
STP 55-88M14-SM-TG

Soldier's Manual and Training Guide

MOS 88M

**MOS 88M MOTOR TRANSPORT OPERATOR, SKILL LEVELS
1, 2, 3, AND 4**

SKILL LEVELS

November 2013



HEADQUARTERS, DEPARTMENT OF THE ARMY

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SKILL LEVELS SL1, SL2, SL3, and SL4

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PREFACE

This publication is for skill level soldiers holding military occupational specialty (MOS) MOS 88M and for trainers and first-line supervisors. It contains standardized training objectives, in the form of task summaries, to train and evaluate soldiers on critical tasks that support unit missions during wartime. Trainers and first-line supervisors should ensure soldiers holding MOS/SL MOS 88M have access to this publication.

This publication applies to the Active Army, the Army National Guard (ARNG)/the Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR).

The proponent of this publication is HQ, TRADOC. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, CASCOM SCOE (ATCL-TDM), G-3 Training & Doctrine Development, CTDD, 2221 Adams Avenue, Fort Lee, VA 23801-2102.

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CHAPTER 1

Introduction

1.1 General

The soldier training publication (STP) identifies the individual military occupational specialty (MOS) training requirements for soldiers in various specialties, for example, Another source of STP task data is the General Dennis J. Reimer Training and Doctrine Digital Library at <http://www.adtdl.army.mil/atdls.htm>. Commanders, trainers, and soldiers should use the STP to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference to support the self-development and training of every soldier in the unit. It is used with the Soldier's Manual of Common Tasks, Army training and evaluation program (ARTEP) products, and ADRP 7-0, Training Units and Developing Leaders, to establish effective training plans and programs that integrate soldier, leader, and collective tasks. This chapter explains how to use the STP in establishing an effective individual training program. It includes doctrinal principles and implications outlined in ADRP 7-0. Based on these guidelines, commanders and unit trainers must tailor the information to meet the requirements for their specific unit.

1.2 Training Requirement

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

a. Operational Environment.

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

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

(3) One type of MOOTW is the Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) event. To assist commanders and leaders in training their units, CBRNE-related information is being included in AMEDD mission training plans (MTPs). Even though most collective tasks within an MTP may support a CBRNE event, the ones that will most directly be impacted are clearly indicated with a statement in the CONDITION that reads: "THIS TASK MAY BE USED TO SUPPORT A CBRNE EVENT." These collective tasks and any supporting individual tasks in this soldier's manual should be considered for training emphasis.

(4) Our forces today use a train-alert-deploy sequence. We cannot count on the time or opportunity to correct or make up training deficiencies after deployment. Maintaining forces that are

ready now, places increased emphasis on training and the priority of training. This concept is a key link between operational and training doctrine.

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

b. How the Army Trains the Army.

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

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

- The operational domain includes home station training, CTC rotations, and joint training exercises and deployments that satisfy national objectives. Each of these actions provides foundational experiences for soldier, leader, and unit development.
- The institutional domain focuses on educating and training soldiers and leaders on the key knowledge, skills, and attributes required to operate in any environment. It includes individual, unit and joint schools, and advanced education.
- The self-development domain, both structured and informal, focuses on taking those actions necessary to reduce or eliminate the gap between operational and institutional experiences.



Figure 1-1. Army Training and Leader Development Model

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

c. Leader Training and Leader Development.

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

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

(3) Leader development is the deliberate, continuous, sequential, and progressive process, grounded in Army values, that grows soldiers and civilians into competent and confident leaders capable of decisive action. Leader development is achieved through the life-long synthesis of the knowledge, skills, and experiences gained through institutional training and education, organizational training, operational experience, and self-development. Commanders play the key roll in leader development that ideally produces tactically and technically competent, confident, and adaptive leaders who act with boldness and initiative in dynamic, complex situations to execute mission-type orders achieving the commander's intent.

(4) A life cycle management diagram for soldiers is on page 1-5. You can find more information and check for updates at <http://das.cs.amedd.army.mil/ooc.htm> (scroll down to LIFE CYCLE MANAGEMENT, select ENLISTED, and find the appropriate tab along the bottom). This information, combined with the MOS Training Plan in Chapter 2, forms the career development model for the MOS.

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

(1) **Commander Responsibility.**

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

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

(2) **NCO Responsibility.**

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

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

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

1.3 Battle-Focused Training

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

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

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

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

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

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

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

BATTLE-FOCUS PROCESS	STP SUPPORT PROCESS
Select supporting soldier tasks	Use TG to relate tasks to METL
Conduct training assessment	Use TG to define what soldier tasks to assess
Determine training objectives	Use TG to set objectives
Determine strategy; plan for training	Use TG to relate soldier tasks to strategy
Conduct pre-execution checks	Use SM task summary as source for task performance
Execute training; conduct after action review	Use SM task summary as source for task

	performance
Evaluate training against established standards	Use SM task summary as standard for evaluation

Figure 1-2. Relationship of Battle-focused Training and STP

1.4 Task Summary Format

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

- a. **Task Title.** The task title identifies the action to be performed.
- b. **Task Number.** A 10-digit number identifies each task or skill. This task number, along with the task title, must be included in any correspondence pertaining to the task.
- c. **Conditions.** The task conditions identify all the equipment, tools, references, job aids, and supporting personnel that the soldier needs to use to perform the task in wartime. This section identifies any environmental conditions that can alter task performance, such as visibility, temperature, or wind. This section also identifies any specific cues or events that trigger task performance, such as a chemical attack or identification of a threat vehicle.
- d. **Standards.** The task standards describe how well and to what level the task must be performed under wartime conditions. Standards are typically described in terms of accuracy, completeness, and speed.
- e. **Performance Steps.** This section includes a detailed outline of information on how to perform the task. Additionally, some task summaries include safety statements and notes. Safety statements (danger, warning, and caution) alert users to the possibility of immediate death, personal injury, or damage to equipment. Notes provide a small, extra supportive explanation or hint relative to the performance steps.
- f. **Evaluation Preparation (when used).** This subsection indicates necessary modifications to task performance in order to train and evaluate a task that cannot be trained to the wartime standard under wartime conditions. It may also include special training and evaluation preparation instructions to accommodate these modifications and any instructions that should be given to the soldier before evaluation.
- g. **Performance Measures.** This evaluation guide identifies the specific actions that the soldier must do to successfully complete the task. These actions are listed in a GO/NO-GO format for easy evaluation. Each evaluation guide contains an evaluation guidance statement that indicates the requirements for receiving a GO on the evaluation.
- h. **References.** This section identifies references that provide more detailed and thorough explanations of task performance requirements than those given in the task summary description.

1.5 Training Execution

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

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

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

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

(3) Commanders, with their subordinate leaders and trainers, conduct site reconnaissance, identify additional training support requirements, and refine and issue the training execution plan. The training plan should identify all those elements necessary to ensure the conduct of training to standard. Rehearsals are essential to the execution of good training. Realistic, standards-based, performance-oriented training requires rehearsals for trainers, support personnel, and evaluators. Preparing for training in Reserve Component (RC) organizations can require complex pre-execution checks. RC trainers must often conduct detailed coordination to obtain equipment, training support system products, and ammunition from distant locations. In addition, RC pre-execution checks may be required to coordinate Active Component assistance from the numbered CONUSA, training support divisions, and directed training affiliations.

b. **Conduct of Training.** Ideally, training is executed using the crawl-walk-run approach. This allows and promotes an objective, standards-based approach to training. Training starts at the basic level. Crawl events are relatively simple to conduct and require minimum support from the unit. After the crawl stage, training becomes incrementally more difficult, requiring more resources from the unit and home station, and increasing the level of realism. At the run stage, the level of difficulty for the training event

intensifies. Run stage training requires optimum resources and ideally approaches the level of realism expected in combat. Progression from the walk to the run stage for a particular task may occur during a one-day training exercise or may require a succession of training periods over time. Achievement of the Army standard determines progression between stages.

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

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

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

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

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

1.6 Training Assessment

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

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

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

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

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

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

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

d. **After Action Review.** The AAR, whether formal or informal, provides feedback for all training. It is a structured review process that allows participating soldiers, leaders, and units to discover for themselves what happened during the training, why it happened, and how it can be done better. The AAR is a professional discussion that requires the active participation of those being trained. FM 7-1 provides detailed instructions for conducting an AAR and detailed guidance on coaching and critiquing during training.

1.7 Training Support

This manual includes the following information which provides additional training support information.

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CHAPTER 2 Trainer’s Guide

2.1 General

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

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

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

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

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

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

- **Subject Area Column.** This column lists the subject area number and title in the same order as Section I, Part One of the MTP.
- **Task Number Column.** This column lists the task numbers for all tasks included in the subject area.
- **Title Column.** This column lists the task title for each task in the subject area.
- **Training Location Column.** This column identifies the training location 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 (ALC, SLC, etc.), the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.

AIT	Advanced Individual Training
UNIT	Trained in the Unit

Figure 2-1. Training Locations

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

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

Figure 2-2. Sustainment Training Frequency Codes

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

2-2. Part One, Section I. Subject Area Codes.**Skill Level SL1**

- 1 Accident Forms and Reporting
- 2 Motor Vehicle Operator Maintenance
- 3 Motor Vehicle Operations
- 4 Transportation of Cargo
- 5 Adverse Terrain/Weather Operations
- 6 Convoy Planning and Operation
- 7 Convoy Execution/Defense
- 8 Hazardous Cargo Transportation
- 9 HEMTT-LHS/PLS Operations

Skill Level SL2

- 10 Motor Transport Supervision
- 11 Convoy Execution/Defense
- 12 Heavy Equipment Transport (HET) Operations
- 13 Motor Vehicle Operations
- 14 Adverse Terrain/Weather Operations
- 15 Transportation of Cargo
- 16 Hazardous Cargo Transportation

Skill Level SL3

- 17 Accident Forms and Reporting
- 18 Motor Vehicle Operator Maintenance
- 19 Motor Transport Supervision
- 20 Convoy Execution/Defense
- 21 Motor Pool Management
- 22 Convoy Planning and Operation
- 23 Hazardous Cargo Transportation
- 24 Heavy Equipment Transport (HET) Operations

Skill Level SL4

- 25 Motor Pool Management
- 26 Convoy Planning and Operation
- 27 Motor Transport Management
- 28 Logistics Automated Systems

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

SKILL LEVEL	DUTY POSITION	SUBJECT AREAS	CROSS TRAIN	TRAIN-UP/MERGER
SL1	VEHICLE DRIVER	1-9	Vehicle Driver	Squad Leader/Section Sergeant
SL1	ASST VEHICLE DRIVER	1-9	Vehicle Driver	Squad Leader/Section Sergeant
SL1	HEAVY VEHICLE DRIVER	1-9	Senior Vehicle Driver	Squad Leader/Section Sergeant
SL1	HET VEHICLE DRIVER	12	Senior Vehicle Driver	Squad Leader/Section Sergeant
SL1	SR VEH DRIVER	1-9	Senior Vehicle Driver	Squad Leader/Section Sergeant
SL2	DRIVER	10-16	Senior Vehicle Driver	Squad Leader/Section Sergeant
SL2	SR VEH DRIVER	10-16	Heavy Vehicle Driver	Squad Leader/Section Sergeant
SL2	DISPATCHER	10-16	Vehicle Driver	Dispatcher
SL2	HET VEHICLE DRIVER	1-9, 12	Squad Leader/Section Sergeant	Platoon Sergeant/Truckmaster
SL3	SQUAD LEADER	1-24	Heavy Vehicle Driver	Platoon Sergeant/Truckmaster
SL3	SECTION SGT	1-24	Heavy Vehicle Driver	Platoon Sergeant/Truckmaster
SL4	PLATOON SERGEANT	1-28	Truckmaster	Senior Transportation Supervisor
SL4	ASST TRUCKMASTER	1-28	Heavy Vehicle Driver	Platoon Sergeant/Truckmaster
SL4	TRUCKMASTER	1-28	Platoon Sergeant	Senior Transportation Supervisor
SL4	DETACHMENT SERGEANT	1-28	Truckmaster/Operations Sergeant	Senior Transportation Supervisor
SL4	OPERATIONS SERGEANT	1-28	Platoon Sergeant	Senior Transportation Supervisor
SL4	Fleet Management NCO			

2-4. Part Two, Critical Tasks List.**MOS TRAINING PLAN
MOS 88M****CRITICAL TASKS****CRITICAL TASKS**

