIAL HANDLING DATA/CERTIFICATION		
1. ITEM NOMENCLATURE MOTOR VEHICLE FLAMMABLE LIQUID LABEL NONE CARGO AIRCRAFT ONLY	2. NET QUANTITY PER PACKAGE 12 gallons	3. TRANSPORTATION CONTROL NO. 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		
<small>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)</small>		
7. DTR REFERENCE		
8. HANDLING INSTRUCTIONS		
9. ADDRESS OF SHIPPER Charleston AFB, South Carolina	10. TYPED NAME, SIGNATURE AND DATE SFC J. J. Bond, 23 June 2007 <i>J. J. Bond</i>	
DD FORM 1387-2, NOV 2004 <small>Form Approved/OMB No. 0704-0188 Adobe Professional 7.0</small>		

Figure 3-133. DD Form 1387-2

Performance Measures

- | | <u>GO</u> | <u>NO-GO</u> |
|---|-----------|--------------|
| 1. Executed the procedures required to direct dangerous or hazardous cargo operations for air movement. | — | — |
| 2. Ensured on-the-spot correction of any deficiencies found in the procedures stated in Step 1. | — | — |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

CFR 49
DD FORM 1387-2
FM 55-17
TM 38-250

Related

Subject Area 27: Basic Cargo Operations (Shore)

**Direct Dangerous or Hazardous Cargo Operations for Motor Transport Movement
551-88H-3517**

Conditions: Assigned as a cargo section chief in an operational environment, given a completed risk assessment, a cargo truck, forklift, dangerous or hazardous cargo, blocking, bracing, and tie-down equipment; fire extinguishers, DD Forms 626 (Motor Vehicle Inspection [Transportation Hazardous Materials]), FM 55-17, FM 55-30, and Code of Federal Regulation (CFR) 49, Part 177.

Standards: Directed dangerous or hazardous cargo operations for motor transport movement in accordance with FM 55-30 and CFR 49, Part 177.

Performance Steps

1. Review all DD Forms 626 (see Figure 3-134) for completeness.
 - a. Ensures that each item on the form is filled out completely.
 - b. Ensures that deficiencies are corrected before vehicles are loaded.
2. Ensure fire fighting equipment is available and readily accessible.
3. Ensure that NO SMOKING signs are posted about 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 with 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. Instruct 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 I - 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*			
a. MILITARY HAZMAT ENDORSEMENT		X		d. ERG OR EQUIVALENT COMMERCIAL:		YES		NO		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 INSPECTION													
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) Truck, cargo, 2 1/2-ton M35A2C						11. VEHICLE NUMBER(S) USA 1326547							
12. PART INSPECTED (X if applicable)		ORIGIN (1)		DESTINATION (2)		ORIGIN (1)		DESTINATION (2)		COMMENTS (3)			
		SAT		UNSAT		SAT		UNSAT					
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. TARPULIN*		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													
16. INSPECTOR SIGNATURE (Origin) <i>Marvin Lee</i>						17. INSPECTOR SIGNATURE (Destination)							
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)		DESTINATION (2)		COMMENTS (3)	
								SAT		UNSAT			
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR													
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT													
20. SEALS APPLIED TO CLOSED VEHICLE; TARPULIN 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) <i>Moe Howara</i>						26. DRIVER(S) SIGNATURE (Origin) <i>Bud Abbots</i>							
27. INSPECTOR SIGNATURE (Destination) <i>Larry Fine</i>						28. DRIVER(S) SIGNATURE (Destination) <i>Lou Costello</i>							

SAMPLE

Figure 3-134. Sample of DD Form 626

INSTRUCTIONS	
<p>SECTION I - DOCUMENTATION</p> <p>General Instructions.</p> <p>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.</p> <p>Items 1 through 5. Self explanatory.</p> <p>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.</p> <p>Item 7. *Enter the expiration date listed on the Medical Examiner's Certificate.</p> <p>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.</p> <p>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)).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>SECTION II - MECHANICAL INSPECTION</p> <p>General Instructions.</p> <p>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.</p>	<p>SECTION II (Continued)</p> <p>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)</p> <p>b. Horn Operative. Ensure that horn is securely mounted and of sufficient volume to serve purpose. (49 CFR 393.81)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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 393.29, 393.32, 393.33)</p>
DD FORM 626, MAR 2007	Page 2 of 3 Pages

Figure 3-134. Sample of DD Form 626 (continued)

INSTRUCTIONS	
<p>SECTION II (Continued)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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> <p>p. Landing Gear. Inspect to ensure that landing gear and assembly are in serviceable condition, correctly assembled, adequately lubricated and properly mounted.</p>	<p>SECTION II (Continued)</p> <p>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)</p> <p>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))</p> <p>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))</p> <p>t. Other Unsatisfactory Condition. Note any other condition which would prohibit the vehicle from being loaded with hazardous materials.</p> <p>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.</p> <p>SECTION III - POST LOADING INSPECTION</p> <p>General Instructions.</p> <p>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.</p> <p>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.</p> <p>Item 19. Check to ensure the load is secured from movement in accordance with applicable service outload drawings.</p> <p>Item 20. Check to ensure seal(s) have been applied to closed equipment; fire and water resistant tarpaulin applied on open equipment.</p> <p>Item 21. Check to ensure each transport vehicle has been properly placarded in accordance with 49 CFR 172.504.</p> <p>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.</p> <p>Item 23. Ensure operator(s) sign DD Form 626, are given a copy and understand the hazards associated with the shipment.</p> <p>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.</p>
DD FORM 626, MAR 2007	Page 3 of 3 Pages

Figure 3-134. Sample of DD Form 626 (continued)

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Reviewed all DD Forms 626 for completeness.	—	—
2. Ensured fire fighting equipment was available and readily accessible.	—	—
3. Ensured that NO SMOKING signs were posted about 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.	—	—
6. Ensured that cargo labels match 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. Instructed the load team to correct any discrepancies immediately.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 CFR 49
 DD FORM 626
 FM 55-17
 FM 55-30

Related

Direct Temporary Storage of Dangerous or Hazardous Cargo (Missile Components)
551-88H-3518

Conditions: Assigned as a cargo section chief in an operational environment, given a completed risk assessment, dangerous or hazardous cargo, storage instructions, storage area, dunnage, Code of Federal Regulation (CFR) 46 and FM 55-17.

Standards: Directed temporary storage of dangerous or hazardous cargo (missile components) in accordance with FM 55-17 and CFR 46.

Performance Steps

1. Ensure the storage area is clean, level, and well drained.
2. Provide shelter if missile components are subject to weather or temperature.
3. Ensure dangerous or hazardous missile components are 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. Contact the supervisor if discrepancies are noted.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Ensured the storage area was clean, level, and well drained.	—	—
2. Provided shelter if missile components were subject to weather or temperature.	—	—
3. Ensured dangerous or hazardous missile components were 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.	—	—

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
10. Ensured adequate decontamination or fire fighting teams, or both, were readily available when special weapons were stored.	—	—
11. Contacted the supervisor when discrepancies were noted.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

CFR 46
FM 55-17

Related

Subject Area 28: Basic Cargo Documentation

Review Ocean Cargo Documentation for Loading or Discharge
551-88H-3509

Conditions: Assigned as a cargo section chief in an operational environment at a terminal or an outport, given DD Form 1386 (Ocean Cargo Manifest Recapitulation or Summary), stowage plan, tally sheet, dunnage, FM 55-15, FM 55-17, FM 55-60, and FM 55-80.

Standards: Reviewed ocean cargo documentation for loading or discharge, making arrangements for handling, storage, and line haul of all cargo in accordance with FM 55-15, FM 55-17, FM 55-60, and FM 55-80.

Performance Steps

1. Screen the manifest (see Figure 3-135) and stowage plan (see Figure 3-136) for outsize or special handling cargo.
 - a. Find the port code to determine cargo of outsize dimensions.
 - b. Find port code to determine cargo that would because of weight or configuration require heavy lift or special handling.

<input checked="" type="checkbox"/> RECAPITULATION <small>(Line 8 applicable)</small>		<input type="checkbox"/> SUMMARY <small>(Line 8 applicable)</small>		OCEAN CARGO MANIFEST RECAPITULATION OR SUMMARY						<input checked="" type="checkbox"/> ORIGINAL		<input type="checkbox"/> REVISED	
1. VESSEL NAME	2. STATUS	3. VOY DOC NO.	4. DATE <small>(YYYYMMDD)</small>	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					
a. (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) MEASURE-MENT TONS	(5) SQUARE FEET
b. (1) DESTINATION PORT	(2) COMMODITY CATEGORY	(3) FOR MSC USE				(4) TRANS-PORTATION ACCT CODE	(5) ON DECK	(1) NO. OF UNITS POV'S/MAIL OR OTHER					
Kuwait	Crane	420L 120W 120H		X		X	30DP	S	BRI Bahrain KLF Arab Emirates PN3 Kuwait Total	N A N	810 175 110 1095	1650 610 310 2570	
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 <i>Claude Williams</i>		b. GRADE OR RANK GS-12		c. TITLE DOC SUPV		MASTER OF VESSEL (Signature) <i>Tom O'Day</i>							
12. NAME AND MAILING ADDRESS OF PREPARING ACTIVITY Military Ocean Terminal, Little Creek, Norfolk, VA 23564													

Figure 3-135. Sample of DD Form 1386 (Ocean Cargo Manifest Recapitulation or Summary)

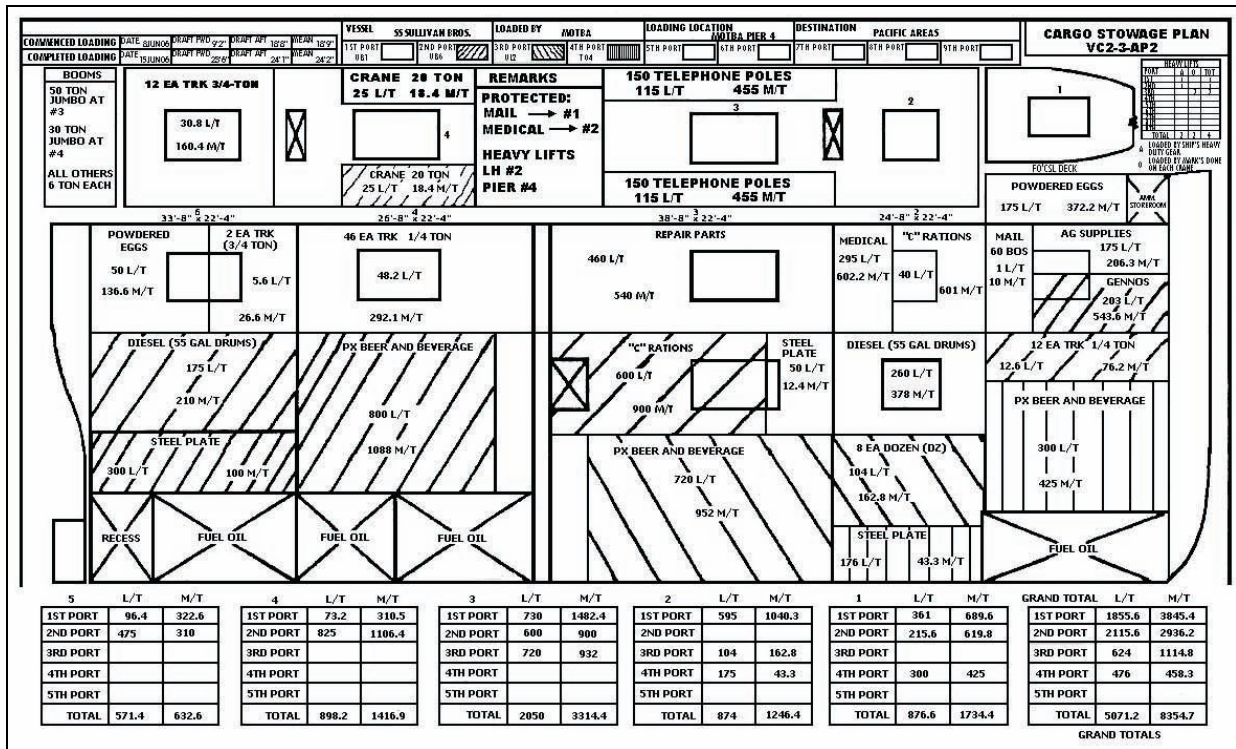


Figure 3-136. Stowage Plan

Performance Steps

2. Screen the manifest and stowage plan for remarks on special cargo items.
 - a. Find location and quantity of mail.
 - b. Find location and quantity of cargo of unusual value.
 - c. Find location and quantity of protected (controlled, pilferable, sensitive) cargo.
3. Determine capacity and location of ship's 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 and prepare to lay dunnage or build special construction.
7. Designate areas for stowage of hazardous cargo.
8. Prepare for construction of magazine if required.
9. Determine requirement for material handling equipment (MHE), container-handling equipment, and cargo-handling gear.
10. Coordinate requirements for transport modes for terminal clearance.
11. Prepare for cargo documentation (hatch tallies), identifying personnel to tally the cargo.
12. Determine the number of hatch gangs needed (based on storage area available and terminal clearance capability).

Performance Steps

13. Plan to discharge priority cargo and expedite its clearance.
14. 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.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Screened the manifest and stowage plan for outsize or special handling cargo.	—	—
2. Screened the manifest and stowage plan for remarks on special cargo items.	—	—
3. Determined capacity and location of ship's booms.	—	—
4. Prepared for rigging of cargo boom for loading different types of cargo and heavy lifts.	—	—
5. Located cargo designated to be deck stowed and prepared to lay dunnage or build any special construction.	—	—
6. Located cargo designated to be deck stowed and prepared to lay dunnage or build any special construction.	—	—
7. Designated areas for stowage of hazardous cargo.	—	—
8. Prepared for construction of magazine (if required).	—	—
9. Determined requirement for material handling equipment (MHE), container-handling equipment, and cargo-handling gear.	—	—
10. Coordinated requirements for transport modes for terminal clearance.	—	—
11. Prepared for cargo documentation (hatch tallies), identifying personnel to tally the cargo.	—	—
12. Determined the number of hatch gangs needed (based on storage area available and terminal clearance capability).	—	—
13. Planned to discharge priority cargo and expedite its clearance.	—	—
14. Determined the need for lighterage.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 55-15
 FM 55-17
 FM 55-60
 FM 55-80

Related

Subject Area 30: Basic Cargo Operations (Ship)

Direct Cargo Operations (Breakbulk)**551-88H-3507**

Conditions: Assigned as a cargo supervisor aboard a cargo vessel (breakbulk) in an operational environment, given a completed risk assessment, a safety briefing, ship's gear, cargo, vehicles, dunnage, tie-down equipment, and FM 55-17.

Standards: Directed breakbulk cargo operations in accordance with FM 55-17.

Performance Steps

1. Direct adherence to the rules for stowing general cargo.

NOTE 1: 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 2: 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 3: If it is necessary to walk on top or 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 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 filler cargo where empty space occurs.
- e. Issue guidance directing that cargo is nested to ensure 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 in accordance with 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 3-137).
- 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.

Performance Steps

- 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 3-137).

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.

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 3-137. Load Factor Lashing Requirements for Other Ships

Performance Steps

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.

Performance Measures

GO **NO-GO**

1. Directed adherence to the rules for stowing general cargo.	_____	_____
2. Directed the maximized use of hold's carry capacity.	_____	_____
3. Directed that all cargo is secured in accordance with 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Direct Cargo Operations (RO/RO)**551-88H-3508**

Conditions: Assigned as a cargo supervisor aboard a Fast Sealift Ship/Large Medium Speed Roll-on/Roll-off (FSS/LMSR) vessel in an operational environment, given a completed risk assessment, safety briefing, traffic control plan, RO/RO flow plan, stowage plan, wheeled and tracked vehicles, lashing materials, and FM 55-17.

Standards: Directed cargo operations on an FSS/LMSR vessel in accordance with FM 55-17.

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 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 in accordance with 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: 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.