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
Skill Level SL1				
Subject Area 1 Accident Forms and Reporting				
551-88M-1388	Complete DD Form 518 and SF Form 91			
	ICTL - MOS 88M - Motor Transport Operator	AIT	BM	1
Subject Area 2 Motor Vehicle Operator Maintenance				
551-88M-1352	Perform Preventive Maintenance Checks			
	ICTL - MOS 88M - Motor Transport Operator	AIT	AN	1
	ICTL - 19D10 Calvary Scout, Version 1.00			
	ICTL - 19K10 Armor Crewman, Version 1.00			
551-88M-1350	Interpret the Preventive Maintenance Process			
	ICTL - MOS 88M - Motor Transport Operator	AIT	SA	1-2
Subject Area 3 Motor Vehicle Operations				
551-88M-1314	Perform Coupling Operations			
	ICTL - MOS 88M - Motor Transport Operator	AIT	SA	1
551-88M-1364	Operate Vehicle with Standard, Automatic/Semiautomatic Transmission			
	ICTL - MOS 88M - Motor Transport Operator	AIT	QT	1-4
551-88M-1661	Perform Wheeled Vehicle Hasty/Self-Recovery and BDAR on a Wheeled Vehicle			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	1-3
551-88M-1662	Change a Tire on a Wheeled Vehicle and Trailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	1
551-88M-1363	Operate Vehicle With or Without Trailer/Semitrailer Under Blackout Conditions			
	ICTL - Military Policeman - SL1			
	ICTL - Internment/Resettlement Specialist - SL1			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-3
	ICTL - MOS 74D - Chemical Operations Specialist - SL1			
551-88M-1364	Operate Vehicle with Standard, Automatic/Semiautomatic Transmission			
	ICTL - MOS 88M - Motor Transport Operator	AIT	QT	1-4
551-88M-1367	Back Vehicle with Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	AIT	QT	1-3
551-88M-1367	Back Vehicle with Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	AIT	QT	1-3
551-88M-1384	Perform as Wheeled Vehicle Ground Guide Day or Night			
	ICTL - MOS 88M - Motor Transport Operator	AIT	BM	1
551-88M-1600	Operate the Movement Tracking System			
	ICTL - MOS 88M - Motor Transport Operator	AIT	AN	1-2
551-88M-1660	Perform Coupling Operations with a Pintle-Connected Trailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-2
Subject Area 4 Transportation of Cargo				

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88M-1663	Operate a Vehicle-Mounted Crane			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-2
551-88M-1664	Operate Vehicle in a Contaminated Area			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-3
551-88M-1382	Perform Payload Vehicle Loading/Unloading Operations With a Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	1-2
551-88M-1411	Perform Tiedown Procedures			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	1-2
Subject Area 5 Adverse Terrain/Weather Operations				
551-88M-1361	Operate Vehicle Under Adverse Conditions			
	ICTL - MOS 88M - Motor Transport Operator	AIT	BM	1-2
	ICTL - 19D10 Calvary Scout, Version 1.00			
Subject Area 6 Convoy Planning and Operation				
551-88M-1658	Prepare Vehicle for Convoy Operations			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	MO	1-3
	ICTL - Warrior Tasks and Battle Drills	UNIT	AN	SL1
	ICTL - 19D10 Calvary Scout, Version 1.00			
Subject Area 7 Convoy Execution/Defense				
551-88M-1359	Operate Vehicle in Convoy			
	ICTL - MOS 88M - Motor Transport Operator	AIT	MO	1-4
551-88M-1650	Operate Vehicle using the Driver's Vision Enhancer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-3
551-88M-1656	Conduct Refueling Operations using Tactical Refueling Vehicles			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	AN	1-2
551-88M-1410	Read Strip Maps			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	1-2
Subject Area 8 Hazardous Cargo Transportation				
551-88M-1659	Transport Hazardous/Sensitive Cargo			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	1-3
Subject Area 9 HEMTT-LHS/PLS Operations				
551-88M-1505	Conduct Load/Unload Operations using CHU			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	MO	1-2
551-88M-1504	Conduct Load/Unload Operations in Manual Mode			
	ICTL - MOS 88M - Motor Transport Operator	AIT	MO	1-2
551-88M-1507	Conduct Container Roll-in/Roll-out (CROP) Load/Unload Operations			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	MO	1-2
551-88M-1503	Transfer Flatrack To/From PLS Trailer using LHS			
	ICTL - MOS 88M - Motor Transport Operator	AIT	MO	1-2
551-88M-1501	Perform Load/Unload Operations in Automatic Mode			
	ICTL - MOS 88M - Motor Transport Operator	AIT	MO	1-2
551-88M-1500	Operate the PLS/HEMTT-LHS Truck			
	ICTL - MOS 88M - Motor Transport Operator	AIT	BM	1-2
Skill Level SL2				
Subject Area 10 Motor Transport Supervision				
551-88M-2334	Supervise Preventive Maintenance Checks and Services			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	AN	2
Subject Area 11 Convoy Execution/Defense				
551-88M-2348	Perform Duties as a Serial/March Unit Commander			

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	2-3
551-88M-2408	Implement Defensive Procedures When Under Attack/Ambush in a Truck Convoy			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
Subject Area 12 Heavy Equipment Transport (HET) Operations				
551-88M-2300	Operate the M1070/M1000 Semitrailer Combination With Disabled Bogie			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2301	Operate the Gas Particulate Filter Unit (GPFU) on the M1070 Tractor			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2302	Operate the APU on the M1000 Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2303	Adjust the Gooseneck on the M1000 Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2304	Adjust the Platform Height on the M1000 Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2306	Manually Steer the M1000 Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2375	Operate the Heavy Equipment Transporter on Improved Roads			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2305	Operate the Loading Ramps on the M1000 Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
551-88M-2376	Load/Unload a Tracked/Wheeled Vehicle Onto a Heavy Equipment Transporter (HET)			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
Subject Area 13 Motor Vehicle Operations				
551-88M-2371	Perform Dispatcher Duties			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2
Subject Area 14 Adverse Terrain/Weather Operations				
551-88M-2355	Operate Vehicle in Inclement Weather Conditions			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
Subject Area 15 Transportation of Cargo				
551-88M-2374	Supervise Loading/Unloading a Tracked/Wheeled Vehicle onto/from a Semitrailer			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	2-3
Subject Area 16 Hazardous Cargo Transportation				
551-88M-2420	Supervise Transportation of Hazardous/Sensitive Cargo			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	QT	2-3
Skill Level SL3				
Subject Area 17 Accident Forms and Reporting				
551-88M-3353	Review Vehicle Accident Reports			
	ICTL - MOS 88M - Motor Transport Operator	SLC	AN	3
Subject Area 18 Motor Vehicle Operator Maintenance				
551-88M-3322	Manage Preventive Maintenance Checks and Services			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	3-4
Subject Area 19 Motor Transport Supervision				
551-88M-3340	Supervise Operations of Vehicle-Mounted Crane			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	3-4
Subject Area 20 Convoy Execution/Defense				

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
551-88M-3339	Perform Advanced Vehicle Recovery Operations and BDAR			
	ICTL - MOS 88M - Motor Transport Operator	ALC	SA	3-4
551-88M-3355	Conduct Mounted Land Navigation			
	ICTL - MOS 88M - Motor Transport Operator	SLC	SA	3-4
551-88M-3600	Operate the Movement Tracking System Control Station (MT3)			
	ICTL - MOS 88M - Motor Transport Operator	SLC	QT	3-4
551-88M-3601	Perform Duties as Convoy Commander			
	ICTL - MOS 88M - Motor Transport Operator	SLC	QT	3-4
	ICTL - SMCT 2 and 3			
Subject Area 21 Motor Pool Management				
551-88M-3333	Supervise Motor Pool Operations			
	ICTL - MOS 88M - Motor Transport Operator	SLC	AN	3-4
551-88M-3335	Supervise Driver's Training Program			
	ICTL - MOS 88M - Motor Transport Operator	SLC	AN	3-4
Subject Area 22 Convoy Planning and Operation				
551-88M-3603	Prepare an Operations Order (OPORD)			
	ICTL - MOS 88M - Motor Transport Operator	SLC	QT	3-4
551-88M-3604	Prepare a Map Overlay			
	ICTL - MOS 88M - Motor Transport Operator	SLC	SA	3-4
551-88M-3602	Conduct Reconnaissance of a Convoy Route			
	ICTL - MOS 88M - Motor Transport Operator	SLC	QT	3-4
Subject Area 23 Hazardous Cargo Transportation				
551-88M-3700	Manage Transportation of Hazardous/Sensitive Cargo			
	ICTL - MOS 88M - Motor Transport Operator	ALC	SA	3-4
Subject Area 24 Heavy Equipment Transport (HET) Operations				
551-88M-3346	Unload Able/Disabled Tracked/Wheeled Vehicle from a Heavy Equipment Transporter			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	3-4
551-88M-3345	Load Able/Disabled Tracked/Wheeled Vehicle onto a Heavy Equipment Transporter			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	SA	3-4
Skill Level SL4				
Subject Area 25 Motor Pool Management				
551-88M-4320	Manage Operator Training Program			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4
Subject Area 26 Convoy Planning and Operation				
551-88M-4401	Manage a Convoy Manifest			
	ICTL - MOS 88M - Motor Transport Operator	UNIT	AN	4
551-88M-4333	Coordinate External Support Requirements to Support a Transportation Battalion OPLAN/OPORD/CONOP			
	ICTL - MOS 88M - Motor Transport Operator	ALC	SA	4
551-88M-4334	Conduct Transportation Battalion Support Operations			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4
Subject Area 27 Motor Transport Management				
551-88M-4323	Manage Transportation Operations			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4
551-88M-4325	Establish Transportation Safety Program			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4
551-88M-4404	Perform Logistics Planning using MDMP			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng Sl
Subject Area 28 Logistics Automated Systems				
551-88M-4402	Manage Tactical Automation Systems			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4
551-88M-4403	Use Logistics Automation Systems to Manage Unit Equipment			
	ICTL - MOS 88M - Motor Transport Operator	ALC	AN	4

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CHAPTER 3

MOS/Skill Level Tasks

Skill Level SL1
Subject Area 1: Accident Forms and Reporting
551-88M-1388
Complete DD Form 518 and SF Form 91

DANGER

There are no associated dangers applicable to the performance of this task.

WARNING

There are no associated warnings associated with the performance of this task.

CAUTION

There are no associated cautions associated with the performance of this task.

Conditions: In an operational environment, you have been involved in a vehicle traffic accident. Given an accident situation sheet, DD Form 518 (Accident-Identification Card), SF Form 91 (Motor Vehicle Accident Report), and a pen or pencil.

Standards: Complete the operator entries on DD Form 518 and SF Form 91 with 100% accuracy.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are required to operate your vehicle as part of a resupply convoy.

Note: None

Performance Steps

1. Enter the following information on DD Form 518.
 - a. Date of accident.
 - b. Make and type of vehicle.
 - c. Registration number of vehicle.
 - d. Your name.
 - e. Your social security number (SSN) (optional).

f. Your rank.

g. Name of organization to which assigned.

2. Give DD Form 518 to any other person involved in the accident.

3. Place a DD Form 518 in or on the involved parked vehicle, notify local authorities, and stand by the scene of the accident until the authorities arrive if the accident involves a parked car and the person concerned is not present.

4. Enter the following information on SF Form 91.

a. Name of department or agency.

b. Name and location of organization to which assigned.

c. Operator identification in section 1.

d. Accident time and location in section 2.

e. Federal vehicle number in section 3.

f. Other vehicle involved in section 4.

g. Other property damage in section 5.

h. Person injured in section 6.

i. Occupants in your vehicle in section 7.

j. Occupants in other vehicle in section 8.

k. Witnesses and police in section 9.

l. Accident conditions in section 10.

m. Events after accident in section 11.

n. Other vehicle or property involved in section 12.

o. Diagram of what happened in section 13.

p. Operator's statement of accident and use of safety equipment in section 14.

q. Operator's signature.

r. Date signed.

5. Turn in report to the commanding officer or noncommissioned officer in charge (NCOIC).

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Entered information on DD Form 518.	_____	_____
2 Gave DD Form 518 to any person involved in the accident.	_____	_____
3 Placed DD Form 518 in or on the involved parked vehicle, notified local authorities, and stood by the scene of the accident until the authorities arrived.	_____	_____
4 Entered information on SF Form 91.	_____	_____
5 Turned in report to the commanding officer or noncommissioned officer in charge (NCOIC).	_____	_____

Evaluation Guidance: None

References

Required

DD FORM 518 ACCIDENT-IDENTIFICATION CARD

SF FORM 91 MOTOR VEHICLE ACCIDENT REPORT

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

Subject Area 2: Motor Vehicle Operator Maintenance
551-88M-1352

Perform Preventive Maintenance Checks

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. Each Soldier should take every precaution not to become a victim of these dangers by wearing the proper uniform, protective devices.

WARNING

Soldiers must adhere to all WARNINGS published in the applicable publication for the vehicle or equipment as well as instruction from local SOP and leadership.

CAUTION

Soldiers must adhere to all CAUTIONS published in the applicable publication for the vehicle or equipment as well as instruction from local SOP and leadership.

Conditions: In an operational environment, your unit is preparing to move to another tactical location and orders are given to conduct maintenance checks on all vehicles. Provided a chocked tactical wheeled vehicle, trailer, or other equipment requiring preventive maintenance checks and services (PMCS), basic issue items (BII), DA Form 5988-E (Equipment Inspection Maintenance Worksheet) / DA Form 2404 (Equipment Inspection Maintenance Worksheet), rags and lubricants as necessary, level ground to work, replacement parts as available, -10, -12, or -14 series technical manual (TM) for the vehicle, trailer or equipment, DA Form 5987-E (Motor Equipment Dispatch) / DD Form 1970 (Motor Equipment Utilization Record) as applicable, hearing protection as necessary, and guidance on disposition of completed maintenance worksheets.

Standards:

Perform preventive maintenance checks to include the following: Interpret the applicable TM and related forms. Inspect the vehicle, trailer, or equipment according to the PMCS tables of the appropriate TM. Distinguish between before, during, and after operation maintenance checks. Regarding faults detected, correct all faults, when possible, within your level of maintenance. Record all uncorrectable faults on DA Form 5988-E/DA Form 2404 completely, accurately, and legibly. Replace available parts within operator-level of authority. Troubleshoot faults as necessary according to the TM. Once all maintenance checks are completed, turn in the form to unit maintenance or your direct supervisor according to the unit standing operating procedure (SOP). When vehicle or equipment requires dispatch, make all operator entries on DA Form 5987-E/DD Form 1970 legibly and accurately. All preventive maintenance checks are to be completed without injury to personnel or damage to equipment.

Special Condition: Special Conditions: Supervisory personnel are present to perform those actions required for proper disposition of vehicle status and vehicle dispatching for mission according to unit standing operating procedure (SOP). Installed components: The operator is responsible for performing maintenance of all installed components of the vehicle to include communications equipment, weapons mounts, and the like. In such cases, the successful completion of this task will include the inspection of these items in accordance with the appropriate TM.

Special Standards: None

Special Equipment: None

Cue: Your unit is preparing to move to a new location. All vehicles must be thoroughly inspected prior to departure.

Note: Use the reference publication that supports the vehicle being used for this task.

Note: Cleanliness. Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Use Dry Cleaning Solvent on metal surfaces where directed. **Note:** Bolts, Nuts, and Screws. Check bolts, nuts, and screws for obvious looseness and missing, bent, or broken conditions. Look for chipped paint and bare metal or rust around bolt heads. If any part seems to be loose, tighten it or notify Unit Maintenance.

Note: Welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. If a bad weld is found, notify Unit Maintenance.

Note: Electrical Wires and Connections. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure wires are in good shape. If a bad wire or connector is found, notify Unit Maintenance.

Note: Hydraulic Lines and Fittings. Look for wear, damage, and leaks; make sure clamps and fittings are tight. Wet spots show leaks. A stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, notify Unit Maintenance.

Note: Damage. Damage is defined as any condition that affects safety or would make the vehicle unserviceable for mission requirements.

Performance Steps

1. Prepare for inspection.

a. Gather the following items needed for the inspection.

(1) Replacement parts (indicated by DA Form 5988-E/DA Form 2404, under "parts requested").

(2) Oil and lubricants in accordance with TM as needed.

(3) BII, rags, and other tools as required (authorized for operator level maintenance only).

(4) On DA Form 5988-E, check for correct pre-printed information in header area. On DA Form 2404 ensure header information is filled in.

(5) Flashlight, work gloves, and hearing protection as needed.

(6) Applicable vehicle TM (-10, -12, or -14 series).

b. Review documentation and ensure that driver information is shown on all required forms.

WARNING

Remove all jewelry prior to start of inspection to avoid injury from snagging or inadvertent electrical grounding.

2. Perform before-operation inspection as listed in appropriate vehicle operator's manual (-10 series TM) if deficiencies are noted on DA Form 5988-E/DA Form 2404.

a. Isolate the malfunction by applying step-by-step troubleshooting procedures.

b. Determine classification of any fluid seepage/leakage by the following criteria.

(1) Class I - Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being inspected.

(3) Class III - Leakage of fluid great enough to cause drops to drip from item being checked.

c. Correct all deficiencies (faults) within the operator's level of maintenance.

d. Record all vehicle deficiencies correctly by replacing parts under corrective action of DA Form 5988-E/DA Form 2404.

e. Record all uncorrectable deficiencies under fault description of DA Form 5988-E or in item 10c, Deficiencies and Shortcomings of DA Form 2404.

f. When a deficiency or shortcoming is found using DA Form 5988-E the operator or supervisor enters a signature and time. For DA Form 2404, the operator or supervisor signs and enters the rank.

3. After performing before-operation checks and vehicle has no NMC faults, the vehicle may be dispatched for mission.

NOTE: Make operator entries on DA Form 5987-E.

a. Operator (and supervisor) reviews SERVICE DUE DATA on DA Form 5987-E/DD Form 1970 (Motor Equipment Utilization Record) and takes appropriate action.

b. Operator (and dispatcher) reviews entries on DD Form 5987-E/DD Form 1970 for accuracy. Dispatcher signs the DA Form 5987-E/DD Form 1970.

c. Operator signs DA Form 5987-E/DD Form 1970 in the operator's signature block.

4. Perform during-operation inspection as listed in the appropriate vehicle operator's TM (-10 series TM).

a. If no deficiencies are noted, make no entries.

b. If deficiencies are noted, follow step 2 above.

5. Perform after operation-inspection as listed in the appropriate vehicle operator's TM (-10 series TM).

a. If no deficiencies are noted on DA Form 5988-E place the first letter of the type of inspection performed under the corrective action column. For DA Form 2404 put initials in the initials column.

b. If deficiencies are noted follow steps 2 above.

6. Turn in DA Form 5988-E/DA Form 2404 to the maintenance supervisor.

7. Retain DA Form 5988-E/DA Form 2404 in equipment records folder if no faults are recorded.

8. Perform preventive maintenance checks on installed components (as applicable, in accordance with the appropriate TM).

Evaluation Preparation:

None

Performance Measures	GO	NO GO
1 Prepared for inspection.	_____	_____
2 Performed before-operation inspection as listed in appropriate vehicle operator's manual (-10 series TM). If deficiencies were noted recorded on DA Form 5988-E/DA Form 2404.	_____	_____
3 Completed operator entries on DA Form 5987-E/DD Form 1970 for vehicle dispatch.	_____	_____
4 Performed during-operation inspection as listed in the appropriate vehicle operator's TM (-10 series TM).	_____	_____
5 Performed after operation-inspection as listed in the appropriate vehicle operator's TM (-10 series TM).	_____	_____
6 Turned in DA Form 5988-E/DA Form 2404 to the maintenance supervisor if faults are recorded during inspection.	_____	_____
7 Retained DA Form 5988-E/DA Form 2404 in equipment records folder if no faults were recorded.	_____	_____
8 Performed preventive maintenance checks on installed components (as applicable).	_____	_____

Evaluation Guidance: None

References

Required

Primary

DA FORM 5987-E MOTOR EQUIPMENT DISPATCH (EGA)

DA FORM 5988-E Equipment Inspection Maintenance Worksheet

DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual.

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-345-10 OPERATORS MANUAL FOR

Required

Primary

TRUCK, LOAD HANDLING SYSTEM (LHS), W
AND W/O WINCH, 8X8 M1120A4 (NSN 2320-
01-534-1872)(EIC BG7) (THIS ITEM IS
INCLUDED ON EM 0288)

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083
SERIES, 5-TON, 6X6, MEDIUM TACTICAL
VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK,
CAR., MTV, M1083 W/WN (NSN 2320-01-360-
1895) (EIC: BT3) W/O WN (2320-01-354-3386)
(EIC: B

551-88M-1350
Interpret the Preventive Maintenance Process

DANGER

There are no inherent dangers associated with the performance of this task.

WARNING

Adhere to all statements referred to in this task.

CAUTION

Adhere to all statements referred to in this task.

Conditions: In an operational environment, provided applicable TMs, DA Form 5988-E and DA Form 2404, DA Form 5987-E and DD Form 1970, and instruction on PMCS procedures, methods and techniques.

Standards:

Evaluate the physical condition of a vehicle, or item of equipment, by following step by step procedures in the technical manual in order to identify defects in appearance, functionality, and operability. Complete operator and maintenance forms with 100% accuracy IAW mission requirements to capture any uncorrectable faults, and identify operator level parts for replacement.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You have just been assigned to your first unit assignment and are now required to maintain your assigned vehicle.

Note: None

Performance Steps

1. Interpret a Technical Manual.
 - a. Define the front cover data.
 - b. Define TM characteristics and structure.
 - (1) Identify Basic Issue Items, and Additional Authorization Listings.
 - (2) Identify chapter, section, and work package outlines.
 - c. Identify item Description, capabilities, and limitations.

- d. Define operator instructions.
 - e. Define preventive maintenance requirements.
 - f. Define lubrication requirements.
2. Complete maintenance and operator forms.
- a. Define completion requirements of DA Form 5988-E, and DA Form 2404.
 - (1) DA Form 5988-E, Equipment data, parts requested, maintenance faults sections.
 - (2) DA Form 2404, Header, applicable references, status symbols, signatures, fault and deficiencies.
 - b. Define completion requirements for DA Form 5987-E and DD Form 1970.
 - (1) DA Form 5987-E, equipment data, service due data, dispatch information.
 - (2) DD Form 1970, vehicle information, timeline usage, destination, and POL usage.
3. Define inspection criteria.
- a. Determine leakage criteria.
 - (1) Class I seepage is defined as a discoloration of the surface of the item but not enough to form drops.
 - (2) Class II leakage is a leak strong enough to form drops on the surface of the item but not strong enough for the drops to fall from the item being inspected.
 - (3) Class III leakage is strong enough to form drops that drop from the item being inspected.
 - b. Inspect for signs of a problem or trouble. Use your senses. Be alert for a burned smell which would indicate leaking fluids on a hot surface or contaminated engine, transmission, differential, or transfer gear case oil.
 - c. Check bolts, nuts, and screws for looseness.
 - d. Look for chipped paint, rust, or corrosion around bolt and screw heads and nuts.
 - e. Check electrical wires, connectors, and harnesses for cracked or broken insulation, bare wires, and broken connectors.
 - f. Check hoses and fluid lines for wear, damage and leaks and make sure fittings are tight.
4. Determine serviceability of item being inspected.
- a. Conduct a 360-degree walk-around of the vehicle.
 - b. Look for fuel or oil leaks under the vehicle. Refer to item 1c for criteria of a leak.

c. Inspect to see if items are in good condition, correctly installed, stowed, secured or excessively worn, or corroded.

5. Determine fault disposition of item being inspected.

a. Classify the item or vehicle being inspected as Not Ready or Not Mission Capable if any fuel, coolant leakage is found. Consult TM for specific guidance.

b. Tighten loose bolts, nuts or screws. Notify maintenance if tools are not available.

c. Notify maintenance if any seepage or leakage is found.

d. Determine if parts are to be replaced, availability of parts, and level of responsibility.

Evaluation Preparation:

Setup: Provide for the Soldier a copy of a Technical manual, DA Form 5988-E, DA Form 2404, DA Form 5987-E, DD Form 1970, instruction on the PMCS process.

Performance Measures

	GO	NO GO
1 Interpreted a Technical Manual.	_____	_____
2 Completed maintenance and operator forms.	_____	_____
3 Defined inspection criteria.	_____	_____
4 Determined serviceability of item being inspected.	_____	_____
5 Determined fault disposition of item being inspected.	_____	_____

Evaluation Guidance: Score the Soldier a GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. Tell the Soldier what they did wrong and how to perform it correctly.

**References
Required**

Primary
AR 600-55 THE ARMY DRIVER AND
OPERATOR STANDARDIZATION PROGRAM
(SELECTION, TRAINING, TESTING, AND
LICENSING)

DA PAM 750-8 The Army Maintenance
Management System (TAMMS) Users Manual

TC 21-305-200 THE ARMY COMMERCIAL
DRIVERS LICENSE EXAMINERS MANUAL
(S&I, COMDT USATSCH, ATTN: ATZF-DOS-
LT, (BLDG 2719), FT EUSTIS, VA 23604-5168)

TM 9-2320-392-10-2 OPERATORS MANUAL
FOR THE M1083A1 SERIES 5 TON, 6X6
MEDIUM TACTICAL VEHICLE (MTV)
VOLUME NO. 2 OF 2. MODEL TRK, CAR.,

Required

MTV, M1083A1 W/WN (NSN 2320-01-447-3884) (EIC BUL);W/O WN (2320-01-447-3890)

Primary

Subject Area 3: Motor Vehicle Operations

551-88M-1314
Perform Coupling Operations

WARNING

WARNING:

Do not use trailer handbrake as primary brake to keep tension on coupling system. This will cause undue tension on brakes and coupling which could result in injury to personnel or damage to equipment. Prevent problems with slack in fifth wheel by using good braking habits and adjusting coupling and braking systems properly.