NOTE: 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 3-138).
 - b. Issue guidance that the number of lashings for tracked vehicles will depend on the weight, and the number of lashings could range eight or more (see Figure 3-139).
 - 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 3-140).
 - d. Issue guidance to leave multifuel 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 3-138. Load Factor Lashing Requirements for FSS/LMSR Ships

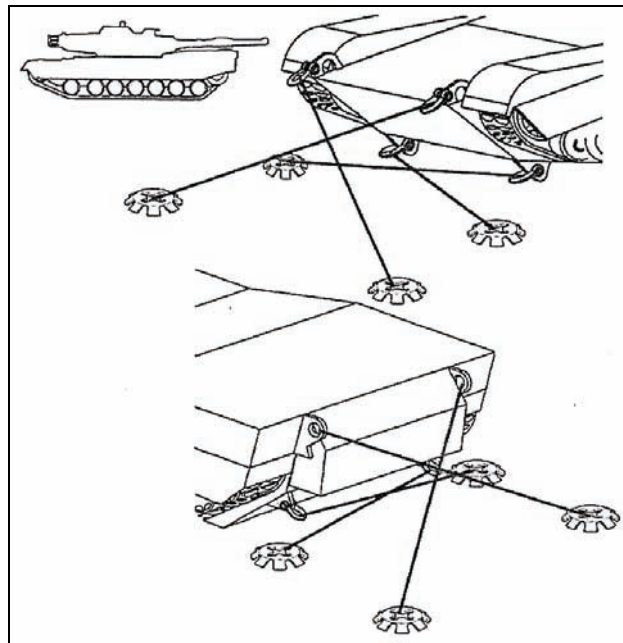


Figure 3-139. Required Lashing Points for an M1 Tank

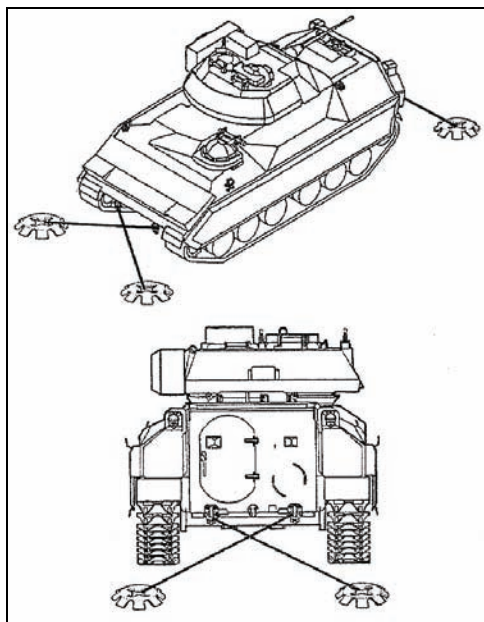


Figure 3-140. Front and Rear Lashing Points for Bradley Fighting Vehicle (BFV)

Performance Steps

6. Execute the procedures to direct roll-off operations.
 - a. Ensure the execution of the proper roll-off loading sequence in accordance with the RO/RO flow plan.
 - b. Ensure traffic control points are designated and manned.
 - 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.

CAUTION: 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures to direct roll-on operations.	—	—
2. Ensured the execution of the proper roll-on loading sequence in accordance with the RO/RO flow plan.	—	—
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Direct Lashing Containers on the Deck of a Landing Craft

551-88H-3511

Conditions: Assigned as a stow planner in an operational environment, given a safety briefing, hatch gang, tools, containers, lashing material, landing craft, FM 55-17, and FM 55-501.

Standards: Directed lashing containers on the deck of a landing craft, ensuring that containers are properly lashed to the deck to prevent movement during transit in accordance with FM 55-17 and FM 55-501.

Performance Steps

1. Oversee personnel lashing containers with chassis.
 - a. Ensure lashing is attached to all four bottom corner fittings of the container.
 - b. Ensure the use of the crisscross (Figure 3-141) or side-to-side (Figure 3-142) lashing technique when attaching lashing to deck fittings in the well deck.
2. Oversee personnel lashing containers without chassis.
 - a. Ensure lashing is attached to all four bottom corner fittings of the container.
 - b. Ensure the use of the crisscross (Figure 3-141) or side-to-side (Figure 3-142) lashing technique when attaching lashing to deck fittings in the well deck.
3. Inspect completed work.
4. Make on-the-spot corrections (as required).

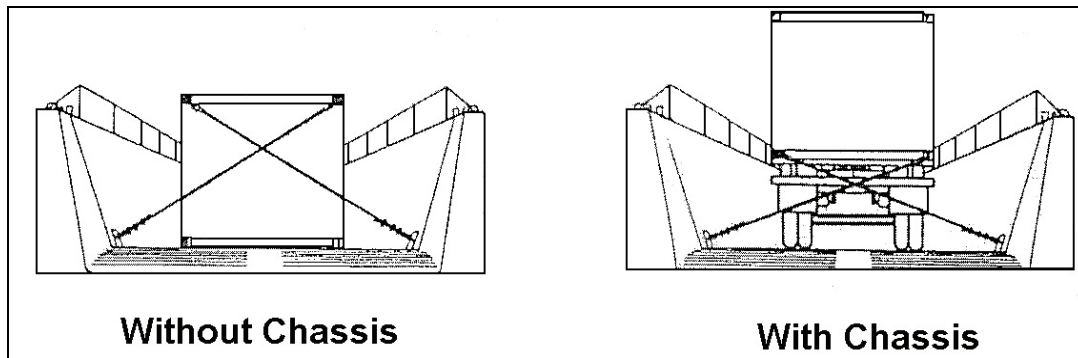


Figure 3-141. Crisscross Lashing

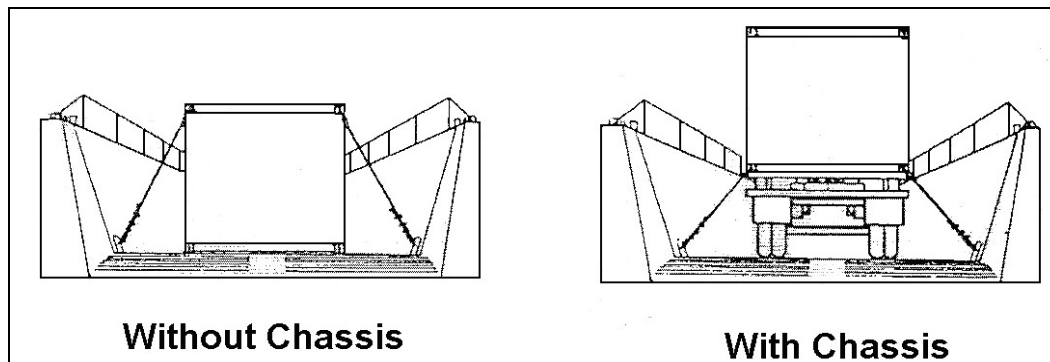


Figure 3-142. Side-to-Side Lashing

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Oversaw personnel lashing containers with chassis.	—	—
2. Oversaw 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17
FM 55-501

Related

Direct Loading Lighters at Shiplside During Logistics-Over-the-Shore Operations
551-88H-3513

Conditions: Assigned as a stow planner in an operational environment, given a completed risk assessment, safety briefing, cargo vessel, ship's gear, general cargo set, hatch gang, tools, containers, lashings, lighterage, FM 55-17, and FM 55-50.

Standards: Directed loading lighters at shiplside during Logistics-Over-the-Shore (LOTS) operations, ensuring that all drafts of cargo were properly handled without damage to cargo, lighters, or vessel, in accordance with FM 55-17, and FM 55-50.

Performance Steps

1. Instruct personnel to work the vessel on the lee side whenever possible.
NOTE: The Lee side of a ship is sheltered from the wind.
2. Instruct personnel to rig the spring lines and mooring lines so that lighters are positioned directly below the ship's outboard booms.
3. Instruct 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 tag lines are attached to each draft of cargo to reduce swinging.
5. Check to ensure 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, not pull, a cargo draft into position.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Instructed personnel to work the vessel on the lee side whenever possible.	—	—
2. Instructed personnel to rig the spring lines and mooring lines so that lighters were positioned directly below the ship's outboard booms.	—	—
3. Instructed 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 tag lines were attached to each draft of cargo to reduce swinging.	—	—
5. Checked to ensure 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 that personnel performed the following actions prior to loading 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17
FM 55-50

Related

Subject Area 32: Basic Cargo Operations (Ship and Shore)

Inspect Cargo Checker's Tally for Correctness
551-88H-3506

Conditions: Assigned as a cargo section chief in an operational environment, given cargo, tally sheet, DD Form 1384 (Transportation Control and Movement Document), clipboard, pen or pencil, and FM 55-17.

Standards: Inspected cargo checker's tally for correctness, ensuring that the tally and DD Form 1384 were complete, accurate, and legible, in accordance with FM 55-17.

Performance Steps

1. Ensure the correct tally method (package, block, straight, or unit) is used (see Figures 3-143 through 3-146).

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT																	PAGE NO.								
1. Doc Id TX1		2. Trf Cont		3. Consignor A26TBE			4. Comm-Spec Hdg 722Z9			5. Air Dim		6. POE 1MJ		7. POB RG1											
8. Mode B		9. Pack PC		10. Trans Control No. AK4224107000031XXX			11. Consignee AK4224			12. Pri 3		13. RBD 130		14. Proj		15. Date Shpd 077		16. ETA		17. Tr Acct A205					
18. Carrier				19. Flight-Truck-Voy Doc No.				20. Ref				21. Remarks		22. Pieces 5		23. Weight 1432		24. Cube 461							
25 a. Tranship Point (1) 1MJ			b. Date Rec 078		c. Bay Whse C-23		d. Date Shpd		e. Mode Carrier TRUCK		f. Flight-Truck-Voy Doc No. GBLG788760			g. Ref.		h. Stow Loc		i. Spill		j. Cond		k. Signature-Remarks 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. Spill		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. Spill		j. Cond		k. Signature-Remarks			
28. Consignee				29. Condition				30. Remarks				31. Remarks		32. Remarks		33. Remarks		34. Remarks		35. Remarks		36. Remarks			
32. Doc Id		33. Trailer-Container		34. Consignor Comm Abbr Other		35. Commodity Spec Hdg		36. VOY NO. Air Dim a		37. POE Dim b		38. POB		39. M O D E		40. Type Pack		41. Transportation Control Number		42. Consignee		43. Remarks and/or		44. Additional Remarks or	
(48) 1117		11 + 46 = 297																							

Figure 3-143. Package Tally Method

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT																	PAGE NO.								
1. Doc Id TX0		2. Trf Cont		3. Consignor A33HRV			4. Comm-Spec Hdg 51AZ9			5. Air Dim		6. POE 1MJ		7. POB RG1											
8. Mode A		9. Pack CS		10. Trans Control No. AT88879004002XXX			11. Consignee AT8887			12. Pri		13. RBD 057		14. Proj		15. Date Shpd 020		16. ETA 3		17. Tr Acct A205					
18. Carrier				19. Flight-Truck-Voy Doc No.				20. Ref				21. Remarks		22. Pieces 297		23. Weight 21,392		24. Cube 573							
25 a. Tranship Point (1) 1MJ			b. Date Rec 023		c. Bay Whse O-42		d. Date Shpd		e. Mode Carrier TRUCK		f. Flight-Truck-Voy Doc No. GBLG788760			g. Ref.		h. Stow Loc		i. Spill		j. Cond		k. Signature-Remarks 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. Spill		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. Spill		j. Cond		k. Signature-Remarks			
28. Consignee				29. Condition				30. Remarks				31. Remarks		32. Remarks		33. Remarks		34. Remarks		35. Remarks		36. Remarks			
32. Doc Id		33. Trailer-Container		34. Consignor Comm Abbr Other		35. Commodity Spec Hdg		36. VOY NO. Air Dim a		37. POE Dim b		38. POB		39. M O D E		40. Type Pack		41. Transportation Control Number		42. Consignee		43. Remarks and/or		44. Additional Remarks or	
(48) 1117																									

Figure 3-144. Block Tally Method

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT																	PAGE NO.		
1. Doc Id TX1	2. Trk Cont	3. Consignor A33HRV			4. Comn-Spec Hdng 733ZZ9			5. Air Dim	6. POE 2DC		7. POB KF1								
8. Mode B	9. Pack CS	10. Trans Control No. AK73212026003XXX			11. Consignee AK9321			12. Pri 071	13. RDD	14. Proj	15. Date Shpd 030	16. ETA 3	17. Tr Acct A205						
18. Carrier		19. Flight-Truck-Voy Doc No.			20. Ref			21. Remarks		22. Pieces 81	23. Weight 9,372	24. Cube 1,281							
25 a. Tranship Point (1) 2DC		b. Date Rec 033	c. Bay Whse A-19	d. Date Shpd	e. Mode Carrier TRUCK	f. Flight-Truck-Voy Doc No. GBLG788760			g. Ref.	h. Stow Loc	i. Spill	j. Cond	k. Signature-Remarks 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. Spill	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. Spill	j. Cond	k. Signature-Remarks						
28. Consignee				29. Condition				30. Remarks											
32. Doc Id	33. Trailer-Container	34. Consignor Comn Abbr Other	35. Commodity Spec Hdng	36. VOY NO. Air Dim a	37. POE b	38. POD	39. M O D E	40. Type Pack	41. Transportation Control Number	42. Consignee	43. REMARKS AND/OR	44. ADDITIONAL REMARKS OR							
											43. a. Pieces	43. b. Weight	43. c. Cube						
24 + 30 + 27 = 81														SAMPLE					

Figure 3-145. Straight Tally Method

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT																	PAGE NO.		
1. Doc Id TV0	2. Trk Cont	3. Consignor A25TBB			4. Comn-Spec Hdng 867ZZ			5. Air Dim	6. POE 1GC		7. POB JF1								
8. Mode D	9. Pack VO	10. Trans Control No. AK43349209001XXX			11. Consignee AK4334			12. Pri 3	13. RDD 253	14. Proj	15. Date Shpd 221	16. ETA 2	17. Tr Acct A205						
18. Carrier		19. Flight-Truck-Voy Doc No.			20. Ref			21. Remarks		22. Pieces 1	23. Weight 12,880	24. Cube 1,690							
25 a. Tranship Point (1) S.S. NEVERSAIL		b. Date Rec 260	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No. GBLG788760			g. Ref.	h. Stow Loc	i. Spill	j. Cond	k. Signature-Remarks G. R. Miller						
26 a. Tranship Point (2) JF1		b. Date Rec 261	c. Bay Whse YARD	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.			g. Ref.	h. Stow Loc	i. Spill	j. Cond	k. Signature-Remarks C. L. Raff						
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. Spill	j. Cond	k. Signature-Remarks						
28. Consignee				29. Condition				30. Remarks											
32. Doc Id	33. Trailer-Container	34. Consignor Comn Abbr Other	35. Commodity Spec Hdng	36. VOY NO. Air Dim a	37. POE b	38. POD	39. M O D E	40. Type Pack	41. Transportation Control Number	42. Consignee	43. REMARKS AND/OR	44. ADDITIONAL REMARKS OR							
											43. a. Pieces	43. b. Weight	43. c. Cube						
TV5														SAMPLE					
M35267271GC JF1 3 VO AK43349209001XXX AK4334 3 00253LO96W111N USA 4L7671																			
NOTE: Left side of windshield broken																			
Left headlight broken Hood dented - C. L. Raff																			

Figure 3-146. Unit Tally Method

Performance Steps

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.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Ensured the correct tally method (package, block, or straight unit) 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 (blocks a through k) 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
DD FORM 1384
FM 55-17

Related

Perform Inspection of Containers in Preparation for Loading Cargo
551-88H-3516

Conditions: Assigned as a cargo section chief in an operational environment, given cargo, containers, means of communication, DD Form 1384 (Transportation Control and Movement Document), clipboard, pen or pencil, DOD 4500.32-R, Volume 1, FM 55-80, and FM 55-17.

Standards: Performed an inspection of a container in preparation for loading cargo in accordance with FM 55-80 and FM 55-17.

Performance Steps

1. Select a container of the proper size.
2. Inspect the exterior of the container for holes, cuts, or severe dents.
3. Inspect the container for (see Figure 3-147):
 - a. Faulty hinges.
 - b. Bent doors.
 - c. Broken fasteners.
 - d. Broken reflectors.
 - e. Damaged lifting eyes.