WARNING:

Use caution when coupling to semitrailer. BE ALERT for personnel in area. Ensure that hands, arms, and body are clear of potential pinch points. Failure to follow this warning may result in injury to personnel.

WARNING:

Use ground guides when backing up to parked semitrailer. Failure to comply may result in injury to personnel or damage to equipment.

WARNING:

Do not allow any personnel between tractor and semitrailer during coupling or uncoupling operations. Failure to comply may result in serious injury or death to personnel.

CAUTION

CAUTION:

Always chock the tractor and/or semitrailer wheels during coupling operations to prevent inadvertent movement of tractor or semitrailer. Failure to comply may result in injury to personnel or damage to equipment.

Conditions: In an operational environment, your unit is preparing for a tactical movement. Given a tractor and semitrailer (uncoupled) with before-operation maintenance performed and all coupling components lubricated as required, an area large enough to accommodate the operation, chock blocks, hearing protection, ground guides (where available), and work gloves.

Standards: Couple, then uncouple, a truck tractor to and from a semitrailer without causing injury to personnel or damage to equipment.

Special Condition: Special Conditions: This task is primarily written for the M915A3/M872A4 Truck Tractor-Semitrailer combination. However, if operating with the M1088 MTV Truck Tractor or the M931/M932 Truck Tractor, follow the steps in the perspective vehicle technical manual (TM) when differences from this task outline occur.

MISSION-READY: This term refers to the status of the vehicle in which all required preventive maintenance has been conducted, all maintenance worksheets have been completed and no faults noted that render the vehicle as NMC, dispatch form is completed with all required signatures, accident forms are present and legible, and all required BII/AAL is properly stowed on vehicle to include safety equipment, and all forms are located in the equipment records folder located in the designated location in the vehicle.

Special Standards: None

Special Equipment: None

Cue: Soldier has been tasked to conduct transportation operations within his unit of operation.

Note: Vehicle operator must ensure the location is clear of personnel and equipment by conducting a 360-degree walkaround of tractor and semitrailer.

Start position for coupling is with fifth wheel jaws unlocked (open), fifth wheel in LOAD position, and fifth wheel slide control lever in LOCKED position.

Performance Steps:

WARNING

WARNING:

Use ground guide when backing up to semitrailer. Failure to do so may result in injury or death to personnel or damage to equipment.

WARNINGS:

Do not use semitrailer handbrake as primary brake to keep tension on coupling system. This will cause undue tension on brakes and coupling which could result in injury or death to personnel or damage to equipment. Prevent problems with slack in fifth wheel by using good braking habits and adjusting coupling and braking systems properly.

Use caution when coupling semitrailer. Be alert for personnel in area. Ensure that hands, arms, and body are clear of potential pinch points. Failure to follow this warning may result in injury or death to personnel.

CAUTION:

Be careful not to run kingpin up fifth wheel ramps as this can damage kingpin and/or fifth wheel.

NOTES:

Truck and semitrailer must be aligned.
Use a ground guide if one is available.

CAUTION:

Fifth wheel lube plates and trailer kingpin plate must be cleaned and dried prior to coupling. Failure to follow this caution could damage fifth wheel and/or trailer.

CAUTION

- Semitrailer wheels must be blocked and semitrailer brakes locked to prevent damage to tractor or semitrailer by uncontrolled sliding of fifth wheel.
- If towing M871 semitrailer or M967/M969/M1062 fuel tankers, rear mud flaps must be removed and stowed in brackets provided. Failure to do so will cause equipment damage.
- Tractor trucks have the capability to turn greater than 90°. Care must be taken to avoid hitting semitrailer with tractor when turning more than 90°.
- Operator must use caution when cresting hills which cause the tractor truck to have a nose

down angle greater than 4° with respect to towed semitrailer. Damage to vehicle or loss of control could occur.

CAUTION:

Be careful not to run kingpin up fifth wheel ramps as this can damage kingpin and/or fifth wheel.

1. Couple semitrailer.

NOTE: Start position for coupling is with fifth wheel jaws unlocked (open), fifth wheel in LOAD position, and fifth wheel slide control lever in LOCKED position.

- a. Emplace chock blocks under semitrailer.

(1) Level Ground. Place one chock block in front of the wheel and behind the opposing wheel on the same axle.

(2) Uphill. Place both chock blocks behind the rear axle of the semitrailer.

(3) Downhill. Place chock blocks in front of forward-most axle on semitrailer.

- b. Ensure that fifth wheel ramps are level with, or slightly below, the angle of the pickup ramps.

CAUTION

CAUTION:

Ensure that centerline of tractor and centerline of semitrailer are aligned during coupling operation.

- c. Position the truck tractor.

NOTE: See truck-semi-trailer alignment graphic. Centerline must be aligned.

(1) Start truck tractor (see TM).

(2) Sound horn (if tactically permissible).

(3) Using ground guide if available, align centerline of tractor with centerline of semitrailer.

d. Ensure that semitrailer is picked up with fifth wheel ramps. If kingpin comes in too high, it will not engage the fifth wheel properly. Adjust semitrailer height as needed.

e. Slowly back tractor under semitrailer kingpin plate. Stop when kingpin plate is touching guide ramps. Semitrailer kingpin should be centered as closely as possible in throat of fifth wheel.

- f. Connect air hoses and light cables.

(1) Remove tether from air hoses.

(2) Remove air hoses from bracket.

(3) Remove 12V or 24V intervehicular electrical cable from tool box.

(4) Connect intervehicular electrical cable to appropriate receptacle.

CAUTION

CAUTION:

Ensure the service air hose from the tractor is connected to the service coupling, the emergency air hose, and to the emergency coupling on the semitrailer.

WARNING:

Airbrake shutoff must be open at all times during the normal operation of the tractor and the semitrailer. Semitrailer brakes must be functional. Failure to do this may cause injury or death to personnel.

(5) Connect air hoses to semitrailer.

(6) If trailer is ABS-equipped, connect ABS electrical cable (M915A3 old model).

(7) Push semitrailer air supply control knob IN, open semitrailer supply valve, and set semitrailer control valve hand brake.

g. Back slowly until fifth wheel locks firmly to kingpin.

h. Check kingpin connection and fifth wheel slide locks by pulling tractor gently forward against locked semitrailer brakes or blocked wheels. As resistance is felt, select transmission shift selector Reverse (R) pushbutton and gently back tractor to verify fifth wheel slide locks in both directions. When resistance is felt, select transmission shift selector Neutral (N) pushbutton and set parking brake.

i. Visually check that fifth wheel jaws close around kingpin.

j. Place fifth wheel slide control lever in UNLOCK position to disengage two slide locking plungers.

k. Drive tractor slowly backward to position fifth wheel in HAUL position.

l. Place fifth wheel slide control lever to LOCKED position to engage slide locking plungers. Ensure slide locking plungers engage.

m. Verify that primary lock release handle and secondary lock release handle are in.

n. Check semitrailer lights.

o. Lift and secure semitrailer landing gear and stow float pads.

p. Stow wheel chocks.

WARNING

Use caution when uncoupling from semitrailer. BE ALERT for personnel in area. Ensure that hands, arms, and body are clear of potential pinch points. Failure to follow this warning may result in injury to personnel.

2. Uncouple semitrailer.

a. Stop truck and semitrailer.

b. Shift transmission to (N) neutral.

c. Chock the semitrailer wheels.

(1) When parking uphill, place chock blocks behind the rear wheels on both sides of the semitrailer.

(2) When parking downhill, place chock blocks in front of forward-most axle on semitrailer.

(3) When parking on level ground, place a chock block firmly in front of a wheel on one side of the axle and firmly behind one wheel on the other side.

d. Pull semitrailer air valve OUT.

CAUTION

Lower landing gear until a small space can be seen between bottom of trailer fifth wheel lube plates. Damage will occur if trailer edge drags across fifth wheel lube plates.

e. Apply parking brake.

f. Remove float pads from stowage brackets and place under landing support legs.

g. Lower the landing support legs.

CAUTION

To prevent damage to air hoses and electrical cables between trailer couplings, ensure air hose and cable ends are placed in storage bracket.

h. Set semitrailer hand brake control valve and close semitrailer air supply valve.

i. Disconnect and stow air hoses and the intervehicular cable.

j. If connected, disconnect and stow ABS electrical cable (M915A3 Old model).

k. Place fifth wheel slide control lever to UNLOCKED position.

l. Drive tractor forward to position fifth wheel to LOAD position.

m. Place fifth wheel slide control lever to LOCKED position. Ensure slide locking plungers engage.

n. Pull secondary lock release handle out and lift to engage catch.

o. Pull primary lock release handle out.

p. Release parking brake and slowly pull forward until semitrailer clears fifth wheel.

q. Stop and set parking brake.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Coupled Semitrailer.	_____	_____
2 Uncoupled Semitrailer.	_____	_____

Evaluation Guidance: None

References

Required

TM 9-2320-302-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR, 6X4, M915A3 (NSN 2320-01-432-4847)

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386)

TM 9-2330-358-14&P OPERATORS, UNIT, INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR SEMITRAILER, TACTICAL, DUAL PURPOSE BREAKBULK/CONTAINER

TM 9-2330-359-14&P OPERATORS, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS) FOR SEMITRAILER, FLATBED: BREAKBULK/CONTAINER TRANSPORTER, 34 TON M872 (T)

Primary

TM 9-2320-302-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR, 6X4, M915A3 (NSN 2320-01-432-4847)

TM 9-2330-386-14&P OPERATORS, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS) FOR SEMITRAILER, TACTICAL, DUAL PURPOSE, BREAKBULK/CONTAINER TRANSPORTER

551-88M-1364
Operate Vehicle with Standard, Automatic/Semiautomatic Transmission

DANGER

Refer to vehicle TM for all DANGER statements.

WARNING

Refer to vehicle TM for all WARNING statements.

CAUTION

Refer to vehicle TM for all CAUTION statements.

Conditions: In an operational environment, given a tactical wheeled vehicle with a standard or automatic/semiautomatic transmission, with before-operation maintenance performed, basic issue items (BII), dispatch, -10 series technical manual (TM), accident forms, and guidance on route to operate.

Standards: Operate the vehicle by following all starting and operating procedures in the referenced TM. Shift gears (manual transmission), use the proper gear mode or gear range for road conditions, and maintain control of the vehicle during all movement (forward and backward). All driving maneuvers are to be completed without injury to personnel or damage to vehicle.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You have received a mission to operate a tactical wheeled vehicle with a standard or automatic/semiautomatic transmission.

Note: None

Performance Steps

1. Prepare for vehicle operation.
 - a. Ensure all operator maintenance, dispatch and accident documentation is present in equipment records folder.
 - b. Depress throttle and merge into roadway.
 - c. Adjust the seats (as needed).
 - d. Adjust driving mirrors (as needed).
 - e. Fasten seat belt.
 - f. Ensure the parking brake is applied.
 - g. On vehicles with winch, ensure that power takeoff is disengaged.

- h. Insert hearing protection prior to starting vehicle.
 - i. Start vehicle engine (refer to TM).
 - j. Observe all instruments and warning lights and buzzers for proper operation.
 - k. Allow engine to warm up and brake system air tank warning buzzer to go off (as applicable).
2. Set the vehicle in motion.
- a. Turn on lights as required.
 - b. Check for approaching traffic.
 - c. Signal to indicate your direction of movement (if tactically permitted).
 - d. Release parking brake.
3. Shift the gears (as applicable). Bring vehicle to desired speed by shifting, as necessary, through the gear pattern (manual transmission) or selecting different gear ranges (automatic transmission).
4. Turn the vehicle.
- a. Prepare to turn (full turn).
 - (1) Signal a right or left turn (when permitted).
 - (2) Observe responses of other vehicle to your signals.
 - (3) Reduce speed to make the turn safely. Keep in mind terrain and load (if applicable) when determining your speed through the turn.
 - b. Start the turn. Rotate the top of the steering wheel in the direction of turn and adjust as desired.
5. Stop the vehicle (nonemergency).
- a. Remove foot from accelerator.
 - b. Apply engine retarder if equipped and as needed.
 - c. Apply service brakes as needed to bring vehicle to complete and safe stop.
6. Back the vehicle.
- a. With vehicle at a complete stop, set the parking brake.
 - b. Place transmission in Neutral (N).
 - c. Post ground guides if available.
 - d. Check behind vehicle to ensure there are no obstructions or personnel.

- e. Sound horn (if tactically permitted).
 - f. Place transmission in Reverse (R).
 - g. Release parking brake.
 - h. If ground guide is posted, observe and adhere to signals to move vehicle into position.
 - i. If no ground guide is present, check all views through rear view mirrors and slowly steer the vehicle backward into position. If necessary, repeat steps 6 a through g above to complete the rearward movement.
 - j. Stop the vehicle.
7. Park the vehicle.
- a. Place the transmission selector lever in Neutral (N).
 - b. Set the parking brake.
 - c. Shutdown the engine (refer to TM).
 - d. Emplace chocks blocks as needed.
 - e. Drain air reservoir if vehicle is no longer needed.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Prepared for vehicle operation.	_____	_____
2 Set the vehicle in motion.	_____	_____
3 Shifted the gears (as appropriate).	_____	_____
4 Turned the vehicle (left/right).	_____	_____
5 Stopped the vehicle (non-emergency).	_____	_____
6 Backed the vehicle.	_____	_____
7 Parked the vehicle.	_____	_____

Evaluation Guidance: None

**References
Required**

Primary
AR 385-10The Army Safety Program (*RAR 004,
10/04/2011)

AR 600-55 THE ARMY DRIVER AND

Required

Primary

OPERATOR STANDARDIZATION PROGRAM
(SELECTION, TRAINING, TESTING, AND
LICENSING)

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-280-10 OPERATORS MANUAL
FOR TRUCK, UTILITY: CARGO/TROOP
CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-
01-107-7155) (EIC: BBD);M998A1 (2320-01-371-
9577) (EIC:BBN);TRUCK, UTILITY:
CARGO/TROOP CARRIER, 1-1/4 TON, 4X4,

TM 9-2320-364-10 OPERATORS MANUAL
FOR TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN
2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083
SERIES, 5-TON, 6X6, MEDIUM TACTICAL
VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK,
CAR., MTV, M1083 W/WN (NSN 2320-01-360-
1895) (EIC: BT3) W/O WN (2320-01-354-3386)
(EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083
SERIES, 5-TON, 6X6, MEDIUM TACTICAL
VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK,
CAR., MTV, M1083 W/WN (2320-01-360-1895)
(EIC: BT3) W/O WN (2320-01-354-3386) (EIC:
BR2)

551-88M-1661

Perform Wheeled Vehicle Hasty/Self-Recovery and BDAR on a Wheeled Vehicle

DANGER

Soldier must determine if there are any unexploded ordnance in the immediate vicinity which may place the crew in imminent danger. If so, Soldier is to evacuate area and notify EOD and chain of command.

WARNING

Operator must exercise extreme caution in determining the extent of damage and road-worthiness. Damage to vehicle may pose an additional physical threat to the crew. Always be aware of UXO and leaking flammables or chemicals.

CAUTION

Soldier must ensure that any battle damage repairs or further limited operation of the vehicle will not result in additional damage to equipment. Disregard if in life-threatening location.

Conditions: In an operational environment, during a resupply mission your vehicle was damaged from an IED. The injured gunner was MEDEVACed and the area is secure. As the driver, you and your assistant driver must determine extent of damage and recover vehicle if possible to a safe location. Provided a tactical wheeled vehicle with simulated damage, (with a winch), chains, BII, shackles, and applicable TM (-10 series), hearing protection, work gloves, a like leading vehicle, and assistance from others as needed.

Standards: You are to recover the vehicle so that it can be operated under its own power without injury to personnel or damage to equipment and assess the damage and report the assessment to your supervisor.

Special Condition: This is a two-person operation. Assistance is required under the supervision of the person being evaluated for this task.

Task is to be conducted under NCO supervision.

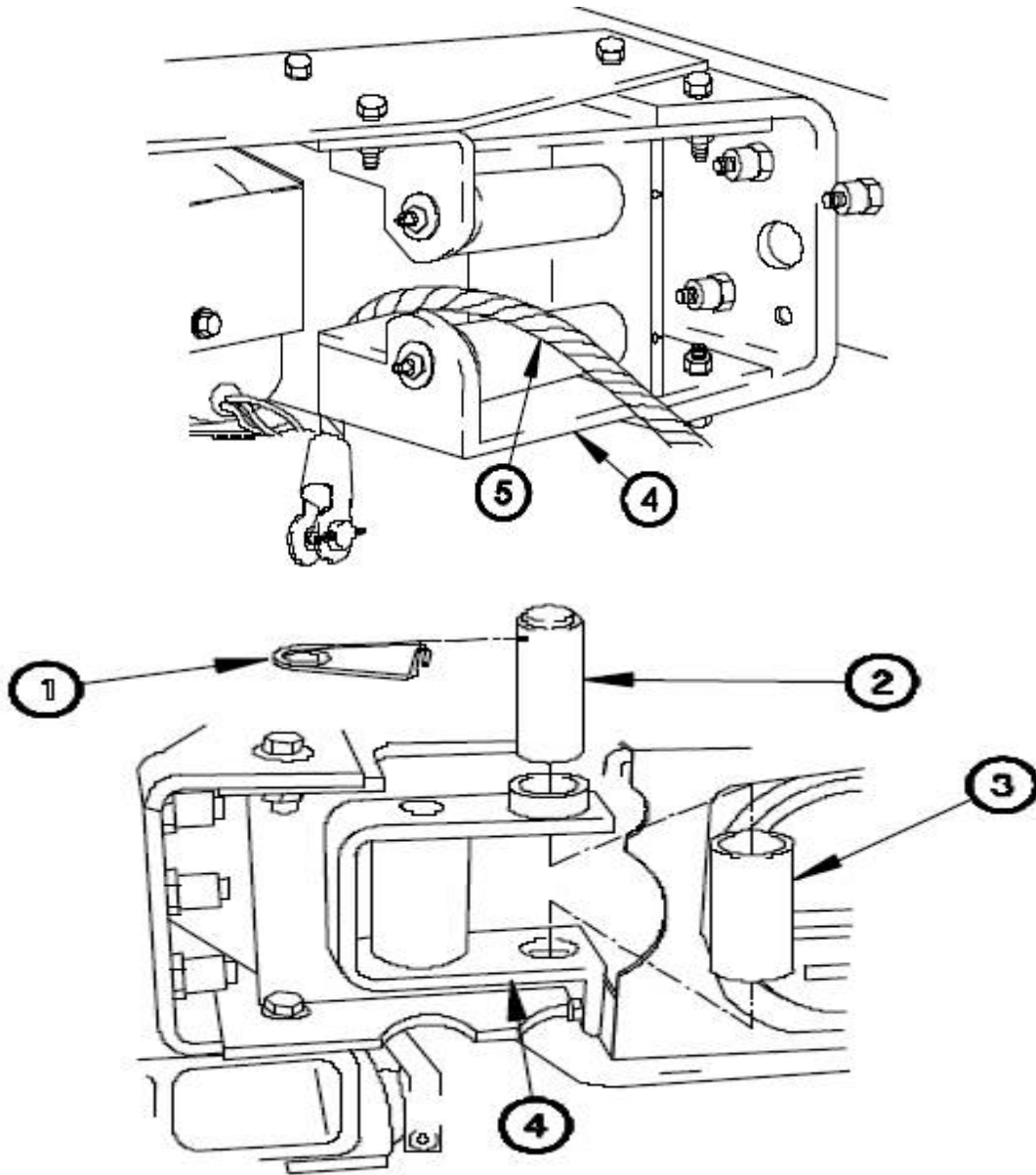
Special Standards: Vehicle is to be rigged for recovery and NCO supervisor is to check and approve the rigging prior to vehicle movement.