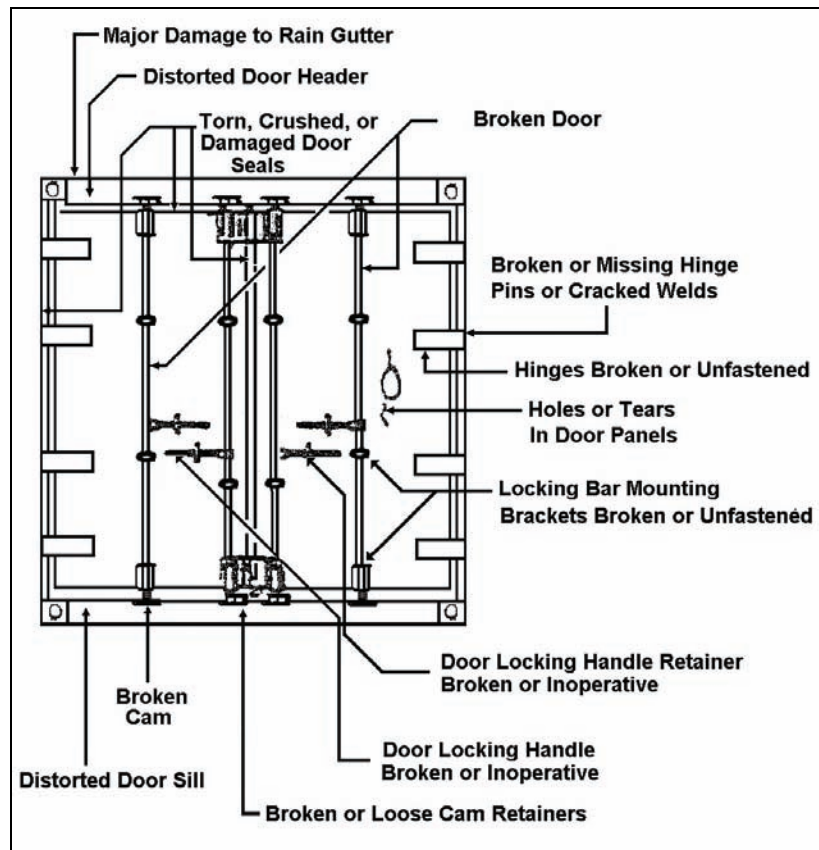


Figure 3-147. Inspection of Containers

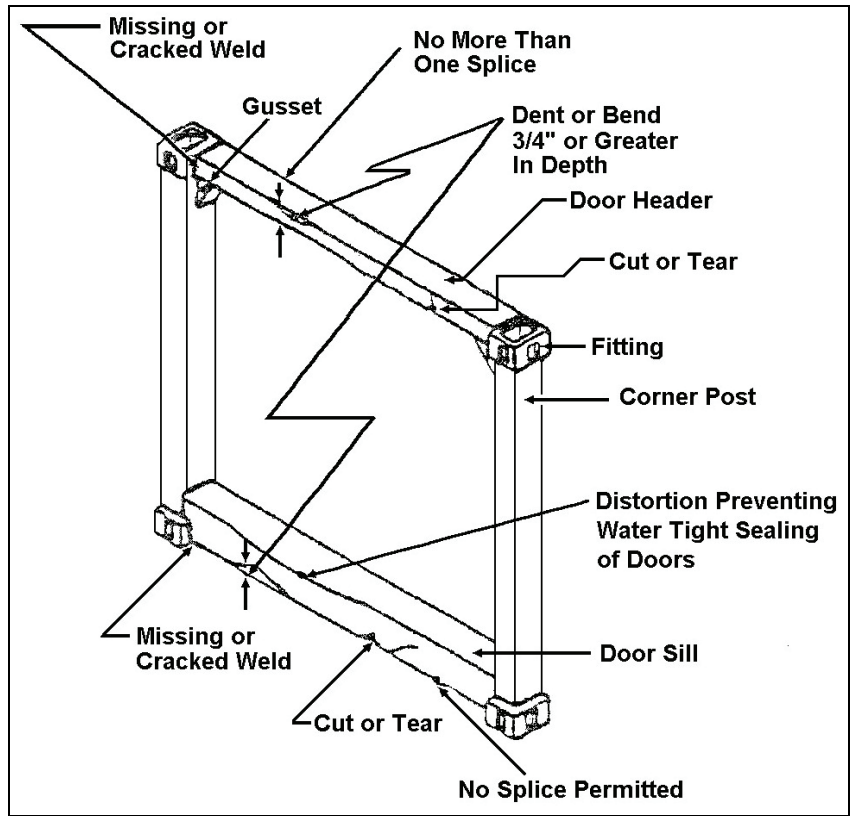


Figure 3-147. Inspection of Containers (continued)

Performance Steps

4. Inspect the interior of the container for holes in roofing, floor, and sides (see Figure 3-148).

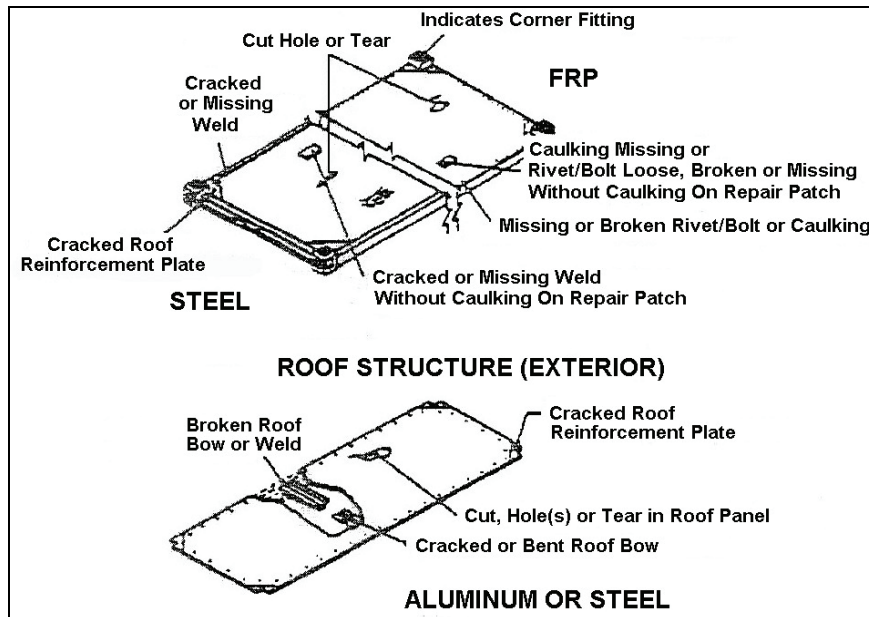


Figure 3-148. Inspection of Container Interior

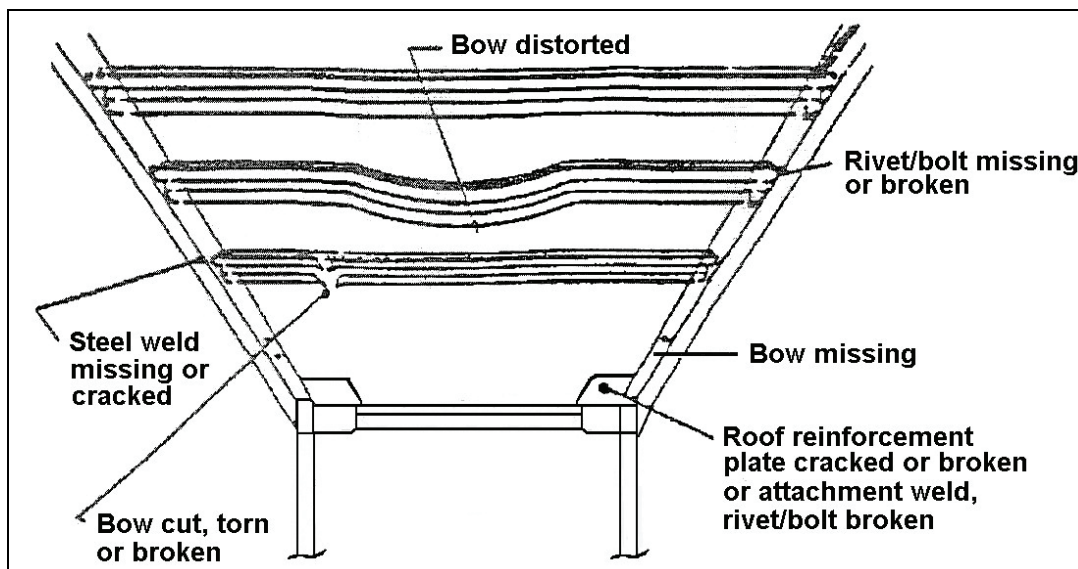


Figure 3-148. Inspection of Container Interior (continued)

Performance Steps

5. Record all defects on DD Form 1384.
6. Request a replacement if the container is determined to be unserviceable.

Performance Measures

1. Selected a container of the proper size.
2. Inspected the exterior of the container for holes, cuts, or severe dents.
3. Inspected the container for:
 - " Faulty hinges.
 - " Bent doors.
 - " Broken fasteners.
 - " Broken reflectors.
 - " Damaged lifting eyes.
4. Inspected the interior of the container for holes in roofing, floor, and sides.
5. Recorded all defects on DD Form 1384.
6. Requested a replacement if the container was determined to be unserviceable.

GO **NO-GO**

—	—
—	—
—	—
—	—
—	—
—	—
—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

- Required**
 DD FORM 1384
 DOD 4500.32-R, VOL 1
 FM 55-80

Related

**Direct the Preparation of a Hatch for Handling Military Explosives
551-88H-3520**

Conditions: Assigned as a cargo section chief in an operational environment, aboard a cargo vessel, given a completed risk assessment, safety equipment, military explosives, tarpaulins, CFR 46, and FM 55-17.

Standards: Directed the preparation of a hatch for handling military explosives in accordance with FM 55-17.

Performance Steps

1. Execute the procedures required to direct the preparation of a hatch for handling military explosives.
 - a. Inform hatch members what magazines and holds are to be broom-clean and free of cargo residue.
 - b. Inspect the bilges, overhead deck beams, and hatch beams, ensuring that hatch gang members understand the necessity for cleanliness.
 - c. Direct the cleaning of all decks, gangways, and hatches over or through which military explosives are to be passed or handled.
 - d. Direct the closing of all hatches or cargo ports or hatches opening into a compartment of explosives, except during loading or unloading, or for short periods.
 - e. Ensure wooden covers are covered with tarpaulins.
 - f. Check hatches for fire hazards and conditions that may injure personnel or damage cargo, ensuring that there are no loose materials.
 - g. Direct hatch gang members to stow hatch beams and hatch covers on the non-working side of the hatch whenever possible.
 - h. Ensure that the location of the cargo vessel officer on duty is known at all times during the handling of explosives.
2. Ensure on-the-spot correction of any deficiencies found in the procedures stated in step 1.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Executed the procedures required to direct the preparation of a hatch for handling military explosives.	—	—
2. Ensured on-the-spot correction of any deficiencies found in the procedures stated in Step 1.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

<p>Required CFR 46 FM 55-17</p>	<p>Related</p>
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Subject Area 33: Basic Cargo Operations (Rail)

Direct Rail Loading Operations

551-88H-3301

Conditions: Assigned as a load team supervisor in an operational environment, given a completed risk assessment, wheeled and tracked vehicles, railcars, load plan, bracing, blocking, and tie-down equipment, Association of American Railroads (AAR) Interchange Rules, TM 55-2200-001-12, and FM 55-17.

Standards: Directed rail loading operations in accordance with AAR Interchange Rules, TM 55-2200-001-12, and FM 55-17 governing loading of commodities on open-top railcars.

Performance Steps

1. Compare vehicles arriving at the ramp 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 ramp and each side of the rail car near the spanners.
NOTE: Instruct guides not to walk backwards on the railcars.
5. Monitor flatcar that the vehicles are being driven on to.
6. Ensure that vehicles are positioned in their allocated spaces on the railcar in accordance with 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 semitrailers 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Compared vehicles arriving at the ramp 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 ramp and each side of the rail car near the spanners.	—	—

Performance Measures	<u>GO</u>	<u>NO-GO</u>
5. Monitored flatcar that the vehicles were being driven on to.	—	—
6. Ensured that vehicles were positioned in their allocated spaces on the railcar in accordance with 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 semitrailers 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

AAR INTERCHANGE RULES
 FM 55-17
 TM 55-2200-001-12

Related

Subject Area 34: Basic Cargo Operations (KALMAR-RTCH)

**Prepare Kalmar Rough Terrain Container Handler for Air Movement (RT 240)
551-88H-3502**

Conditions: Assigned as a cargo load team chief in an operational environment, given a completed risk assessment, a RT 240 with attached forklift kit, aircraft, TM 10-3930-675-10-1, TM 10-3930-675-10-2, and FM 55-17.

Standards: Prepared Kalmar rough terrain container handler for air movement in accordance with TM 10-3930-675-10-1, TM 10-3930-675-10-2, and FM 55-17.

Performance Steps

1. Prepare RT 240 RTCH forklift 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 forklift kit attached only when moving between remote areas, NOT on highways or streets. 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 1/4 tank or less.

2. Load RT 240 RTCH rough terrain container handler on an aircraft.
 - a. Start rough terrain container handler engine.

WARNING: Always use a ground guide and do not exceed 1 MPH (1.6 kph) when driving RTCH up ramps in preparation for air transport. Failure to use a ground guide may result in an accident, causing death or injury to personnel or damage to equipment.

NOTE: Ensure RTCH is properly aligned with aircraft. Once dolly wheels are installed on tophandler, RTCH is difficult to steer.

- b. Position RTCH in line with and facing aircraft loading ramp, as close as possible to aircraft.
 - c. Make sure cab is moved to transport position.
 - d. Raise boom to 19 degrees and extend boom to 110 inches (2,794 millimeters).

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.

- e. Rotate tophandler 90 degrees counterclockwise to longitudinal position and ensure tophandler is centered with RTCH.
 - f. Fold boom support.
 - g. Lower tophandler until approximately 18 inches (45.7 centimeters) off the ground.

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.

- 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 3-149).
 - i. Remove dolly wheels from storage compartment, using ramp.
 - j. Install each dolly wheel to tophandler (see Figure 3-150).
 - (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 3-151).
 - (3) Remove lower pin from dolly wheel and set aside.

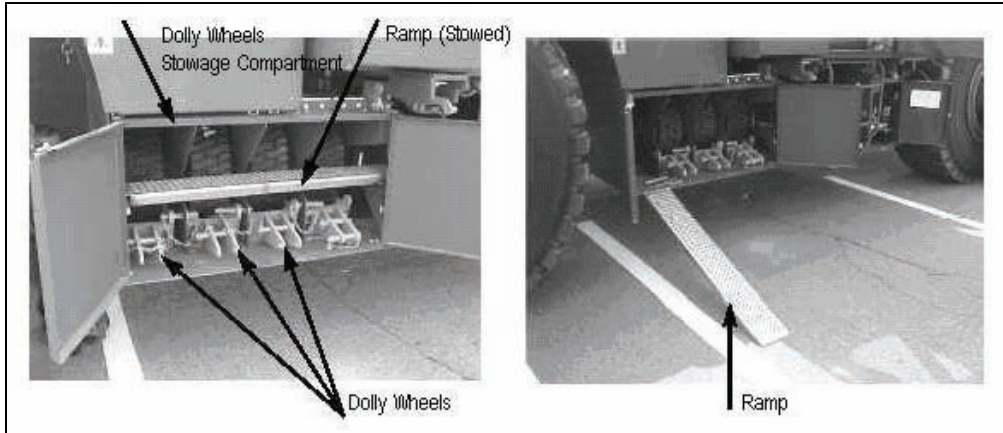


Figure 3-149. Dolly Wheels Storage Compartment

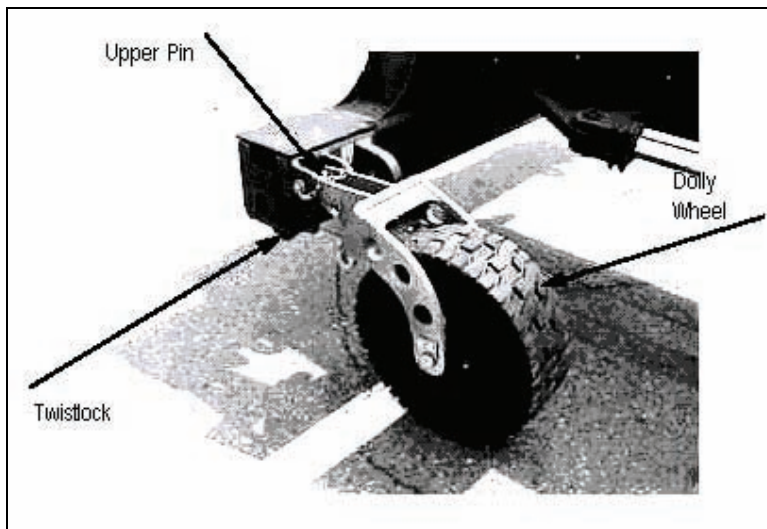


Figure 3-150. Installing Dolly Wheel to Tophandler

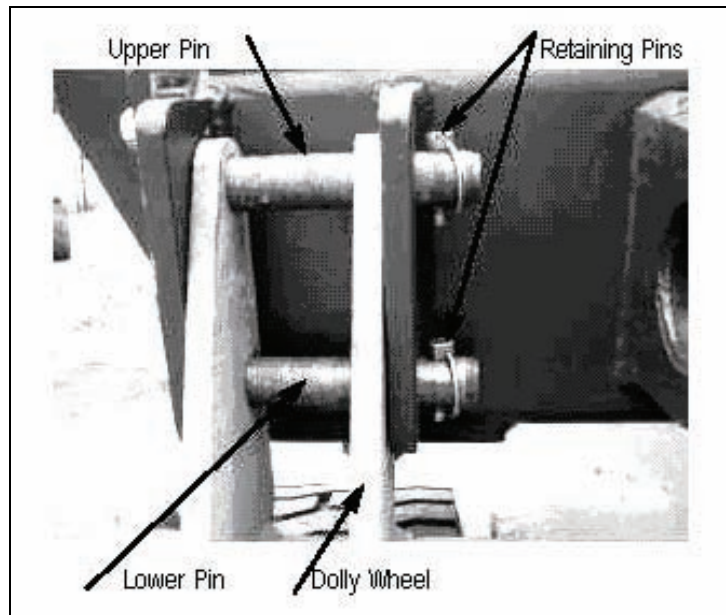


Figure 3-151. Installing Upper Pin From Outside of Tophandler

Performance Steps

- 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 (0.6 meters).
- 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 3-152).