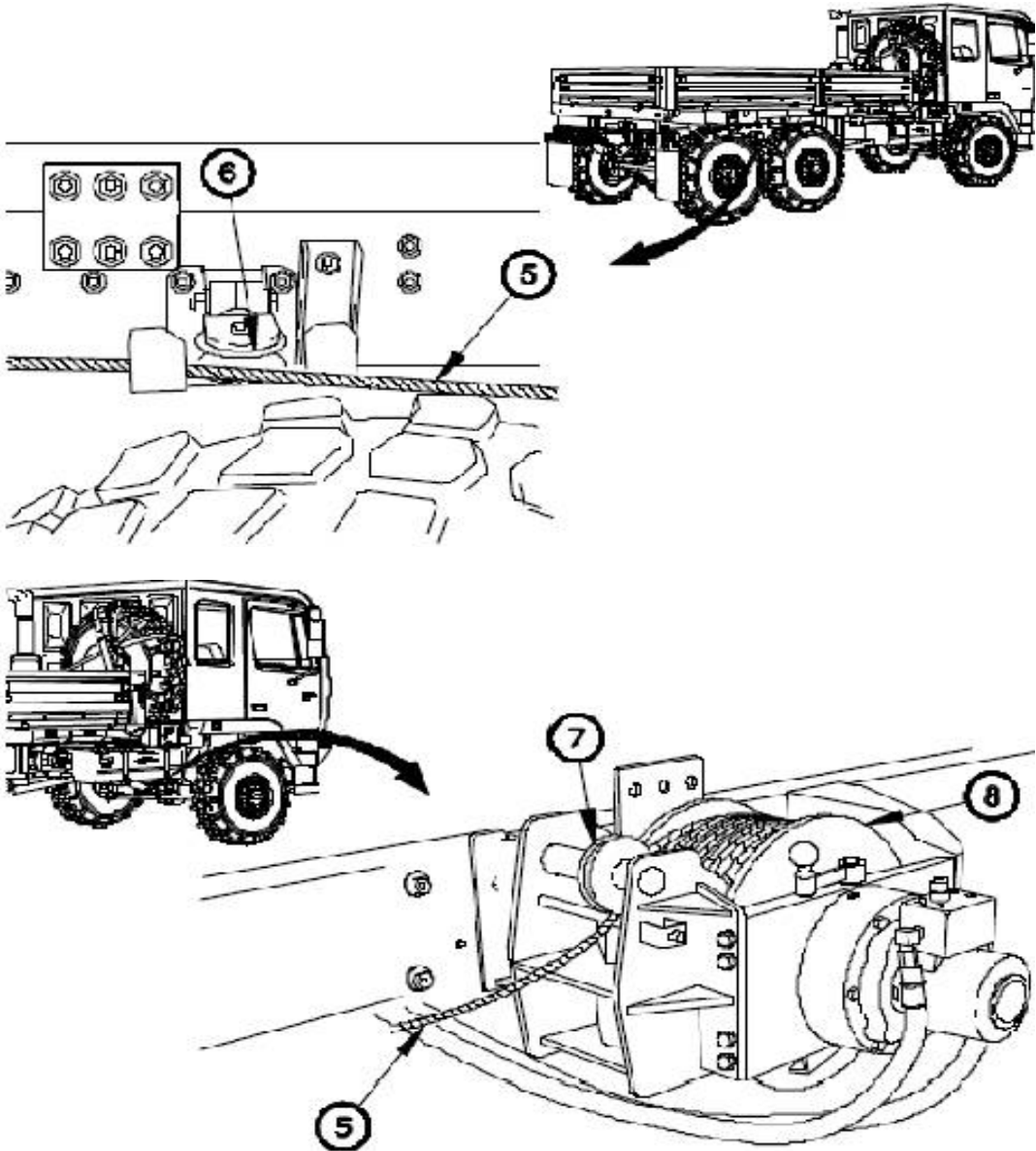
Special Equipment: None

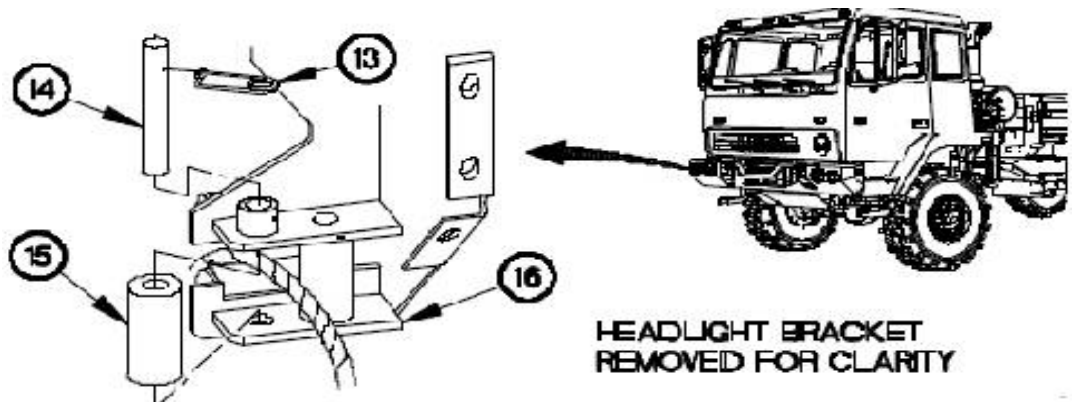
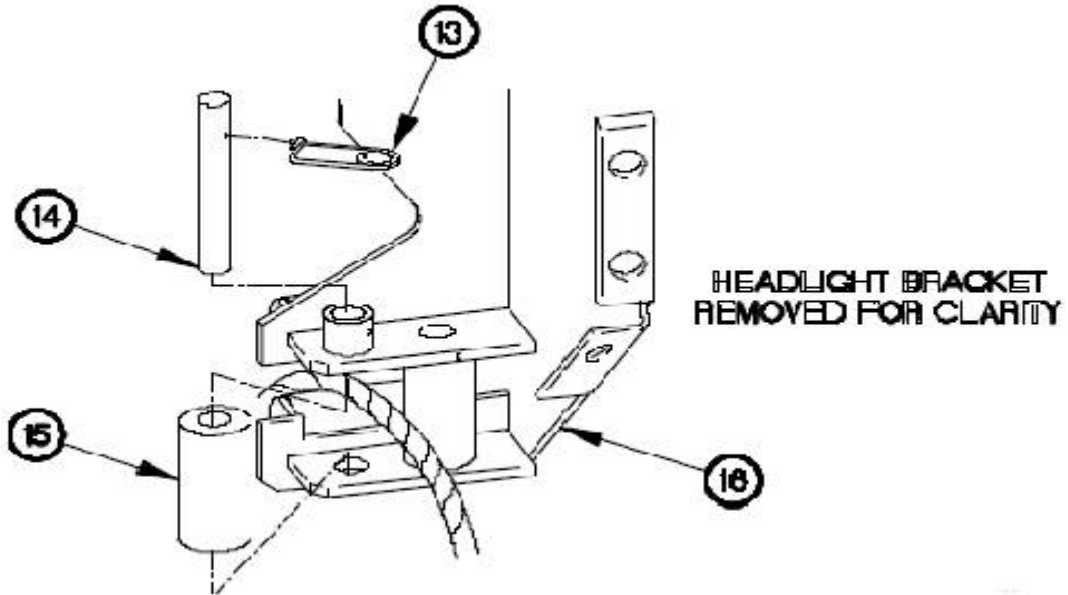
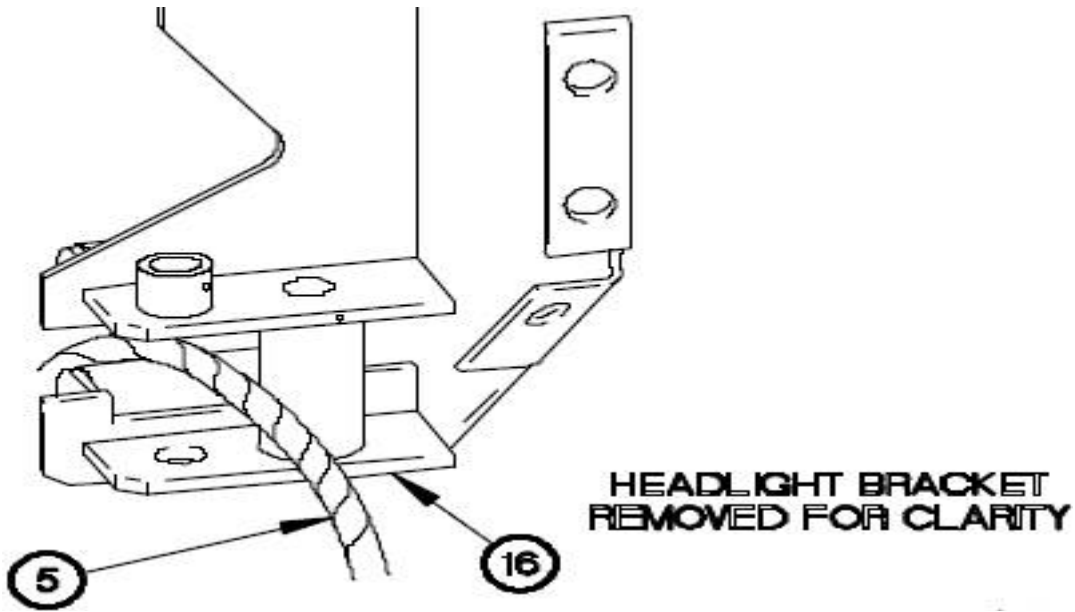
Cue: Your unit has been travelling along the approved convoy route.

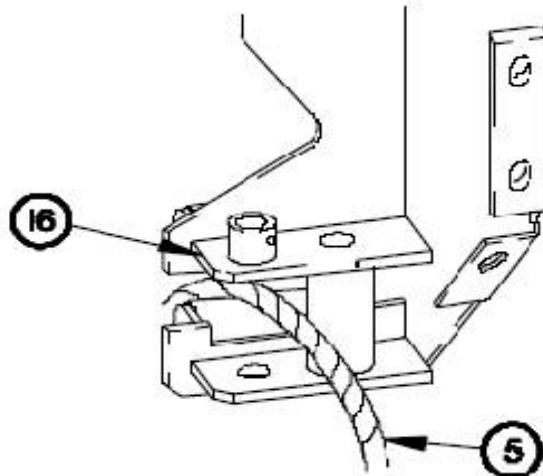
Note: None

Performance Steps:

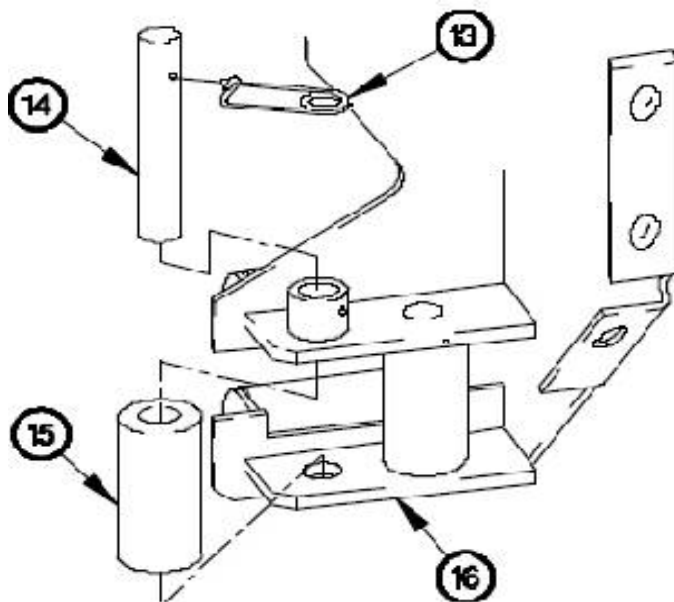




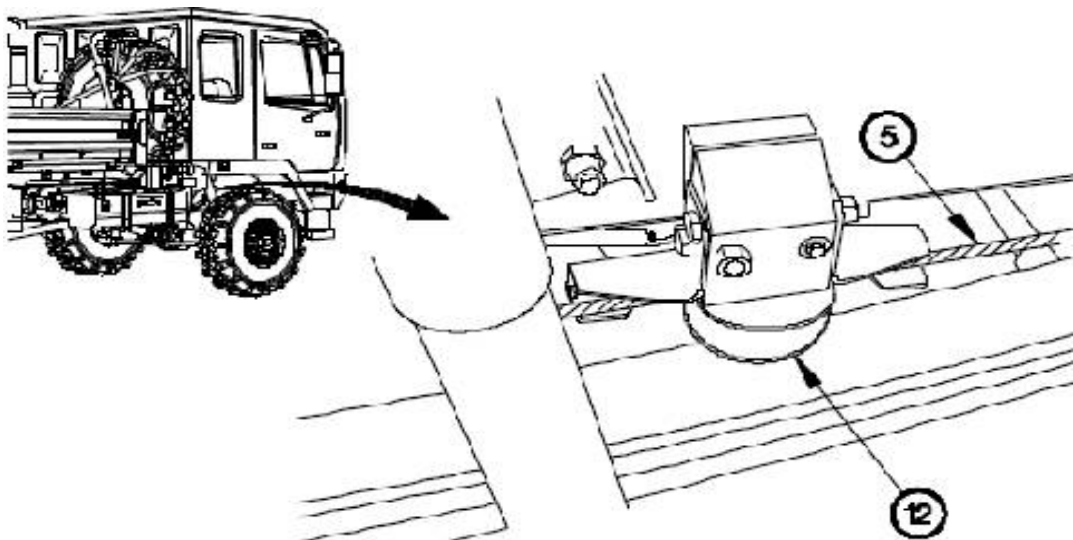


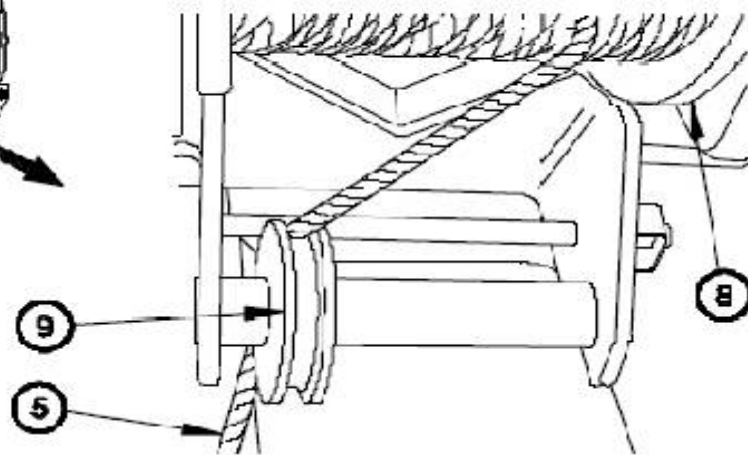
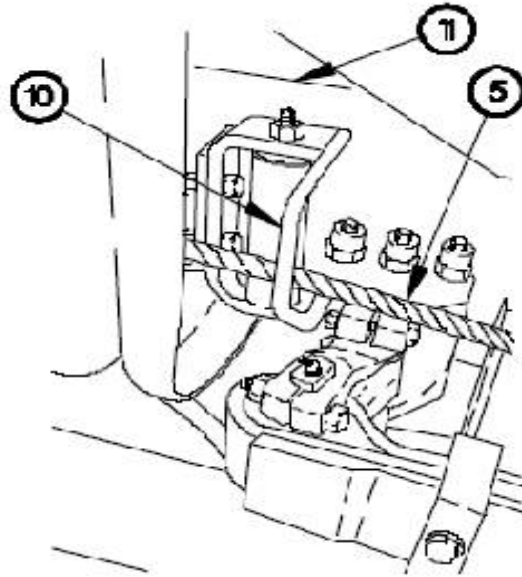
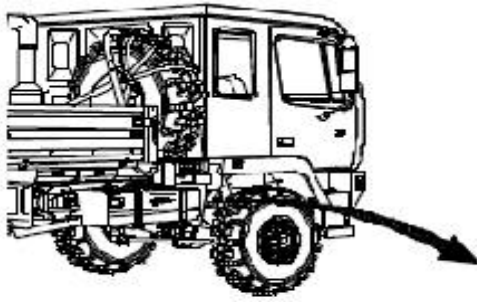


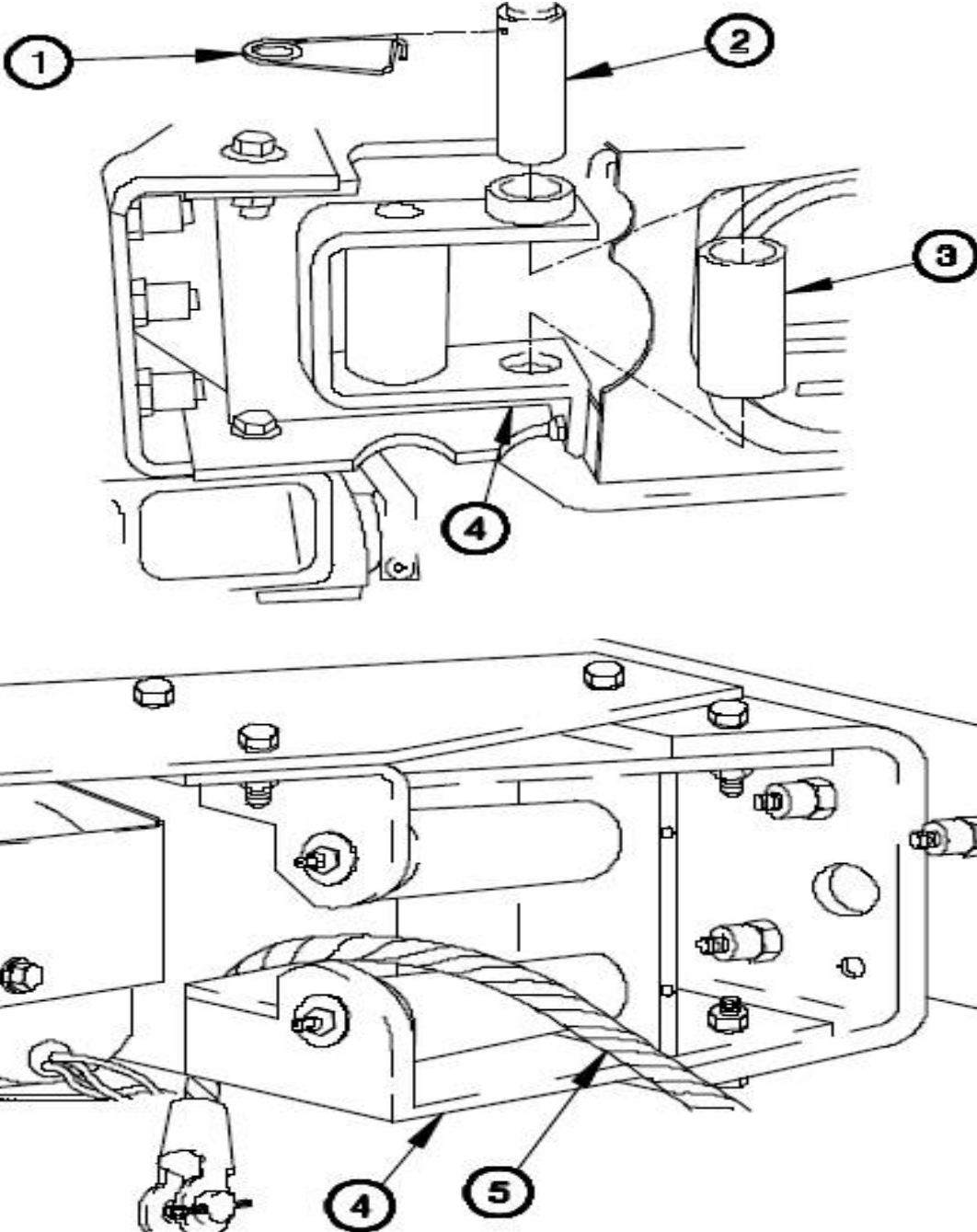
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REMOVED FOR CLARITY**

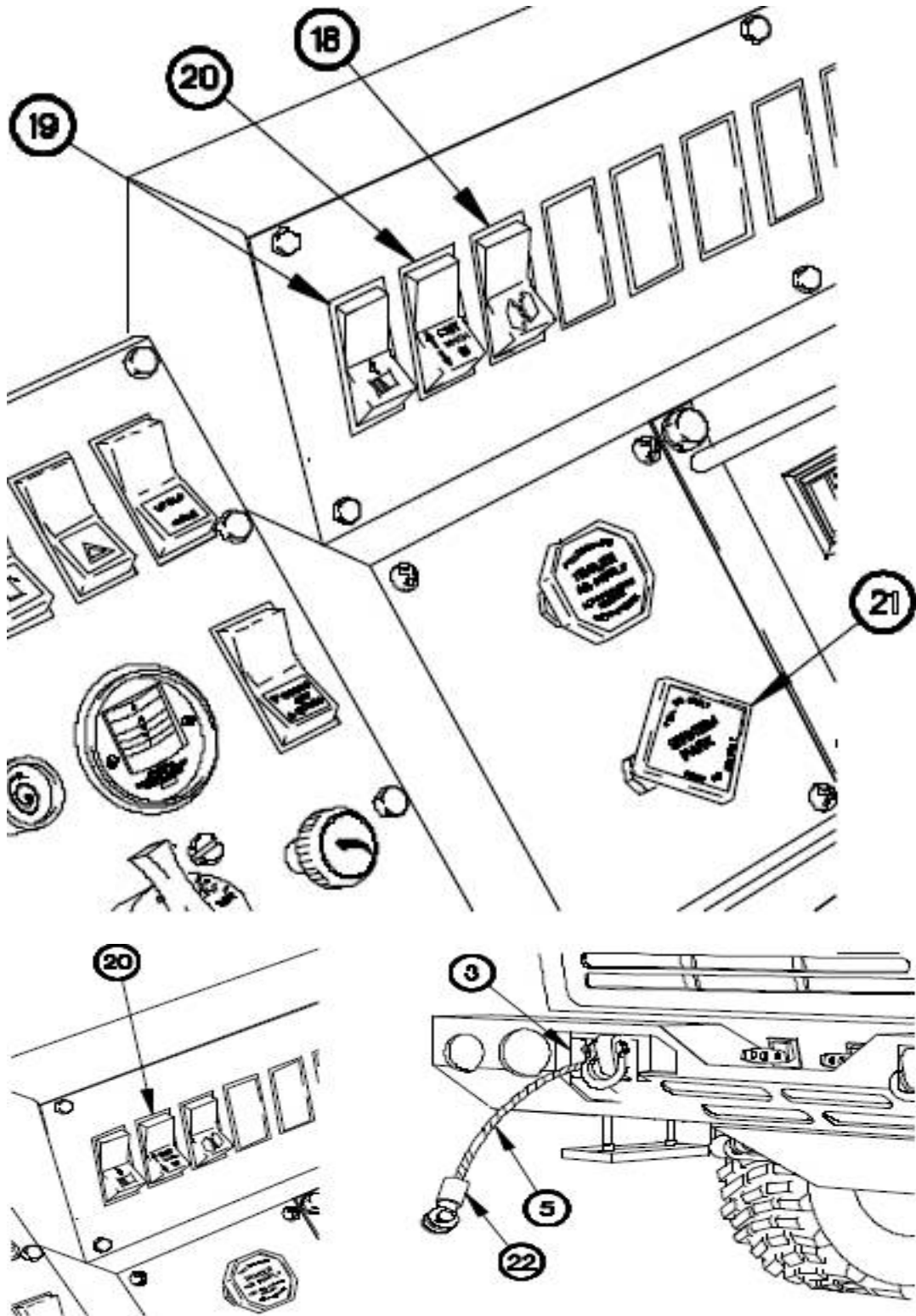


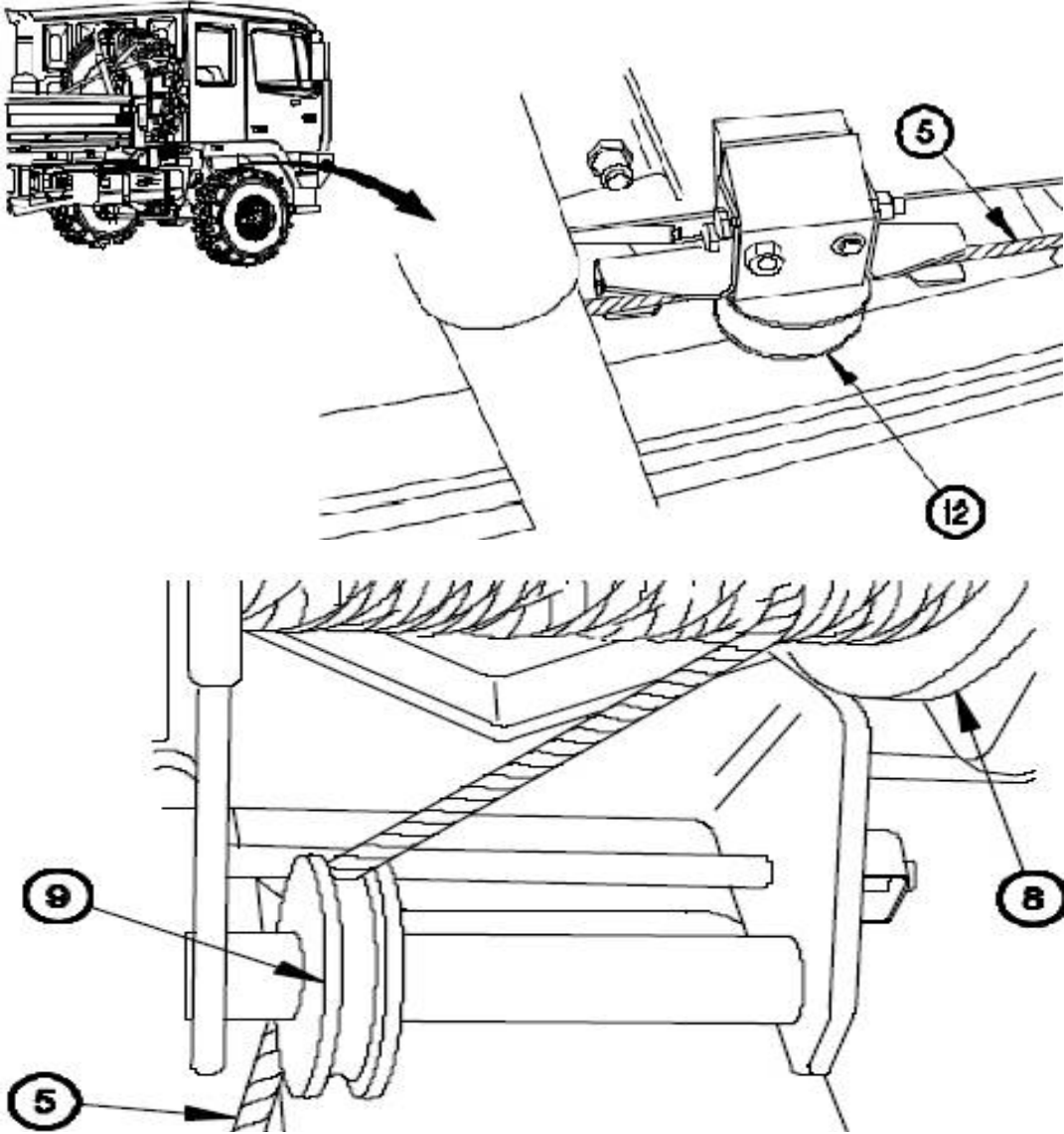
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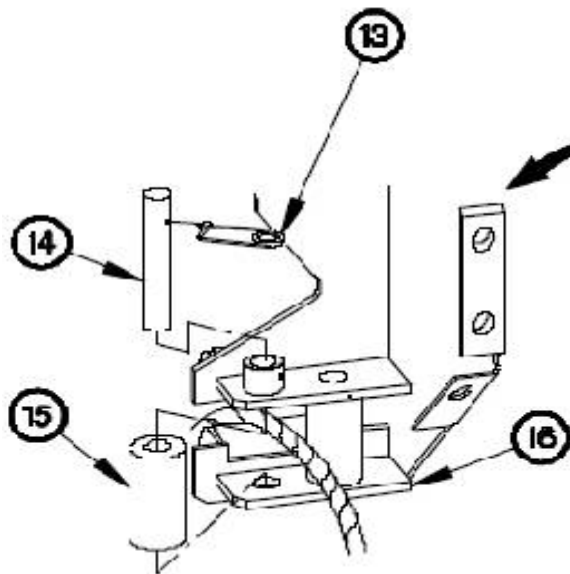
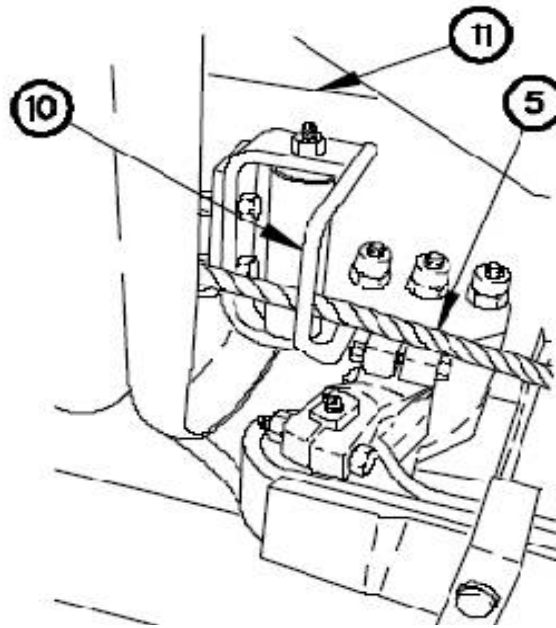