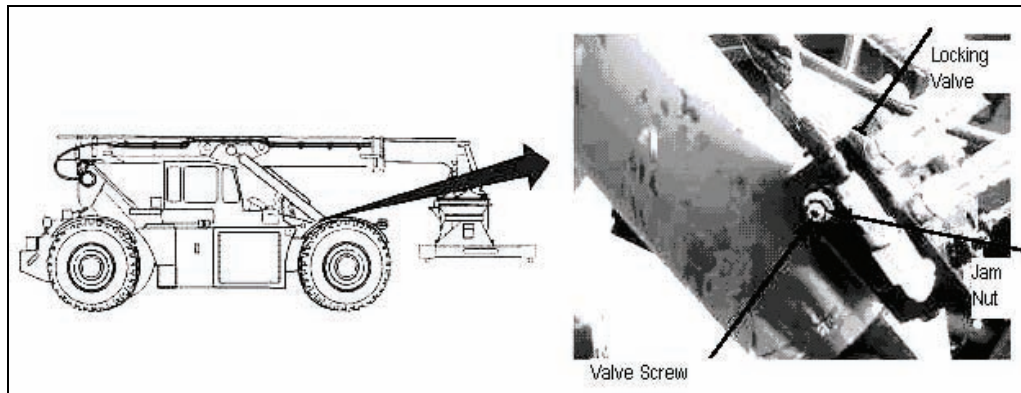


Figure 3-152. Turning Float Valve Screw

- p. At front of vehicle, open both shutoff valves #6 slowly and at the same time the tophandler should now be resting on dolly wheels in floating position (see Figure 3-153).

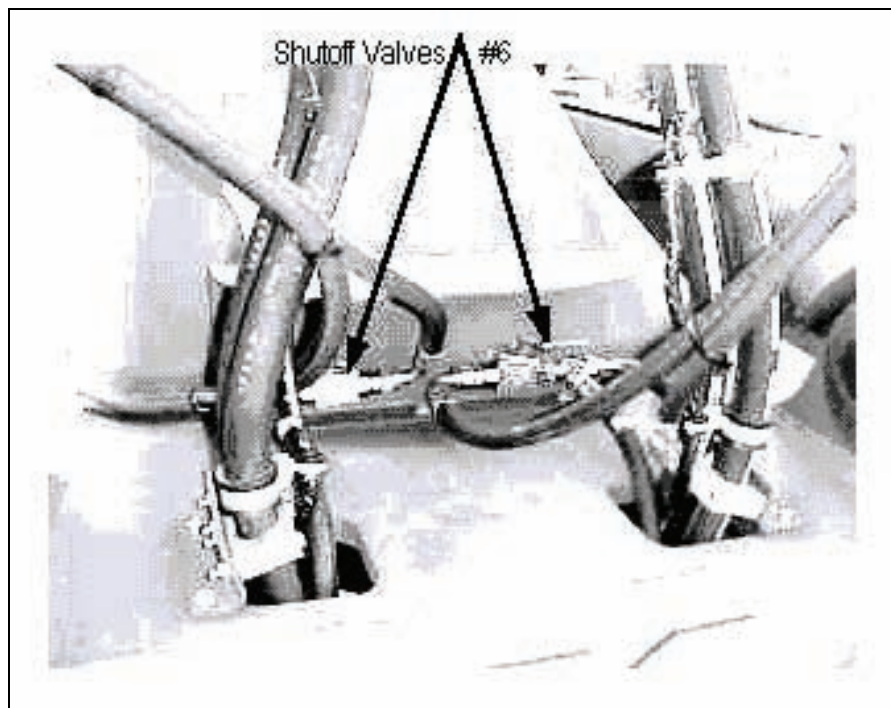


Figure 3-153. Opening Both Shutoff Valves #6

Performance Steps

q. Open remote hydraulic control compartment (see Figure 3-154).

NOTE: Raise bogie wheels only enough to allow bogie wheels retaining collar to be unlocked.

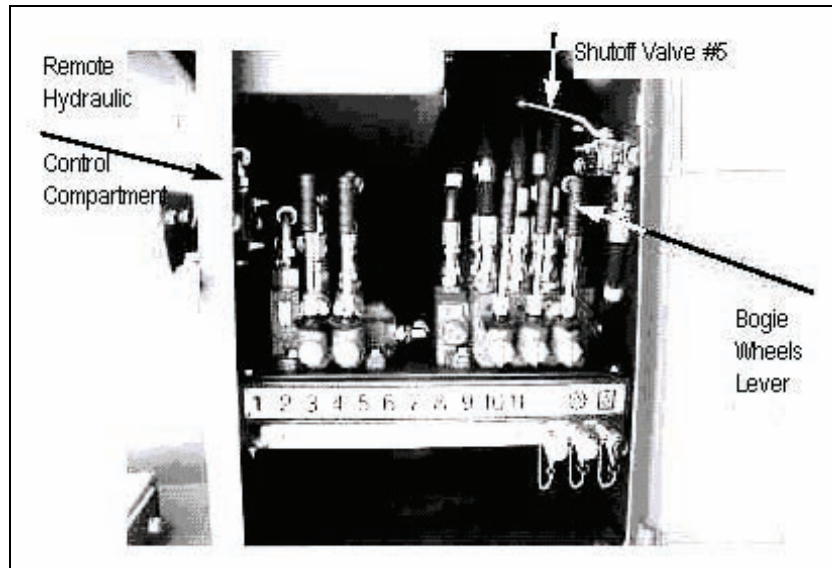


Figure 3-154. Opening Remote Hydraulic Control Compartment

- r. Slowly pull bogie wheels lever to raise bogie wheels.
- s. Turn bogie wheels retaining collar and then 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 3-155).

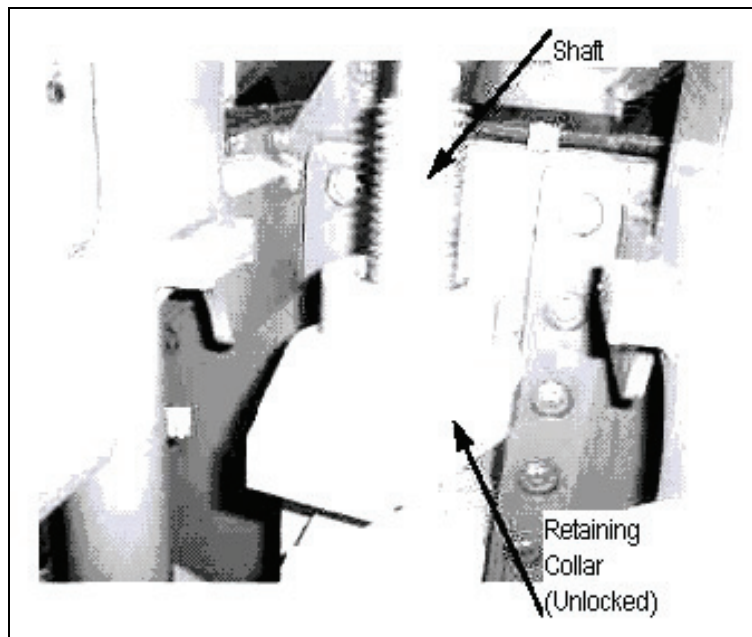


Figure 3-155. Turning Bogie Wheels Retaining Collar

Performance Steps

- t. Push bogie wheels lever to lower bogie wheels and ensure wheels are lowered sufficiently to apply ground pressure.
- 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 3-156).

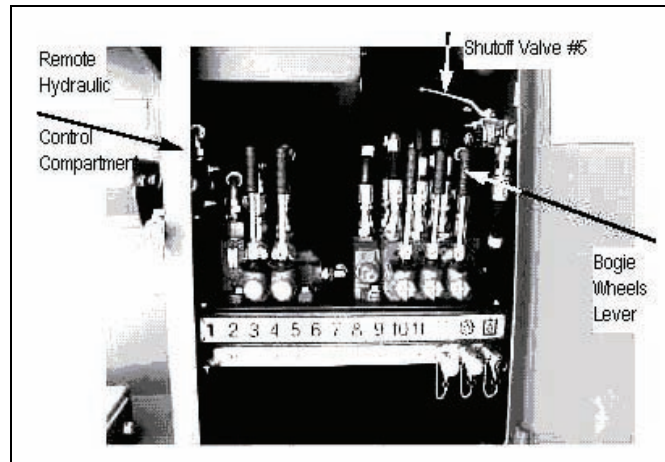


Figure 3-156. Opening Shutoff Valve #5

CAUTION: Over steering will damage dolly and bogie wheels.

- v. Using first gear and two-wheel steering mode, slowly drive RTCH forward up ramps and position inside aircraft and DO NOT exceed 1 MPH (1.6 kph) speed. And only slight steering corrections are allowed during loading.
- w. Lower boom support to the maximum onto the frame.
- x. Rotate bogie wheels retaining collar and 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 3-157).

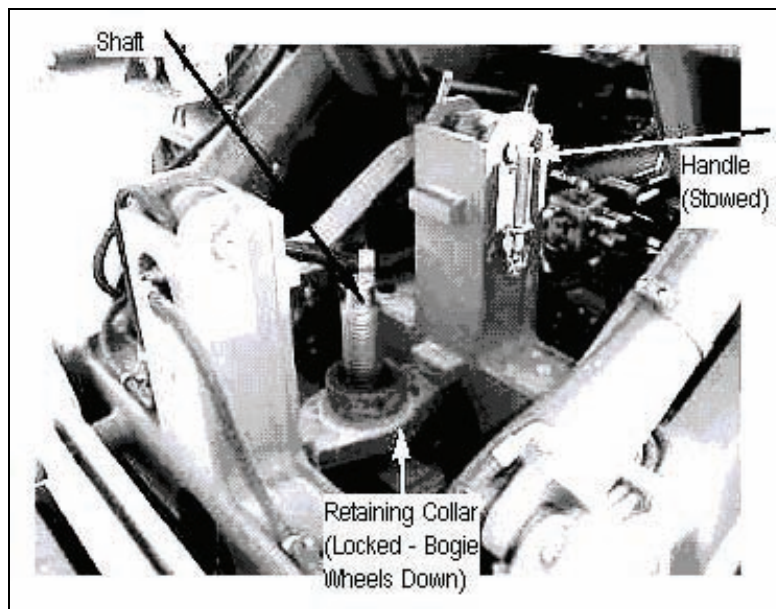


Figure 3-157. Rotating Bogie Wheels Retaining Collar

Performance Steps

- y. Shut down RTCH engine.
 - (1) Tie boom to RTCH frame.
 - (2) Secure RTCH to tie-down locations inside aircraft in accordance with tie-down instructions on RTCH data plate and on aircraft

3. Unload RT 240 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 and 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 and DO NOT exceed 1 MPH (1.6 kph) speed. And only slight steering corrections are allowed during unloading.
- f. Inside remote hydraulic control compartment and close shutoff valve #5.
- g. Inside remote hydraulic control compartment, pull bogie wheels lever to fully raise bogie wheels.
- h. Turn bogie wheels retaining collar and turn clockwise to lock bogie wheels in stowed position.
- i. At front of vehicle, close both shutoff valves #6.
- 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 pin from each dolly wheel and remove dolly wheel from tophandler.
 - (2) Reinstall lower and upper pin in dolly wheel and secure with retaining pins.

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.

- 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.
- o. Retract and lower boom.

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.

- p. Rotate tophandler 90 degrees clockwise to operational position.
- q. Return cab to operational position.
- r. Shut down RTCH engine.
- s. Fill fuel tank.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Prepared RT 240 RTCH forklift for air movement.	—	—
2. Loaded RT 240 RTCH forklift onto aircraft.	—	—
3. Unloaded RT 240 RTCH forklift from the aircraft.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

FM 55-17

TM 10-3930-675-10-1

TM 10-3930-675-10-2

Related

**Attach Forklift Kit to Kalmar Rough Terrain Container Handler (RT 240)
551-88H-3503**

Conditions: Assigned as a team chief in an operational environment, given a completed risk assessment, RT 240 RTCH forklift, forklift kit, TM 10-3930-675-10-1, and TM 10-3930-675-10-2.

Standards: Attached forklift kit to Kalmar rough terrain container handler (RT 240) in accordance with TM 10-3930-675-10-1 and TM 10-3930-675-10-2.

Performance Steps

1. Instruct personnel to perform 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 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. Supervise the installation of the forklift kit on the RT 240 RTCH forklift.

NOTE: The forklift kit attaches to the tophandler twistlocks and hydraulic system. The forklift is attached with the kit in a folded configuration.

NOTE: The procedure requires two personnel: 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.

- a. Position tophandler directly over and level with forklift kit (see Figure 3-158).
- b. Lower tophandler onto forklift kit and secure with twistlocks.

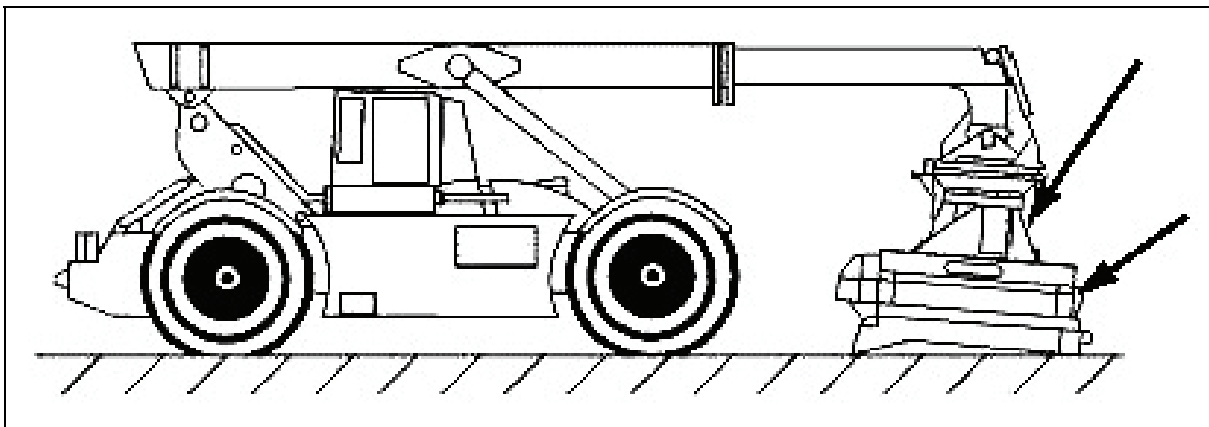


Figure 3-158. Positioning Tophandler Over Forklift Kit

Performance Steps

- c. 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 3-159).
- d. 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 3-160).
- e. Remove two locking pins and retaining pins that secure upper fork arms to the top frame.
- f. Stow retaining pins on forklift kit top frame.
- g. Slowly tilt the tophandler/forklift kit to the full rearward position while raising the boom and this will allow the upper fork arms to unfold downward (see Figure 3-161).

NOTE: The following step requires a structure such as an ISO container or a loading dock to complete the unfolding of the lower forks.

- h. Retract the boom and position the truck in front of an ISO container or loading dock (see Figure 3-162).
- i. Remove two locking pins and retaining pins that secure forks to upper fork arms.
- j. Raise the boom until the forks are even with sides of the container or vertical wall of the loading dock.
- k. Extend the boom until the forks are close to the vertical surface.
- l. Place transmission in Neutral (N).
- m. Slowly tilt the tophandler/forklift kit forward, then raise the boom and this will allow the RTCH to move rearward and the forks to fold out to the horizontal position.
- n. Retract the boom and level the forklift kit using the joystick tilt control.

NOTE: Retaining pins should be installed from the outside.

- o. Install retaining pins and locking pins to secure forks to upper fork arms (see Figure 3-163).

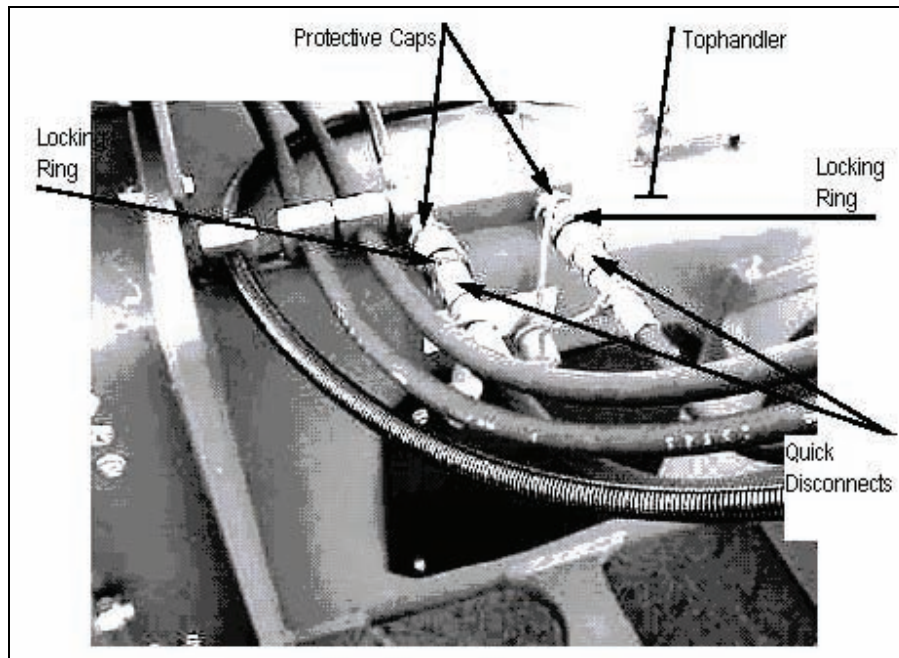


Figure 3-159. Releasing Locking Rings

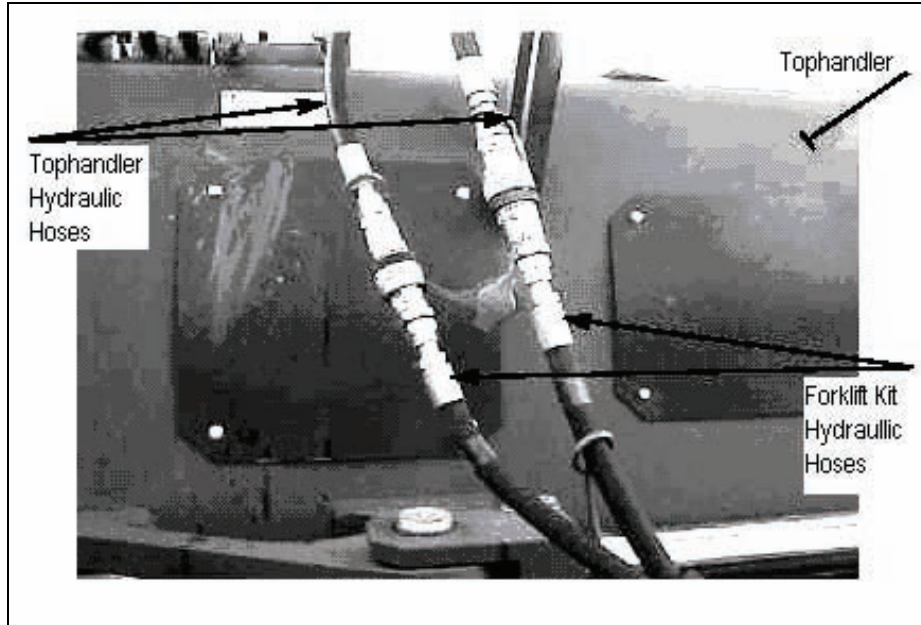


Figure 3-160. Removing Protective Caps From Forklift Kit Hydraulic Hose Connectors

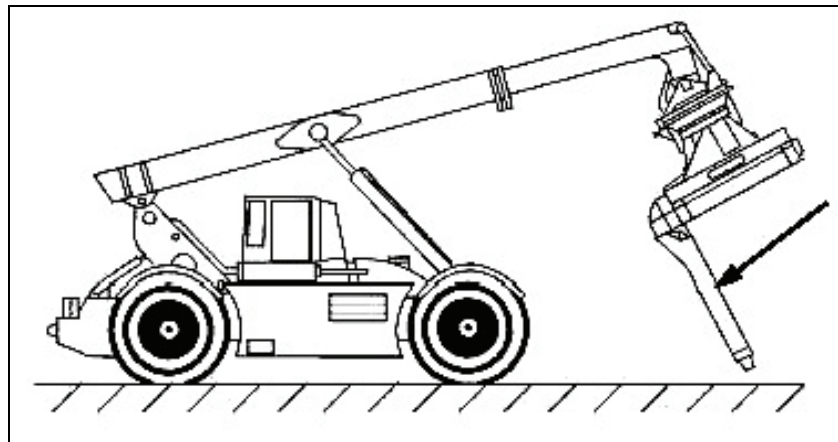


Figure 3-161. Tilting the Tophandler/Forklift Kit to the Full Rearward Position

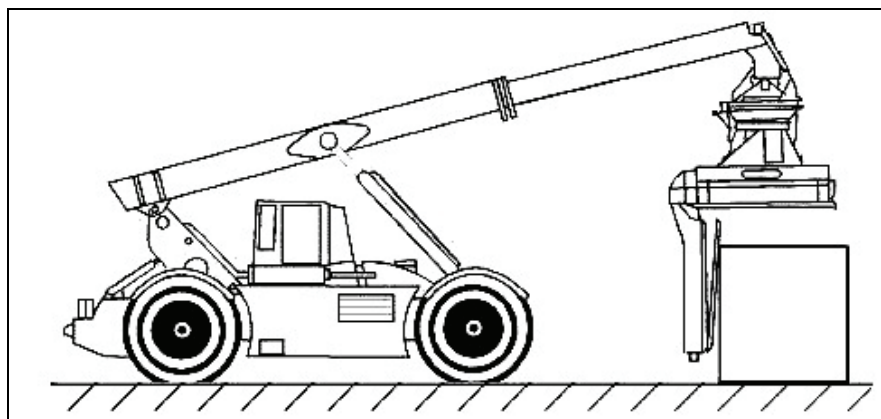


Figure 3-162. Retracting the Boom

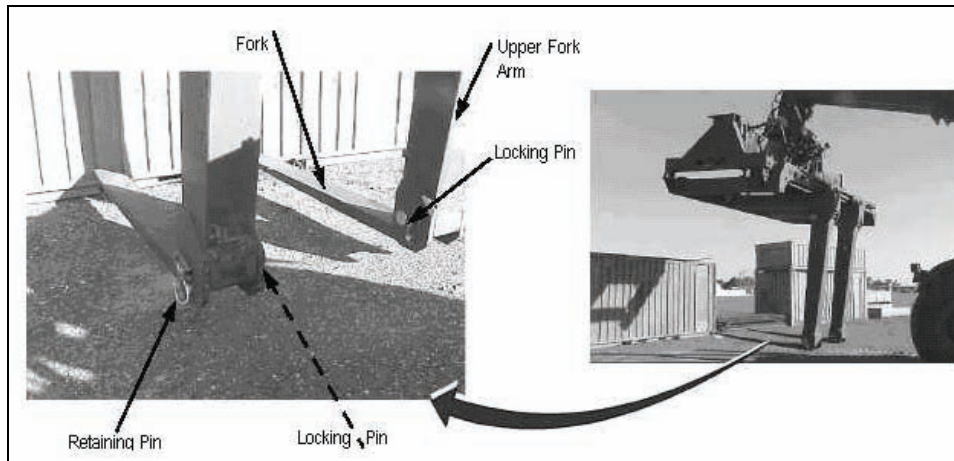


Figure 3-163. Installing Retaining Pins and Locking Pins

Performance Measures

GO **NO-GO**

- | | |
|---|-----------------------------|
| <ol style="list-style-type: none"> 1. Instructed personnel to perform preventive maintenance checks and services (PMCS) before installing the forklift kit. 2. Supervised the installation of the forklift kit on the RT 240 RTCH forklift. | <p>— —</p> <p>— —</p> |
|---|-----------------------------|

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- TM 10-3930-675-10-1
- TM 10-3930-675-10-2

Related

**Supervise Material Handling Equipment (MHE) Operation
551-88H-3510**

Conditions: Assigned as a cargo section chief aboard a cargo vessel in an operational environment, given a completed risk assessment, safety briefing, safety equipment, cargo, cargo stowage plan, material handling equipment (MHE), and FM 55-17.

Standards: Supervised MHE operations in accordance with FM 55-17.

Performance Steps

1. Identify the purpose and types of MHE.

NOTE 1: MHE is large, mechanically powered equipment used to lift, transfer, and stack cargo. Types of MHE are as follows:

- " Forklifts (gas or electric)
- " Tractors with trailers
- " Rough Terrain Container Crane (RTCC)
- " Gantry Crane

NOTE 2: Some additional non-powered MHE are the 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:
 - " Type of cargo
 - " Weight of cargo
 - " Size of cargo
 - " Containers, if used
 - " Distance cargo is to be moved
 - " Type of surface or terrain
 - " 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.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Identified the purpose and types of MHE.	—	—
2. Ensured MHE operators are 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Subject Area 35: Advance Automated Cargo Documentation, Computer Deployment Systems (CODES)

Check Trim and Stability

551-88H-4515

Conditions: Assigned as a stow planner in an operational environment, given ship's characteristics and data, Stability Worksheet, and FM 55-17.

Standards: Checked trim and stability using the Stability Worksheet, ensuring the vessel meets sailing conditions prescribed by the vessel master and FM 55-17.

Performance Steps

1. Check transverse stability.
 - a. Enter arrival ship data at the top of the worksheet (see Figure 3-164).
 - b. Calculate mean draft. This is the key for entering the hydrostatic data tables. Enter the tables and obtain the displacement at the arrival mean draft and copy it to the TONS column of the worksheet.
 - c. Enter arrival ship KG in the EST KG column of the worksheet.
 - d. Multiply arrival ship displacement times arrival ship KG and enter this number in the VERT MOMENT column.
 - e. On the worksheet, locate the compartment into which cargo will be loaded and enter the number of tons in the TONS column.
 - f. Add the estimated VCG of the cargo to the VCG TO DECK (second column of the worksheet) and enter this number in the EST KG column of the worksheet.
 - g. Multiply TONS times EST KG and enter in the VERT MOMENT column.
 - h. Add the numbers in the tons column. This is the LOADED DISPLACEMENT. Add the numbers in the VERT MOMENT column to obtain total moments.
 - i. Divide total vertical moments by loaded displacement to obtain the loaded ship KG and enter this on the worksheet where indicated.
 - j. The loaded displacement enables you to again enter the hydrostatic data tables. From the tables, pull out the KM, LCB, MOMENT TO TRIM 1", and the loaded mean draft. Enter these numbers on the worksheet in the spaces provided.
 - k. Subtract KG from KM and enter as GM. Enter Free Surface correction given in the problem and subtract it from GM to obtain GvM.
 - l. Using the loaded mean draft, enter the graph in the trim and stability pamphlet and determine the minimum GM required. Subtract this from GvM to determine the margin of GM obtained by loading the cargo in this manner. If the margin is negative or very small, weights will have to be shifted so as to place more weight on the lower decks thereby increasing the margin.
2. Check longitudinal stability.
 - a. Enter arrival ship data at the top of the worksheet (see Figure 3-164).
 - b. Calculate mean draft. This is the key for entering the hydrostatic data tables. Enter the tables and obtain the displacement at the arrival mean draft and copy it to the TONS column of the worksheet.
 - c. Enter arrival ship LCG in the LCG FM MIDSHIPS column of the worksheet. (+ if fwd of amidships and - if aft of amidships)
 - d. Multiply tons (displacement) times the LCG and enter in the LONG MOMENT column.
 - e. Multiply TONS for each compartment loaded times the LCG of that compartment and enter in the LONG MOMENT column.
 - f. Add the LONG MOMENTS to obtain total longitudinal moment, and divide this by the loaded displacement. This gives you LCG of the loaded ship. Enter this on the worksheet.
 - g. Subtract LCB (which should already be entered on the worksheet from step j of the TRANSVERSE STABILITY procedure) from LCG and obtain TRIM LEVER.
 - h. Multiply TRIM LEVER by LOADED DISPLACEMENT and enter as TRIMMING MOMENT.

Performance Steps

- i. Divide TRIMMING MOMENT by MOMENT TO TRIM 1" (which should already be entered on the worksheet) and obtain trim in inches.
- j. Round trim in inches to the NEAREST EVEN WHOLE INCH and divide by 2.
- k. Apply this number to the mean draft to obtain the drafts forward and aft. If G is forward of B (indicated by a +), then subtract from mean draft for the aft draft and add to the mean draft for the fwd draft. If G is aft of B (indicated by a -), then add to the mean draft for the draft aft and subtract from mean draft for the draft forward

STABILITY WORKSHEET
USNS ALGOL

Page 1 of 4 ARRIVAL SHIP CONDITIONS

DF _____ DA _____ MD _____ DISPL _____

KG _____ LCG _____

LOCATION HOLD/DECK	VCG TO DECK	TONS	EST KG	VERT MOM	LCG + fwd	LONG MO
Arr. ship						
1 Fwd/2nd	52				+350	
1 Aft/2nd	52				+299	
1 Fwd/37'	37				+350	
1 Aft/37'	37				+299	
2 fwd/flt	87				+243	
	87				+183	
7A MD	73				-312	
8F MD	73				-355	
8A MD	73				-395	
TOTALS	*****					

$KG = \frac{\text{TOTAL VERTICAL MOMENT}}{\text{LOADED DISPLACEMENT}}$

 $LCG = \frac{\text{TOTAL LONG. MOMENT}}{\text{LOADED DISPLACEMENT}}$

TRANSVERSE STABILITY

* KM _____

(-) KG _____

(=) GM _____

(-) FS _____

(=) GvM _____

(-) GM REQ _____

(=) MARGIN _____

LONGITUDINAL STABILITY (TRIM)

LCG _____

(-)* LCB _____

(=) TRIM LEVER _____

(X) DISPL. = _____ (TRIMMING MOMENT)

TRIMMING MOMENT = TRIM (ROUND TO NEAREST EVEN WHOLE INCH) _____

*MOM. TO TRIM 1" _____

TRIM AMOUNT TO APPLY TO MD FOR DRAFTS FORE AND AFT

2

MEAN DRAFT _____ DRAFT FWD _____ DRAFT AFT _____ TRIM _____

*INDICATES INFORMATION FROM HYDROSTATIC DATA TABLES

SAMPLE

Figure 3-164. Stability Worksheet

Performance Measures

GO **NO-GO**

- | | | |
|------------------------------------|-------|-------|
| 1. Checked transverse stability. | _____ | _____ |
| 2. Checked longitudinal stability. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Skill Level 4

Subject Area 36: Advanced Cargo Operations (Air)

Monitor External Sling Load Operation
551-88H-4501

Conditions: Assigned as a Platoon Sergeant in an operational environment given a completed risk assessment, helmet, gloves, earplugs, goggles, protective mask and safety clothing, an air terminal or designated field area, and FM 4-20.197.

Standards: Ensured external sling load operation was performed safely without damage to equipment or injuring personnel in accordance with FM 4-20.197.

Performance Steps

1. Ensure personnel are wearing safety equipment (helmet, protective mask or dust goggles, earplugs, and gloves) (see Figure 3-165).

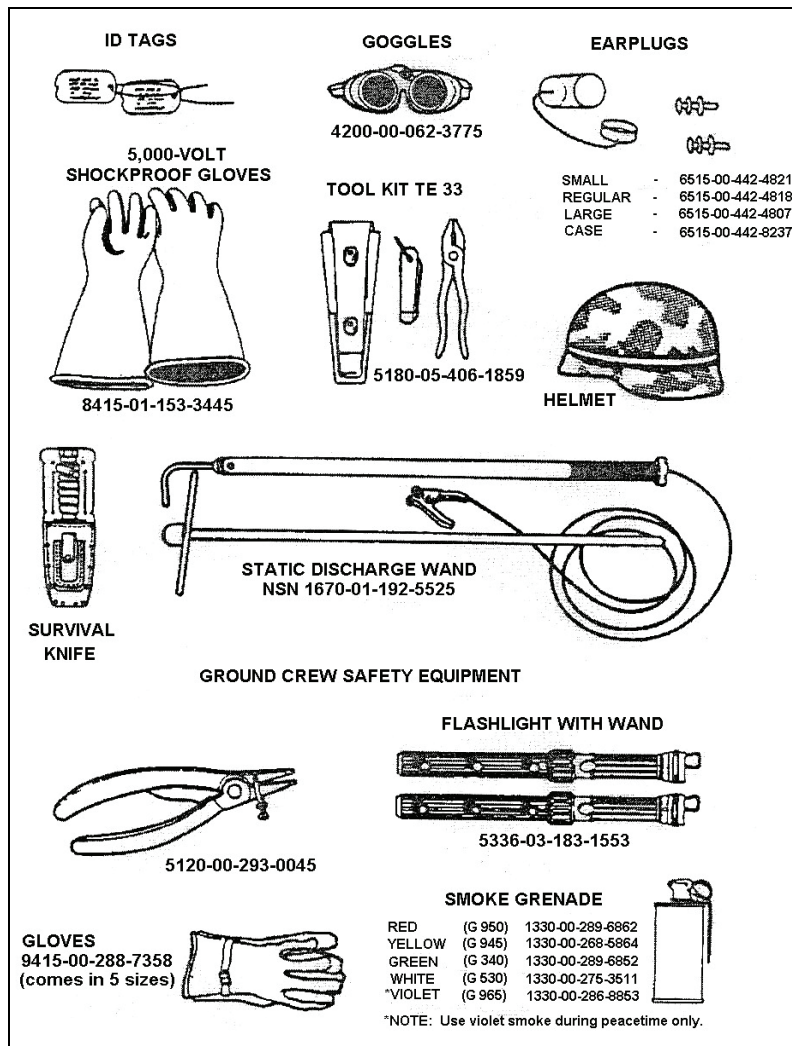


Figure 3-165. Safety Equipment

Performance Steps

2. Inspect the static charge wands, ensuring they are insulated and joined to a length of cable.
3. Ensure ground rod is driven into the ground on the opposite side of the hookup team rendezvous point.
4. Oversee crewman to ensure the static discharge wand is placed and held against the cargo hook.
5. Observe the position of the signalman to ensure that he is seen by the pilot and that signals given are clear, correct, and safe.
6. Oversee 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Make on-the-spot corrections as required.	_____	_____
2. Inspected static discharge wands, ensuring insulation and connection to cable.	_____	_____
3. Ensured ground rod was driven on opposite side of the hookup team rendezvous point.	_____	_____
4. Ensured ground rod was driven on opposite side of the hookup team rendezvous point.	_____	_____
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. Oversaw external sling load procedures for rigging loads, ensuring rigging methods were correct and personnel followed safety procedures.	_____	_____
7. Made on-the-spot corrections as required.	_____	_____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 4-20.197

Related

Monitor Air Terminal Operations

551-88H-4502

Conditions: Assigned as a platoon sergeant to monitor air terminal operations in an operational environment, given safety equipment, aircraft, vehicles, cargo, equipment, Military Intelligence (MI) support, deploying personnel, emergency plans, communication support, labels and markings, fire fighting equipment, tie-downs, load team personnel, ramp NCO, fuel cans, TM 38-250, and FM 4-01.011.

Standards: Ensured Air Terminal Operations were carried out safely with all cargo properly labeled, marked, stowed, and secured in accordance with TM 38-250 and FM 4-01.011.

Performance Steps

1. Monitor air cargo operations.
 - a. Oversee personnel that are checking compatibility of cargo to ensure that cargo can be loaded aboard the aircraft.
 - b. Oversee the checks on labels and markings to ensure all cargo is marked or labeled as applicable.
 - c. Ensure personnel observe safety precautions and fire fighting equipment is on hand.
 - d. Ensure personnel use safe handling methods.
 - e. Ensure personnel load and tie down cargo properly.
 - f. Take 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. Instruct personnel to check each vehicle carefully to ensure all loose or removed items are secured properly within or on vehicle.
 - c. Instruct 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. Instruct drivers and equipment operators to follow 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. Instruct 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. Instruct personnel that smoking is prohibited on the aircraft parking ramp except in designated smoking areas.
 - b. Instruct 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.

Performance Steps

- e. Instruct 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. Instruct personnel must maintain a 10-foot safety perimeter around the aircraft at all times.
 - j. Instruct 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) Arrange 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. Coordinates with deploying forces to maintain adequate dispersion using the following guidelines:
 - (1) When movement is necessary, moves rapidly under cover of darkness, at the latest possible time, and to separate areas in the vicinity of the air facilities.
 - (2) Makes 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. Arrange 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. Instruct 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 TM38-250 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.

Performance Steps

- 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 are no more than what is specified in accordance with 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. Instruct load team chief to correct all discrepancies immediately.
- j. Instruct load team chief that all discrepancies will be corrected before loading.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- FM 4-01.011
- TM 38-250

Related

Brief Troop Commander on Flight Safety**551-88H-4512**

Conditions: Assigned as a platoon sergeant in an operational environment during a Departure Airfield Control Group (DACG) operation, given a designated airfield or field area, and FM 4-01.011.

Standards: Briefed troop commander on flight safety, ensuring awareness of flight line guidelines and in-flight responsibilities in accordance with FM 4-01.011.

Performance Steps

1. Brief troop commander on In-Flight Safety.

- a. Inform troop commander that personnel must keep their seats belts fastened when taking off or landing and when ordered by the aircraft commander.
- b. Inform troop commander that smoking is prohibited when the aircraft has vehicles or hazardous cargo aboard.
- c. Inform troop commander that smoking is prohibited on aircraft unless permitted by the aircraft commander.
- d. Inform troop commander that no electronic devices will be operated aboard the aircraft.
- e. Inform troop commander to follow instructions of the aircraft commander or his designated representative in the event of an emergency.
- f. 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.
- g. Inform troop commander to brief all personnel on the above instructions before lift-off.
- h. 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 instruct his personnel to follow all instructions of the Aircraft Loadmaster and 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 that no vehicle will be started and no Restraining devices will be removed until the loadmaster gives the instructions.
- c. Inform troop commander to move his troops perpendicular to the Aircraft at least 50 feet (150 feet from a C5 aircraft) before turning when deplaning from an aircraft with engines running.
- d. Inform troop commander to brief his personnel on all of the Precautions in 1 through 3 above and on the following flight line 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) Do not drive over 15 mph when driving on the flight line.
 - (6) Do not drive over 5 mph when driving within 50 feet of the aircraft.
 - (7) Do not drive over 3 mph on loading ramps or inside the aircraft.
 - (8) Comply with the loadmaster's orders regarding the off-loading of the aircraft.
 - (9) Do not park closer than 25 feet to an aircraft.
 - (10) 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.
 - (11) Do not drive a vehicle within 10 feet of an aircraft.
 - (12) Do not let trash or debris be thrown on the flight line.
 - (13) Do not stand or walk directly in front of or behind vehicles that are being driven or backed into or out of an aircraft.
 - (14) Do not back vehicles toward or into an aircraft or off an aircraft without spotters placed at the front and rear of the vehicle.

Performance Measures

1. Briefed troop commander on In-Flight Safety.
2. Briefed troop commander on Off-Load Safety.

GO **NO-GO**____ ____
____ ____

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**
FM 4-01.011**Related**

Subject Area 37: Advanced Cargo Operations (Ship)

Monitor Marine Terminal Operations**551-88H-4508**

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, a vessel with equipment and supplies, material handling equipment (MHE), personnel to conduct ship discharge operations, FM 55-17, and FM 55-60.

Standards: Monitored marine terminal operation to assure the success of operation in the placement of equipment and supplies where and when needed in accordance with FM 55-17 and FM 55-60.

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) Break-Bulk terminal.
 - (4) Special Commodity (ammunition) terminal.
 - (5) Bulk Fuel terminal.
 - (6) Composite capability for multipurpose/combi-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) Arrange 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. Be knowledgeable of terminal restrictions regarding the handling and storage of ammunition/hazardous materials.

Performance Steps

- 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. Instruct personnel to correct deficiencies immediately and report all security violations to the security officer immediately.
 - h. Instruct personnel to be knowledgeable of all the different types of terrorist activity 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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.	—	—
4. Monitored marine terminal security.	—	—
5. Monitored marine terminal operational planning.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 FM 55-17
 FM 55-60

Related

Monitor Handling of Dangerous or Hazardous Cargo Aboard a Cargo Vessel
551-88H-4510

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, dangerous or hazardous cargo to load or discharge, a prestowage plan, cargo handling personnel, access to technical personnel; CFR 49, Parts 100 thru 185; and CFR 46, Parts 146.29-41 thru 172.

Standards: Monitored handling of dangerous or hazardous cargo aboard a cargo vessel ensuring adherence to all technical and safety procedures in accordance with CFR 49, Parts 100 thru 185; and CFR 46, Parts 146.29-41 thru 172.

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 46, Part 146.29-41.
8. Check to ensure personnel follow regulations regarding handling, stowing, and securing of dangerous or hazardous cargo given in CFR 46, Parts 146.29-39 and 146.29-51.
9. Report discrepancies to the platoon leader.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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.	—	—

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 46, Part 146.29-41.	—	—
8. Checked to ensure personnel followed regulations regarding handling, stowing, and securing of dangerous or hazardous cargo given in CFR 46, Parts 146.29-39 and 146.29-51.	—	—
9. Reported discrepancies to the platoon leader.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References**Required**

CFR 46
CFR 49

Related

Monitor Dangerous or Hazardous Cargo Operations for Motor Transport Movement
551-88H-4511

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, dangerous or hazardous cargo, DD Form 626 (Motor Vehicle Inspection [Transporting Hazardous Materials]), DD Form 836 (Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles), FM 55-30, FM 55-15; CFR 49, Parts 100 thru 199; and CFR 46.

Standards: Monitored dangerous or hazardous cargo operations for motor transport movement ensuring adherence to all technical and safety procedures in accordance with FM 55-30, FM 55-15; CFR 49, Parts 100 thru 199; and CFR 46.

Performance Steps

1. Ensure that all technical and safety procedures are followed when transporting hazardous materials via motor transport movement.
 - a. Instruct personnel to check the area that contains the hazardous materials and post warning/restrictions signs as required.
 - b. Instruct personnel to post NO SMOKING signs within 25 feet from the loading area.
 - c. Instruct personnel to verify that all motor vehicle inspection requirements are included on the DD Form 626 (see Figure 3-166).
 - d. Validate that there are no defeats listed on inspection report that will affect the safe operation of the vehicle and its load.
 - e. Instruct personnel to validate that all deficiencies found are corrected before the vehicle is loaded.
 - f. Instruct drivers that each truck hauling explosives must have two (2) fire extinguishers.
 - g. Instruct 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. Instruct truck drivers to turn the motor off while explosives and flammables are being loaded.
 - j. Instruct personnel to have the inspector to sign the DD Form 626.

NOTE: At origin, the shipper must inspect the vehicle before they are loaded.

- k. Instruct personnel to ensure that the driver understands the hazards associated with the shipment/load.
2. Ensure that all hazardous cargo are prepared and documented on DD Form 836 (see Figure 3-167).
 - a. Validate and verify that selected individuals (shipper) were available to certify hazardous shipment documentation.
 - b. Instruct personnel to ensure that hazardous shipments, are properly prepared, packaged, labeled, marked, and placarded.
 - c. Instruct personnel to personally inspect the items being certified and sign the hazardous material (HAZMAT) documentation.
 - d. Ensure that the certifying official is trained at a department of defense (DOD) approved school within the past 24 months.
 - e. Ensure that the proper Emergency Response Information for Hazardous Material is submitted along with the unit request for transportation.
 - f. Instruct personnel to verify that the proper shipping information is input on the DD Form 636 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.

Performance Steps

- (7) Block 7. Emergency Response guide numbers.
- (8) Block 8. Shipper's Certification.
- g. Instruct personnel to provide the driver with a signed copy of the DD Form 836.
- h. Instruct personnel to retain a copy of the DD Form 626 and the DD Form 836 with the commercial bill of lading (CBL) as a file copy.
- i. Ensure that a qualified individual from the unit coordinates with the Freight Movement Office who schedules shipments and selects the carriers being used to move the shipments.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)										
<i>(Read instructions before completing this form.)</i>										
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 I - 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. <i>(X if satisfactory at origin)</i>					9. CVSA DECAL DISPLAYED ON COMMERCIAL EQUIPMENT*					
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		
c. ROUTE PLAN								b. TRAILER		
								X		
SECTION II - MECHANICAL INSPECTION										
<i>All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.</i>										
10. TYPE OF VEHICLE(S) Truck, cargo, 2 1/2-ton M35A2C					11. VEHICLE NUMBER(S) USA 1326547					
12. PART INSPECTED <i>(X if applicable)</i>		ORIGIN (1)		DESTINATION (2)		ORIGIN (1)		DESTINATION (2)		COMMENTS (3)
		SAT		UNSAT		SAT		UNSAT		
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. TARPALIN*		X		
j. FUEL SYSTEM*		X				t. OTHER <i>(Specify)</i>				
13. INSPECTION RESULTS <i>(X one)</i> ACCEPTED					REJECTED					
<i>(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)</i>										
14. SATELLITE MOTOR SURVEILLANCE SYSTEM: <i>(X one)</i> ACCEPTED					REJECTED					
15. REMARKS										
16. INSPECTOR SIGNATURE <i>(Origin)</i> <i>Marvin Lee</i>					17. INSPECTOR SIGNATURE <i>(Destination)</i>					
SECTION III - POST LOADING INSPECTION										
<i>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.</i>										
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR		ORIGIN (1)		DESTINATION (2)		ORIGIN (1)		DESTINATION (2)		COMMENTS (3)
		SAT		UNSAT		SAT		UNSAT		
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT										
20. SEALS APPLIED TO CLOSED VEHICLE; TARPALIN 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 <i>(Origin)</i> <i>Moe Howara</i>					26. DRIVER(S) SIGNATURE <i>(Origin)</i> <i>Bud Abbott</i>					
27. INSPECTOR SIGNATURE <i>(Destination)</i> <i>Larry Fine</i>					28. DRIVER(S) SIGNATURE <i>(Destination)</i> <i>Lou Costello</i>					

SAMPLE

Figure 3-166. Sample of DD Form 626

INSTRUCTIONS	
<p>SECTION I - DOCUMENTATION</p> <p>General Instructions.</p> <p>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.</p> <p>Items 1 through 5. Self explanatory.</p> <p>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.</p> <p>Item 7. *Enter the expiration date listed on the Medical Examiner's Certificate.</p> <p>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.</p> <p>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)).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>SECTION II - MECHANICAL INSPECTION</p> <p>General Instructions.</p> <p>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.</p>	<p>SECTION II (Continued)</p> <p>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)</p> <p>b. Horn Operative. Ensure that horn is securely mounted and of sufficient volume to serve purpose. (49 CFR 393.81)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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)</p> <p>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 393.29, 393.32, 393.33)</p>
DD FORM 626, MAR 2007	Page 2 of 3 Pages

Figure 3-166. 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.

Figure 3-166. Sample of DD Form 626 (continued)

HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT								
DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES								
1. a. NOMENCLATURE: b. MODEL NO.: c. BUMPER NO.:			d. CONTAINER SEAL NO.: e. SERIAL NO.: f. TCN NUMBER:					
2. SHIPPER NAME/ADDRESS/TELEPHONE NO./DATE OF PREPARATION HHB, 31st ADA Bde Fort Bliss, TX DSN 978-xxxx March 2006							3. PAGE <u>1</u> OF <u>1</u> PAGES	
4. CARGO (To be completed by the unit or shipper Transportation Office (TO))								
PROPER SHIPPING NAME <small>(Include RQ, Technical Names, Additional information per 49 CFR 172.203, as required.)</small> a.	HAZARD CLASS/DIVISION b.	SUBSIDIARY HAZARD c.	UNID NUMBER d.	PACKING GROUP (PG) e.	PACKAGES NUMBER f. KIND g.		TOTAL NET QUANTITY h.	TOTAL AMMO (NEW) i.
Cartridges for Weapons	1.2E		UN 0321		4	BX	4 rds	14.631 kg
Ammunition, Illuminating	1.2G		UN 0171		1	BX	2 rds	4.447 kg
5. CONSIGNEE NAME								
6. REMARKS								
SAMPLE								
7.a. COPY OF EMERGENCY RESPONSE GUIDE NUMBER(S)								
b. EMERGENCY NOTIFICATION. In all cases of accident, breakdown or fire, promptly call emergency assistance telephone number(s) in item 7c below and then shipper and/or consignee in item 2 above, in that order.								
c. 24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBERS:								
DOD NON-EXPLOSIVE HAZMAT: 1-800-861-8061 1-804-279-3131 (FOR CALLS FROM SHIPS AT SEA)	DOD HAZ CLASS 1 (EXPOSIVES) ONLY: (703) 697-0218 or 0219 (COLLECT) OR DSN 227-0218 (WATCH OFFICER)	CHEMICAL/BIOLOGICAL WARFARE MATERIAL DUTY HOURS: DSN 584-3044, 584-7211, 584-6455, Comm. (410) 436-3044, (410) 436-7211, (410) 436-6455 AFTER DUTY HOURS: DSN 584-2148, Comm. (410) 436-2148 (Ask for TEU S3)	SECURE HOLDING: 1-800-524-0331 OIL AND CHEMICAL SPILLS: NATIONAL RESPONSE CENTER (NRC) AND TERRORIST HOTLINE: 1-800-424-8802 AT SEA:	DOD RADIOACTIVE MATERIALS: ARMY: (703) 697-0218 (COLLECT) USAF: (202) 767-4011 (COLLECT) USN/MC: Use 24-hour emergency response phone number provided by USN/MC activity initiating shipment. (AT SEA: (804) 279-3131)				
8. SHIPPER'S CERTIFICATION This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the regulations								
a. TYPE OR PRINT NAME OF SHIPPER CERTIFIER Michael Myatt				c. SIGNATURE(S) OF VEHICLE OPERATOR(S)				
b. SIGNATURE OF SHIPPER CERTIFIER AND DATE <i>Michael Myatt</i>								
DD FORM 836, OCT 2006 PREVIOUS EDITION IS OBSOLETE. <small>Adobe Professional 7.0</small>								
HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT								

Figure 3-167. Sample of DD Form 836

HAZMAT INST // HAZMAT INST // HAZMAT INST // HAZMAT INST	
INSTRUCTIONS FOR COMPLETING DD FORM 836, DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES	
<p>GENERAL</p> <p>DD Form 836 will be completed by a qualified* individual from a transportation office, unit or other organization offering Hazardous Material (HAZMAT) for transportation in areas accessible to the general public.</p> <p>*An individual is considered qualified to complete and sign (certify) DD Form 836, only after having satisfactorily completed either a DOD authorized HAZMAT Course from one of the DOD-approved schools listed in the Defense Transportation Regulation (DTR) or military technical specialist training in accordance with the DTR, Chapter 204, Paragraph D. This person will be appointed in writing by the activity or unit commander, to include scope of authority and expiration date of training.</p> <p>Item 1. Fill in the nomenclature, model number, TCN, and bumper number/serial number of the vehicle/container. For containers carrying sensitive or classified items, the container security seal is required.</p> <p>Item 2. Enter the shipper's address and telephone number of the HAZMAT origination and date of preparation. Telephone number is for NOTIFICATION PURPOSES ONLY. Emergency assistance will be obtained from the 24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBER(S) in Item 7c. on the first page of this form.</p> <p>Item 3. Self-explanatory.</p> <p>Item 4a. Enter the proper shipping name of the HAZMAT and if applicable include the technical name. (Enter additional information as required by 49 CFR, 172.203 - Example: RQ, Inhalation Hazard.) NOTE: In the case of multiple HAZMAT items on the same form with different emergency response telephone numbers, each phone number will be annotated below or adjacent to the HAZMAT item to which they apply.</p> <p>Item 4b. Enter the Hazard class/division and, if applicable, the Compatibility Group.</p> <p>Item 4c. Enter the subsidiary hazard of the material if applicable.</p> <p>Item 4d. Enter the identification numbers, e.g., NA, UN. The letters "UN" or "NA" must be noted. "NA" may not be used for OCONUS.</p> <p>Item 4e. Enter the packing group (e.g. I, II, or III) of the HAZMAT.</p> <p>Item 4f. Enter the total number of packages/items.</p> <p>Item 4g. Enter the type of packaging (e.g., container, box, drum, pallet), the HAZMAT is packed in.</p> <p>Item 4h. Enter the total net quantity for non-explosive material in metric measure. US measure may be added in parentheses underneath the metric measure. For ammunition, enter the total number of rounds/articles. Exception: Net total quantity is not required for bulk packages, empty packages, and cylinders of Class 2.</p>	<p>Item 4i. Enter total Net Explosive Weight (NEW) in kilograms for ammunition/ explosive (Class 1 items). NEW information is found in the Joint Hazard Classification System (JHCS) in the entry for the NEW (Transportation Quantity). Example: 27.231 kg.</p> <p>Item 5. Enter the six digit Department of Defense Activity Address Codes (DODAAC) and/or the clear geographical location of the ultimate consignee of the HAZMAT shipment. If this is a unit move, the unit name will be the same as that for Item 2.) Additional information if needed can be annotated in Item 6.</p> <p>Item 6. Additional handling instructions/information.</p> <p>Item 7a. Enter Emergency Response Guide Number.</p> <p>Item 7b. Self-explanatory. Call 24-hour Emergency Response number(s) circled in Item 7c first and then shipper.</p> <p>Item 7c. Circle emergency response telephone number. NOTE: For Radioactive Material Shipments only: Circle numbers and cross out those numbers that do not apply, e.g., Army shipments - cross out all but Army's radioactive response number.</p> <p>Item 8. Certifying person must type or print name legibly in 8a. and must sign in writing (longhand) and add the date signed in 8b.</p> <p>Item 8c. Self explanatory.</p> <p>NOTES:</p> <p>1. Units returning from firing range must have a certified or qualified person to ensure that all HAZMAT is properly repackaged and secured (i.e. braced, blocked, and tied down) prior to being transported back to base. See exception below.</p> <p>2. Completion of a new DD Form 836 is not required. Original DD Form 836 may be used provided that:</p> <p>a. Change Item 2 (Date Prepared).</p> <p>b. Change Item 4. (Cargo): (i) HAZMAT used will be deleted from form by crossing out or lining through. (ii) HAZMAT that remains, but is in different quantities, will have the correct amounts entered in the section(s).</p> <p>EXCEPTION:</p> <p>c. Change Item 8b.: (i) A qualified individual (if available) must sign in writing (longhand). If a qualified individual is not available, then the Officer-in-Charge (OIC) or Non-Commissioned Officer-in-Charge (NCOIC) must sign in writing (longhand) to verify that the above procedures have been performed for the return trip to base. (ii) Cross out original signature if different certifier will be used.</p>
HAZMAT INST // HAZMAT INST // HAZMAT INST // HAZMAT INST	

Figure 3-167. Sample of DD Form 836 (continued)

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 are prepared and documented on DD Form 836. | _____ | _____ |

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- CFR 46
- CFR 49
- DD FORM 626
- DD FORM 836
- FM 55-15
- FM 55-30

Related

Subject Area 38: Advanced Cargo Documentation

Prepare Prestowage Plan**551-88H-4504**

Conditions: Assigned as a Platoon Sergeant in an operational environment, given a list of cargo, scratch paper, pencil, blank stowage plan, vessel stowage and capacity booklet, and FM 55-17.

Standards: Prepared prestowage plan to include vessel characteristics, vessel capacities, cargo list, cargo weight data, vessel stowage factor, weight distribution plan, estimated cargo trim table, and cargo loading plan ensuring accurate and legible entries, in accordance with FM 55-17.

Performance Steps

1. Obtain the following vessel characteristics from the Military Sealift Command (MSC) representative and enter them on the prestowage plan.
 - a. Type of vessel.
 - b. Number of hatches.
 - c. Capacity of cargo booms.
 - d. Location of cargo booms.
2. Obtain the following vessel capacities from the MSC representative and enter them on the prestowage 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. Prepare a cargo list to include:
 - a. Amount.
 - b. Supply class.
 - c. Commodity.
 - d. Weight (LTs).
 - e. Cubic feet.
 - f. Cubic storage factor.
 - g. Measurement tons.
4. Compare cargo weight data with vessel capacity data (LTs and cubic feet) to determine if enough cargo space exists on the vessel.
5. Compute the vessel stowage factor (VSF) using the following formula: Bale cubic capacity / Weight of cargo to be loaded = VSF
6. Allocate cargo to compartments below deck using the following formula: Cubic capacity of each compartment / VSF = Cargo in LTs.
7. Prepare a weight distribution plan to show where cargo tonnages are allocated.
8. Prepare a table to estimate the loaded trim.

Performance Steps

9. Prepare a plan to show where cargo will be loaded that:
 - a. Distributes the weight, or bottom cargo, in the hold of the vessel.
 - b. Whenever possible, places heavy-lift cargo in a location where the jumbo boom can be used.
 - c. If there is still space in the compartment for additional cargo, uses the following topping-off formula to fill the unused space:

$$X = \frac{V-AT}{B-A}$$
 Where X = LTs of the lighter commodity to be stowed.
 V = net cubic capacity of space to be filled (taking into account broken stowage).
 A = stowage factor of the denser commodity.
 T = tonnage capacity of space to be filled.
 B = stowage factor of the light commodity.

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Obtained the following vessel characteristics from the Military Sealift Command (MSC) representative and entered them on the prestowage plan.	—	—
2. Obtained the following vessel capacities from the MSC representative and entered them on the prestowage plan.	—	—
3. Prepared a cargo list.	—	—
4. Compared cargo weight data with vessel capacity data (LTs and cubic feet) to determine if enough cargo space exists on the vessel.	—	—
5. Computed the vessel stowage factor (VSF) using the following formula: Bale cubic capacity / Weight of cargo to be loaded = VSF	—	—
6. Allocated cargo to compartments below deck using the following formula: Cubic capacity of each compartment / VSF = Cargo in LTs.	—	—
7. Prepared a weight distribution plan to show where cargo tonnages are allocated.	—	—
8. Prepared a table to estimate the loaded trim.	—	—
9. Prepared a plan to show where cargo will be loaded.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

**Interpret Data on Manifest
551-88H-4505**

Conditions: Assigned as a platoon sergeant in an operational environment with cargo to load or discharge, given a manifest and DOD Regulation 4500.32-R, Volume 1.

Standards: Accurately interpreted data on the manifest to include port of embarkation (POE), port of debarkation (POD), date vessel sailed, vessel status code, vessel name, vessel sustaining code, type of MHE and transport equipment needed for vessel discharge, and requirements for equipment based on cargo ensuring accurate and legible entries, in accordance with DOD Regulation 4500.32-R, Volume 1.

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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required	Related
DOD 4500.32-R, VOL 1	

Monitor Marine Terminal Operations Productivity and Analysis
551-88H-4509

Conditions: Assigned as a platoon sergeant in an operation environment, given a completed risk analysis, a vessel with equipment and supplies, material handling equipment (MHE), personnel to conduct ship discharge operations, and FM 55-60.

Standards: Monitored marine terminal operations productivity and analysis to specify the capability of the terminal service companies in accordance with FM 55-60.

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.

Performance Steps

3. Monitor daily operation report.
 - a. Check number of passenger embarked, and debarked.
 - (1) View passenger 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 gangs for ship and pier work.
 - (3) View covered and open storage space.
 - (4) View the number or railroad cars that can be accommodated and cleared.
 - (5) View material handling equipment availability.
 - f. Brief staff and commander at least once daily.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-60

Related

Subject Area 41: Advanced Cargo Operations (Shore)

Monitor Cargo Stowage and Securing Operations**551-88H-4503**

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, a cargo vessel, cargo to stow, dunnage, safety clothing, a hatch gang, and FM 55-17.

Standards: Ensured cargo was properly stowed and secured in accordance with FM 55-17.

Performance Steps

1. Check to ensure that the cargo space was used properly.
2. Check to ensure cargo is being stowed considering efficient discharge.
3. Check to ensure cargo is being stowed so that the item's strongest structures bear the greatest pressure and weight.
4. Check to ensure each item is stowed so that it supports and strengthens the entire load.
5. Check dunnage to ensure enough has been used, but not more than needed.
6. Check to ensure that stowage and special handling instructions have been followed.
7. Instruct personnel to correct all discrepancies immediately.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Checked to ensure that the cargo space was used properly.	—	—
2. Checked to ensure cargo was stowed considering efficient discharge.	—	—
3. Checked to ensure cargo was stowed so that the item's strongest structures bore the greatest pressure and weight.	—	—
4. Checked to ensure each item was stowed so that it supported and strengthened the entire load.	—	—
5. Checked dunnage to ensure enough was used, but not more than needed.	—	—
6. Checked to ensure that stowage and special handling instructions were followed.	—	—
7. Instructed personnel to correct all discrepancies immediately.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Monitor Cargo Security Procedures
551-88H-4506

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, security personnel, cargo checkers, FM 55-17, FM 55-60, and DD Form 1384 (Transportation Control and Movement Document).

Standards: Ensured proper security, technical, and safety procedures were being followed during loading or discharge of cargo/container shipments according to FM 55-17 and FM 55-60.

Performance Steps

1. Notify security personnel that security cargo will be unloaded and/or received and that surveillance and protection are required.
2. Give security briefing to personnel involved in cargo operations.

NOTE: Inform personnel handling the cargo on how essential it is to maintain control of the documentation flow.

3. Assign responsible personnel to receive, account for, and release security cargo.
4. Check to ensure personnel comply with rules to control individuals and vehicles within the storage area.
5. Instruct personnel that security cargo/containers cannot be reopened without carrier or security officer's specific authority.
6. Instruct 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. Instruct personnel to secure cargo in a secure cage, unit, or vault for intransit storage and to store loaded containers door to door.
8. Instruct personnel to inspect cargo and containers seals carefully and regularly and note discrepancies on DD Form 1384 (see Figure 3-168).
9. Restrict privately owned vehicles from entering the cargo handling or intransit storage area.
10. Instruct security personnel to inspect terminal lighting and fences for defects and forward discrepancies and suggested corrections to the security officer.
11. Instruct 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.

Performance Steps

12. Monitor gatehouse personnel for 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. Periodically change padlocks on security lockers, units, and vaults. Padlocks should be changed immediately if a key is reported missing.
14. Report any loss or pilferage to the nearest military police element or cargo security officer.

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. TRACCT									
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. Tranship 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			<i>Ryan Miller</i>									
UM4		124	A 17										<i>Lindy Ruff</i>									
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	37. POD	38. M O B E	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER			41. CONSIGNEE	42. P R I	43. REMARKS AND/OR				44. ADDITIONAL REMARKS OR					
				Air Dim a.	POE b.								RDD a.	Prej b.	Stow Loc	Shpd c.	ETA d.	Tac e.	Pieces a.	Weight b.	Cube c.	

Figure 3-168. Sample of DD Form 1384

Performance Measures	<u>GO</u>	<u>NO-GO</u>
1. Notified security personnel that security cargo will be unloaded and/or received and that surveillance and protection are required.	—	—
2. Gave security briefing to personnel involved in cargo operations.	—	—
3. Assigned responsible personnel to receive, account for, and release security cargo.	—	—
4. Checked to ensure personnel comply with rules to control individuals and vehicles within the storage area.	—	—
5. Instructed personnel that security cargo/containers cannot be reopened without carrier or security officer's specific authority.	—	—
6. Instructed security personnel and/or cargo checkers to guard hatches or the warehouse.	—	—
7. Instructed personnel to secure cargo in a secure cage, unit, or vault for intransit storage and to store loaded containers door to door.	—	—
8. Instructed 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. Instructed security personnel to inspect terminal lighting and fences for defects and forward discrepancies and suggested corrections to the security officer.	—	—
11. Instructed personnel shipping or receiving cargo to maintain a record of each shipment leaving the security area.	—	—
12. Monitored procedures gatehouse personnel must perform at vehicle entrances and exits.	—	—
13. Periodically changed padlocks on security lockers, units, and vaults. Padlocks should be changed immediately if a key is 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
 DD FORM 1384
 FM 55-17
 FM 55-60

Related

Subject Area 42: Advanced Cargo Operations (Ship and Shore)

Monitor Handling of Refrigerated Cargo**551-88H-4507**

Conditions: Assigned as a platoon sergeant in an operational environment, given a completed risk assessment, port veterinarian, personnel, refrigerated cargo, storage compartments, and FM 55-17.

Standards: Monitored handling of refrigerated cargo, ensuring adherence to technical and safety procedures in accordance with FM 55-17.

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. Instruct 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. Attend 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.

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
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. Instructed 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.	—	—

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
8. Pre-inspected stowage and monitored securing operations.	—	—
9. Attended 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 measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required
FM 55-17

Related

Subject Area 43: Advanced Cargo Operations (Rail)

Review Rail Plan for Loading/Unloading Cargo
551-88H-4301

Conditions: Assigned as a platoon sergeant in an operational environment, given palletized cargo loads, vehicles, material handling equipment (MHE), rail load plan, FM 4-01.011, and FM 55-17.

Standards: Ensured the deploying unit identifies all equipment designated for rail movement by reviewing the automated rail load plan using TC-AIMS II and the manual rail load plan using TC ACCIS.

Performance Steps

1. Review the unit rail development responsibilities when using TC-AIMS II for loading/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.

FRONT PAGE:

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.

BACK PAGE:

Block 16. Dunnage Requirements. Fill in the appropriate information identified a. through h.

Block 17. Totals. For items b. through h.

- c. Check for completeness of the manual rail load plan.

Performance Steps

2. Review the automated output reports generated by TC-AIMS II.

NOTE: Personnel responsible for generating these automated 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)-Unit Equipment List to verify that the unit's equipment has been placed on the manifest, if applicable (see Figure 3-169).

NOTE: The terms OEL and the Unit Deployment List (UDL) are synonymous.

- 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 3-170).

NOTE: The terms AUEL and the DEL are synonymous.

- c. Review the summary and detail (AUEL/OEL) reports to determine if the unit movement plan is included.
- d. Review the 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 on).

3. Review the unit manual load plan procedures for loading/unloading cargo (see FM 4-01.011).

Performance Measures

	<u>GO</u>	<u>NO-GO</u>
1. Reviewed the unit rail development responsibilities when using TC-AIMS II for loading/unloading cargo.	—	—
2. Reviewed the automated output reports generated by TC-AIMS II.	—	—
3. Reviewed the unit manual load plan procedures for loading/unloading cargo.	—	—

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

References

Required

- FM 4-01.011
- FM 55-17

Related

TC-AIMS II - Equipment List															Page 1 of 13				
OEL Report - Unit Equipment List																			
Date: 20070829																			
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			Square Feet	Cubic Feet	Item Weight in Lbs	Planned Loaded Weight	Actual Loaded Weight	TP PK	Water/Air Com Cd	Water/Air T S M C H P E	W A I V E R	CGO CAT	H L C	M-Ton	S-Ton
D0001	/	T38844	01	204	86	101	121.83	1025.43	7500	8716	7500	VC	867 V	Z 9 K Z	N R2D A		25.84	3.75	
UIC: WD1HAA Equipment Desc: TRK AMB 4 LITTER 4X4 Model: M997 Bumper Number: HHC70															Serial Number: 050478				
SAMPLE																			
D0002	/	G35919	01	165	95	84	108.85	701.98	5730	5730	5730	VE	892 V	Z 9 K Z	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	5380	7880	5880	VC	887 V	Z 9 K Z	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				

* 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 3-169. TC-AIMS II Automated Rail Load Plan

SAMPLE

Date: 29Aug07 TC ACCIS - Equipment List
 PCN FICEUR01

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 3-170. TC-ACCIS Automated Output Report

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Appendix A

Hands-On Evaluation

HANDS-ON EVALUATION (DA FORM 5164-R) INSTRUCTIONS

DA Form 5164-R (allows the trainer to keep a record of the performance measures a Soldier passes or fails on each task. See Figure A-1 for a sample of a completed DA Form 5164-R.

Before evaluation:

1. Obtain a blank copy of DA Form 5164-R, which you may locally reproduce on 8 ½ x 11 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.

HANDS-ON EVALUATION For use of this form, see STP 11-25S14-SM-TG; the proponent agency is TRADOC		DATE 1 November 2006	
TASK TITLE Supervise Stowage of Wheeled and Tracked Vehicles on RO/RO Deck		TASK NUMBER 551-88H-2513	
ITEM a	PERFORMANCE STEP TITLE b	SCORE (Check One)	
		PASS c	FAIL d
1.	Directed the stowage of vehicles on the lower decks.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
2.	Directed the stowage vehicles on the upper decks.	<input type="checkbox"/> P	<input checked="" type="checkbox"/> F
3.	Directed the stowage of vehicles within fire lanes.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
4.	Directed the securing of wheeled vehicles.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
5.	Directed the securing of tracked vehicles.	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
		<input type="checkbox"/> P	<input type="checkbox"/> F
EVALUATOR'S NAME SSG Powell		UNIT W Co., 244th QM Bn	
SOLDIER'S NAME PV2 Howard		STATUS <input type="checkbox"/> GO <input checked="" type="checkbox"/> NO GO	

SAMPLE

DA FORM 5164-R, SEP 85 EDITION OF DEC 82 IS OBSOLETE APD V2.01

Figure A-1. Sample of a Completed DA Form 5164-R

Appendix B

Field Expedient Squad Book

FIELD EXPEDIENT SQUAD BOOK (DA FORM 5165-R) INSTRUCTIONS

DA Form 5165-R allows the trainer to keep a record of task proficiency for a group of Soldiers. See Figure B-1 for a sample of a completed DA Form 5165-R.

Before evaluation:

1. Obtain a blank copy of DA Form 5165-R, which you may locally reproduce on 8 ½ x 11 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. Soldiers who failed to perform the task should be retrained and reevaluated until they can meet the standards. 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

A/DACG	Arrival/Departure Airfield Control Group
AAR	Association of American Railroads
ACCP	Army Correspondence Course Program
AIPD	Army Institute for Professional Development
AIT	advanced individual training
ALCE	airlift control element
AN	annually
ANCOC	Advanced Noncommissioned Officer Course
ARTEP	Army Training and Evaluation Program
ASI	additional skill identifier
ATLAS	All Terrain Lifter Army System
AUEL	Automated Unit Equipment List
BA	biannually
BFV	Bradley Fighting Vehicle
BII	basic issue items
BM	bimonthly
BNCOG	Basic Non-Commissioned Officer Course
BOE	Bureau of Explosives
BS	breaking strength
BTC	Basic Technical Course
BW	biweekly
C	Celsius
CB	center of balance
CBL	commercial bill of lading
CFR	Code of Federal Regulation

CODES	Computer Deployment Systems
CONUS	continental United States
CTT	common task test
D	diameter
D2	diameter (squared)
DA	Department of the Army
DACG	Departure Airfield Control Group
D.C.	District of Columbia
DD	Department of Defense
DOT	Department of Transportation
ECS	Electronic Control System
EPA	Environmental Protection Agency
4WD	four wheel drive
F	Fahrenheit; forward
FAW	front axle weight
FM	field manual; frequency modulated
FSS	Fast Sealift Ship
G3	Assistant Chief of Staff, Operations
HAZMAT	hazardous material
HI	high
HQ	Headquarters
HST	Helicopter Support Team
IAW	intermediate axle weight
ITO	installation transportation officer
kph	kilometer per hour
L	length
lb	pound(s)
Lbs	pounds

LMI	Load Moment Indicator
LMSR	Large Medium Speed Roll-on/Roll-off
LO	low
LO/LO	Lift-on/Lift-off
LOTS	Logistics-Over-the-Shore
LT	long ton(s)
MDA	main deck aft
METL	mission-essential task list
MHE	material handling equipment
MI	Military Intelligence
MILVAN	military-owned demountable container
MO	monthly
MOS	military occupational specialty
MOSC	Military Occupational Specialty Code
MPH	miles per hour
MSC	Military Sealift Command
N	neutral
NA	not applicable
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
No.	number
OEL	Organizational Equipment List
PMCS	preventive maintenance checks and services
POD	port of debarkation
POE	point of embarkation
psi	pounds per square inch
PVR	portable vehicle ramp
QT	quarterly

R	reverse
RAW	rear axle weight
RDD	required delivery date
RDL	reference datum line
RO/RO	Roll-on/Roll-off
ROP	rollover protection
RPM	revolutions per minute
RTCC	rough terrain container crane
RTCH	rough terrain container handler
RTFL	rough terrain forklift
S3	battalion operations officer
SA	semiannually
SD	special duty
SEAVAN	commercial- or government-owned or leased shipping container
SF	safety factor
SL	skill level
SM	Soldier's Manual
SMCT	Soldier's Manual of Common Tasks
SOP	standing operating procedure
STON	short ton
STP	Soldier Training Publication
SWC	safe working capacity
SWL	safe working load
2WD	two wheel drive
TC-AIMS II	Transportation Coordinators' Automated Information for Movements System II
TCN	Transportation Control Number
TG	Trainer's Guide

TM	technical manual
TRADOC	Training and Doctrine Command
UDL	Unit Deployment List
UMC	Unit Movement Coordinator
UMO	Unit Movement Officer
USCG	United States Coast Guard
V	vertical distance
VA	Virginia
VLA	vehicle lashing assembly
VSF	vessel stowage factor
w	with
W	weight
WK	weekly
WRM	war reserve material
WTF	work-through floor

Section II

Terms

Army Training and Evaluation Program (ARTEP)

The cornerstone of unit training. It is the umbrella program used by the trainer and training manager in the training evaluation of units. The ARTEP is a complete program that enables commanders to evaluate and develop collective training based on unit weaknesses, then train the unit to overcome those weaknesses and reevaluate. Success on the battlefield depends on the coordinated performance of collective and individual skills that are taught through the ARTEP mission training plan.

Collective training

Training, either in institutions or units that prepares cohesive teams and units to accomplish their missions on the battlefield and in operations other than war.

Combat critical task

A task that is directly related to the combat missions of units and is derived from collective tasks. These types of tasks and mission essential tasks comprise the critical tasks for training.

Common task

A task every Soldier in the Army must learn and perform at some skill level.

Critical task

See "task," "critical collective task," and "critical individual task."

Cross training

The systematic training of Soldiers on tasks related to another duty position.

Individual training

Training that prepares the Soldier to perform specified duties or tasks related to assigned duty position or subsequent duty positions and skill level.

Individual training evaluation programs

Programs that provide information to commanders and service schools on the effectiveness of individual training. Feedback is used to improve training and training support materials.

Integration training

Initial entry training in Skill Level 1 tasks for an individual newly arrived in a unit. 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

A task derived from important noncombat collective tasks, which indirectly support individual and unit performance on the battlefield or are necessary to ensure battlefield survival of the individual. These tasks and combat-critical tasks comprise the critical tasks for training.

Performance measures

The actions that can be objectively observed and measured to determine if a task performer has performed the task to the prescribed standard. These measures are derived from the task performance steps during task analysis. See "Task performance specifications."

Performance-oriented training

Training in which learning is accomplished through performance or the actual doing of the tasks under specified conditions until an established standard is met. Hands-on training consisting of a skill demonstrating phase, a skills practice phase, and a skill evaluation phase.

Soldier's Manual

An STP listing of critical tasks for each SL in a particular MOS.

Sustainment training

See "refresher training."

Task summary

A listing in the Soldiers' training publications of the conditions, standards, and performance measures, references, and proponent for each individual critical task. Information is extracted from the individual critical task analysis. See "Task performance specifications." Reference dependent task summary--A summary written for those tasks that require the trained Soldier to refer to one or more publications while performing all or part of a task in wartime conditions. Reference independent task summary--A summary written for those tasks that require the trained Soldier to perform the task in wartime conditions from memory, without reference to any publication.

Train-up

The opportunity for an individual to train to a higher skill level in his or her MOS or CMF; certification may be involved.

Unit training

Training that is conducted in a unit.

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References

Required Publications

Required publications are sources that users must read in order to understand or to comply with this publication.

DA Forms are available on the APD website at www.apd.army.mil.

Department of Army Forms

DA FORM 2028	<i>Recommended Changes to Publications and Blank Forms</i>
DA FORM 2404	<i>Equipment Inspection and Maintenance Worksheet</i>
DA FORM 5164-R	<i>Hands-On Evaluation (LRA)</i>
DA FORM 5165-R	<i>Field Expedient Squad Book</i>
DA FORM 7382	<i>Sling Load Inspection Record</i>

Department of Army Pamphlets

DA PAM 750-8	<i>The Army Maintenance Management System (TAMMS) Users Manual, 22 August 2005</i>
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DD Forms are available from the OSD web site, www.dior.whs.mil.

Department of Defense Forms

DD FORM 626	<i>Motor Vehicle Inspection (Transporting Hazardous Materials)</i>
DD FORM 836	<i>Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles</i>
DD FORM 1384	<i>Transportation Control and Movement Document</i>
DD FORM 1386	<i>Ocean Cargo Manifest Recapitulation or Summary</i>
DD FORM 1387	<i>Military Shipment Label</i>
DD FORM 1387-2	<i>Special Handling Data/Certification</i>
DD FORM 2133	<i>Joint Airlift Inspection Record</i>

Department of Defense Regulations

DTR 4500.9-R, Part I	<i>Defense Transportation Regulation: Passenger Movement, 1 June 2005</i>
DTR 4500.9-R, Part II	<i>Defense Transportation Regulation: Cargo Movement, 1 November 2004</i>
DTR 4500.9-R, Part III	<i>Defense Transportation Regulation: Mobility, 1 August 2007</i>
DOD 5100.76-M	<i>Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives, 12 August 2000 (S&I US Naval Pubs & Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120-5099)</i>

Field Manuals

FM 3-19.30	<i>Physical Security</i> , 8 January 2001
FM 4-01.011	<i>Unit Movement Operations</i> , 31 October 2002
FM 4-01.30	<i>Movement Control</i> , 1 September 2003
FM 4-20.197	<i>Multiservice Helicopter Sling Load: Basic Operations and Equipment</i> , 20 July 2006
FM 5-125	<i>Rigging Techniques, Procedures, and Applications</i> , 3 October 1995
FM 7-0	<i>Training the Force</i> , 22 October 2002
FM 7-1	<i>Battle Focused Training</i> , 15 September 2003
FM 10-450-4	<i>Multiservice Helicopter Sling Load: Single-Point Load Rigging Procedures</i> , 30 May 1998
FM 10-450-5	<i>Multiservice Helicopter Sling Load: Dual-Point Rigging Procedures</i> , 30 August 1999
FM 21-20	<i>Physical Fitness Training</i> , 30 September 1992
FM 21-60	<i>Visual Signals</i> , 30 September 1987
FM 21-305	<i>Manual for the Wheeled Vehicle Driver</i> , 27 August 1993
FM 25-4	<i>How to Conduct Training Exercises</i> , 10 September 1984
FM 25-5	<i>Training for Mobilization and War</i> , 25 January 1985
FM 55-15	<i>Transportation Reference Data</i> , 27 October 1997
FM 55-17	<i>Cargo Specialists' Handbook</i> , 16 February 1999
FM 55-30	<i>Army Motor Transport Units and Operations</i> , 27 June 1997
FM 55-50	<i>Army Water Transport Operations</i> , 30 September 1993
FM 55-60	<i>Army Terminal Operations</i> , 15 April 1996
FM 55-80	<i>Army Container Operations</i> , 13 August 1997
FM 55-501	<i>Marine Crewman's Handbook</i> , 1 December 1999
FM 55-502	<i>Army Watercraft Safety</i> , 23 December 1996

Other Product Types

AAR TARIFF NO. BOE-6000	Hazardous Materials Regulations of the Department of Transportation
CFR 46	Shipping, 1 October 2007
CFR 49	Transportation, 1 October 2007
GROVE MM 1-187-000004-1	Grove 40-ton Operator Manual
GROVE MM 7-187-000004-2	Grove 40-ton Training Manual
Hagglunds Hydraulic Deck Crane Manual	
TEA Pamphlet 700-4	Vessel Characteristics for Shiploading, August 2001
TEA Pamphlet 700-6	Large, Medium Speed, Roll-on/Roll-off Ships Users' Manual, September 2002
TEA Pamphlet 700-7	Fast Sealift Ship Users Manual, August 2005

Soldier Training Publications

- STP 21-1-SMCT *Soldier's Manual of Common Tasks Skill Level 1*,
2 October 2006
- STP 21-24-SMCT *Soldier's Manual of Common Tasks (SMCT) Warrior Leader
Skill Levels 2-4*, 2 October 2006

Technical Manuals

- 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 (3810-01-497-1001)*,
28 February 2007
- TM 10-3930-638-10 *Operator's Manual for Truck, Forklift, DED, Pneumatic Tire,
Articulated Frame Steer, 4,000 Lb Capacity Rough Terrain,
Army Model MHE 237 (J.I. Case Model M4K)
(NSN 3930-01-076-4237)*, 30 May 1980
- TM 10-3930-641-10 *Operator's Manual for Truck, Container Handler: Rough
Terrain; 50,000 Lb Capacity Diesel Engine Driven (DED),
Pneumatic Tires (PT), Model DV43 (NSN 3930-01-082-3758)
With Tophandler(s)*, 15 May 2006
- TM 10-3930-643-10 *Operator's Manual Truck, Forklift, DED Pneumatic Tire,
10,000 Lb Capacity Rough Terrain, Articulated Frame Steer
(Dresser Industries Model M10A, MHE 236)
(NSN 3930-01-054-3833)*, 19 January 1990
- TM 10-3930-673-10 *Operator's Manual for All Terrain Lifter Army System (ATLAS)
Clean Burn Diesel 10,000 Lb Capacity Model Skytrak
10,000M (NSN 3930-01-417-2886)*, 4 May 1998
- TM 10-3930-675-10-1 *Operator's Manual for Rough Terrain Container Handler
(RTCH): RT 240; 53,000 Lb Capacity; 4 X 4 (NSN 3930-01-
473-3998) Rough Terrain Container Handler (RTCH): RT
240; 53,000 Lb Capacity; 4 X 4 (Reset) (NSN 3930-01-473-
3998) Rough Terrain Container Handler (RTCH): RT 240V2;
53,000 Lb Capacity; 4 X 4 (NSN 3930-01-522-7364)*,
1 December 2006
- TM 10-3930-675-10-2 *Operator's Manual for Rough Terrain Container Handler
(RTCH): RT 240; 53,000 Lb Capacity; 4 X 4 (NSN 3930-01-
473-3998) Rough Terrain Container Handler (RTCH): RT
240; 53,000 Lb Capacity; 4 X 4 (Reset) (NSN 3930-01-473-
3998) Rough Terrain Container Handler (RTCH): RT 240V2;
53,000 Lb Capacity; 4 X 4 (NSN 3930-01-522-7364)*,
1 December 2006
- TM 10-3990-205-12&P *Operator's Unit Maintenance Manual and Repair Parts and
Special Tools List for Spreader, Lifting, ISO and Intermodal
Freight Containers; Type II, Top Lift, Semi Automatic TLS
Model 214LS20 (NSN 3990-01-258-2010) and Model
215LS40 (3990-01-258-2011)*, 15 December 1988
- TM 10-3990-204-12&P *Operator's and Organizational Maintenance Manual Including
Repair Parts and Special Tools List T/W Supplemental
Operating Maintenance and Repair Instructions (SOMARPI)
for Spreader, Lifting Frames (NSN 3990-01-128-0089)
(Linefast Model No. 7127-51A-20L) (3990-01-128-0090)
(Linefast Model No. 7127-51A-35L) (3990-01-128-0091)*

TM 38-250

(Linefast Model No. 7127-51A-40L) and Spacer/Stabilizer Bar, FSCM 58400, Part No. 7127-SB, 25 September 1984
Preparing Hazardous Materials for Military Air Shipments, 12 October 2004

TM 55-2200-001-12

Transportability Guidance for Application of Blocking, Bracing and Tie-Down Materials for Rail Transport, 31 May 1978

Training Circulars

TC 55-60-17

Training Program for the 50,000-Pound Rough-Terrain Container Handler, 31 October 2000

STP 55-88H14-SM-TG

18 December 2007

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
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