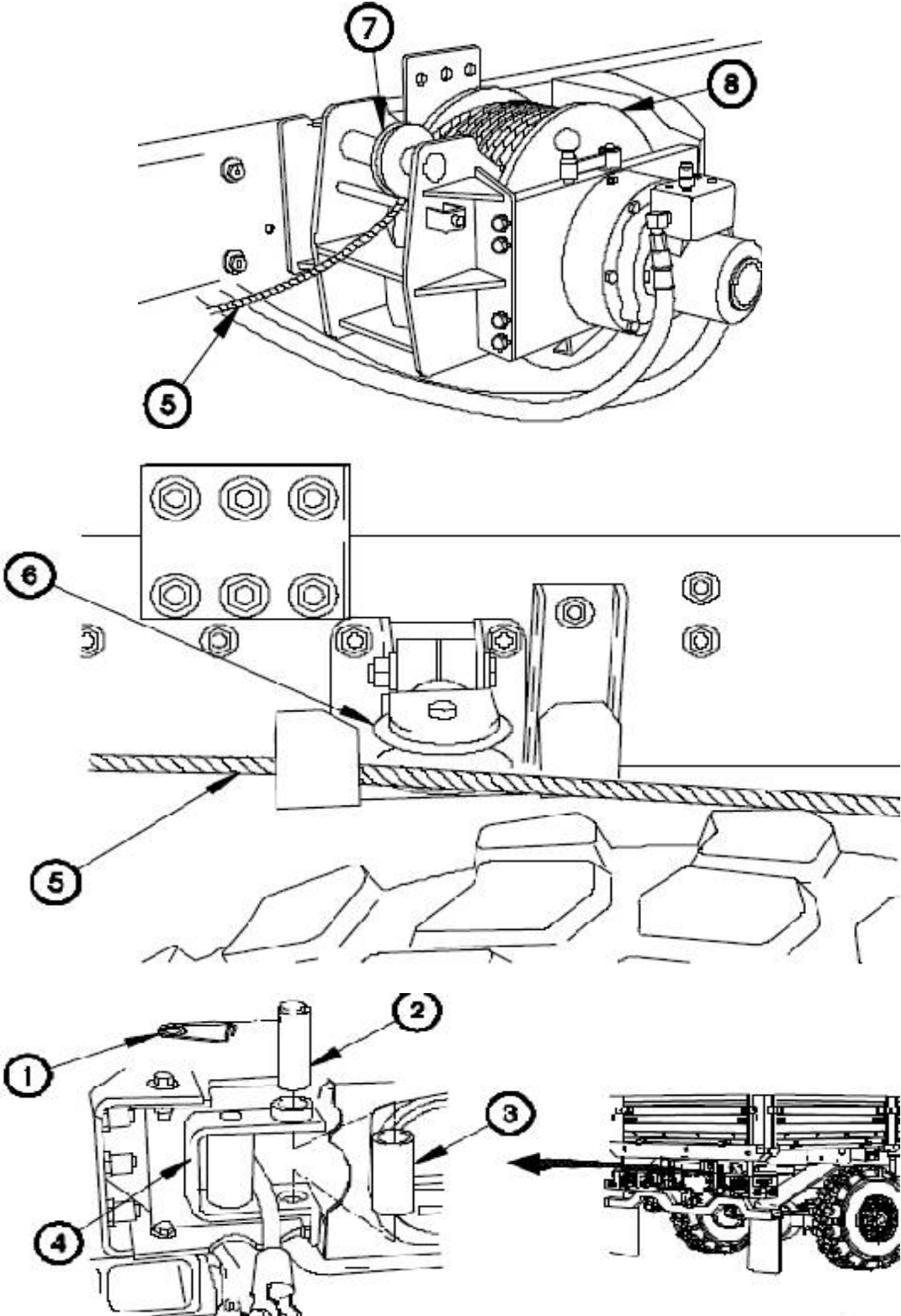


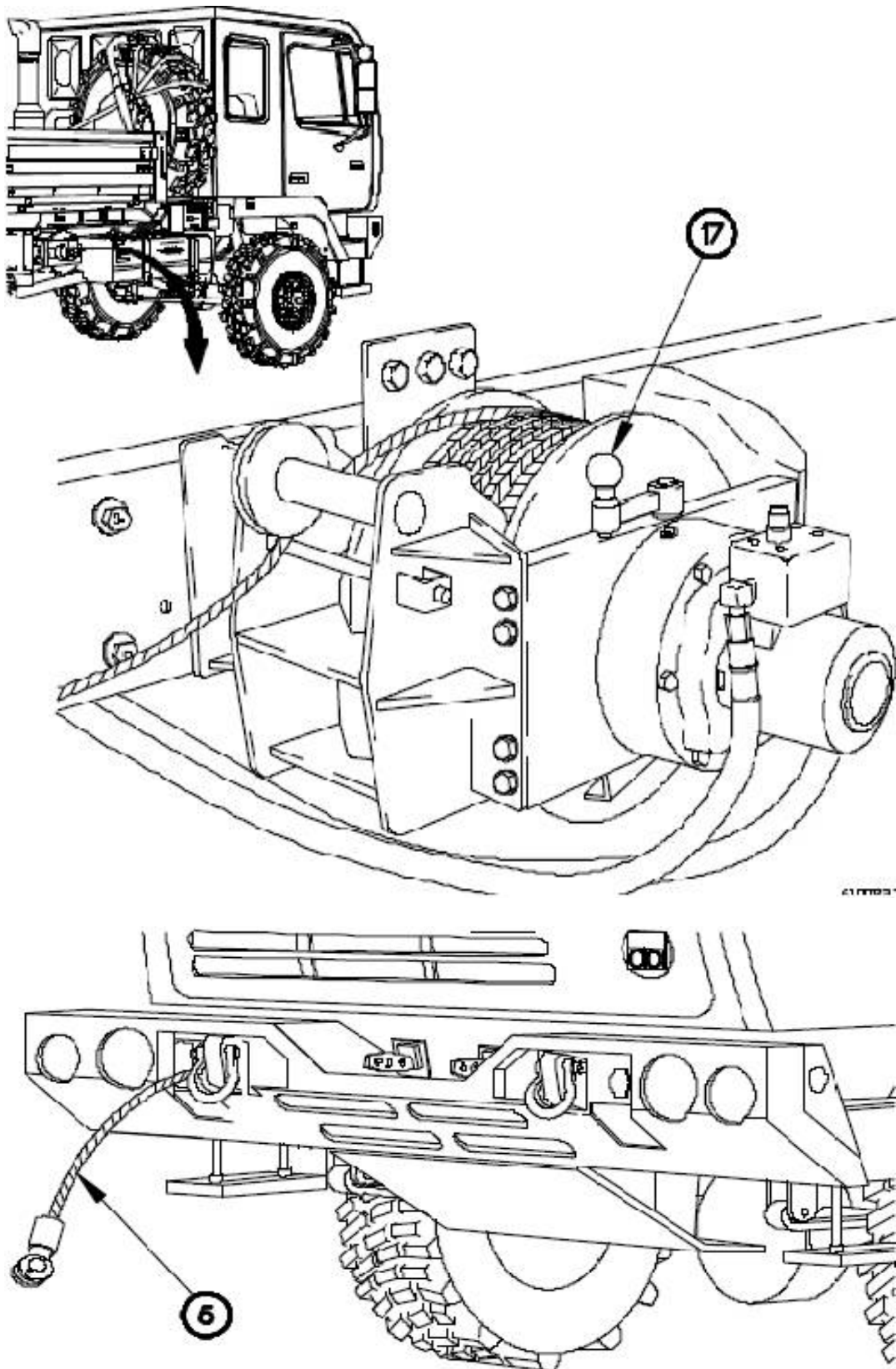


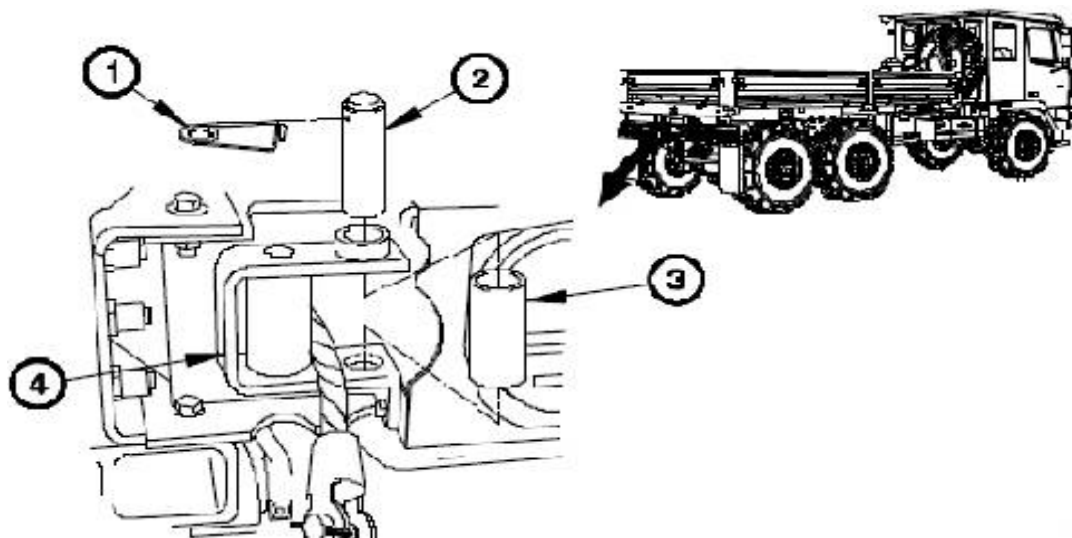
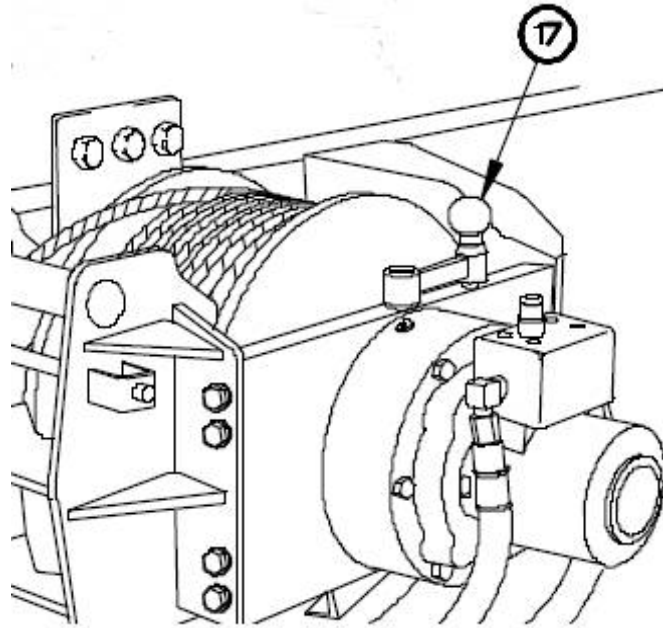




**HEADLIGHT BRACKET
REMOVED FOR CLARITY**







1. Conduct a Hasty recovery by using a like vehicle (front recovery, no winching).

a. Disabled vehicle operator stays in cab and directs assistant driver (or VC) to dismount and connect tow chain to towing (recovery) vehicle tow pintle.

b. Disabled vehicle operator motions towing vehicle operator to begin slow movement. to get the vehicles rolling, then on to a safe location (rally point).

WARNING

WARNING:

Handling a tow bar requires two persons (approximately 100-pound lift).
Failure to comply may cause injury to personnel and damage to equipment.

c. Disabled vehicle operator controls disabled vehicle while being towed to rally point.

d. Once at the safe location (rally point), disabled vehicle operator and assistant disconnect tow chain and connect tow bar for further recovery.

WARNING

WARNING:

Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

2. Attempt to self-recover the vehicle using the Central Tire Inflation System (CTIS) in EMERGENCY mode. If unsuccessful, continue as follows for self-recovery using the self-recovery winch.

3. Self-recover vehicle by using the self-recovery winch (SRW) (front or rear recovery)(M1083 Series).

a. Shutdown engine.

b. Spool cable to front of vehicle.

(1) Remove retaining pin, pin, and roller from rear roller support.

(2) Remove cable from rear roller support.

NOTE: Install retaining pin so that clasp end is toward curbside of vehicle.

(3) Install roller in rear roller support with pin and retaining pin.

(4) Remove cable from rear cable pulley.

(5) Remove cable from rear cable guide on 15K SRW.

(6) Position cable toward front of vehicle.

(7) Install cable through front cable guide on 15K SRW.

(8) Install cable through cable guide behind fuel tank.

(9) Install cable through front cable pulley.

(10) Remove retaining pin, pin, and roller from front roller support.

(11) Install cable through front roller support.

NOTE: Install retaining pin so that clasp end is toward curbside of vehicle.

(12) Install roller on front roller support with pin and retaining pin.

c. Direct assistant spool cable to rear of vehicle.

(1) Remove retaining pin, pin, and roller from front roller support.

(2) Remove cable from front roller support.

NOTE: Install retaining pin so that clasp end is toward curbside of vehicle.

(3) Install roller on front roller support with pin and retaining pin.

(4) Remove cable from front cable pulley.

(5) Remove cable from cable guide behind fuel tank.

(6) Remove cable from front cable guide on 15K SRW.

(7) Position cable toward rear of vehicle.

(8) Install cable through rear cable guide on 15K SRW.

(9) Install cable through rear cable pulley.

(10) Remove retaining pin, pin, and roller from rear roller support.

(11) Install cable through rear roller support.

WARNING

WARNING:

Ensure line pull does not exceed capacity of 15k self-recovery winch (srw). Failure to comply may result in serious injury or death to personnel.

(12) Install roller in rear roller support with pin and retaining pin.

CAUTION

CAUTION:

Do not attach cable to any towing vehicle that is more than approximately 15 degrees away from a straight 15K Self-Recovery Winch (SRW) pull. Failure to comply may result in damage to equipment.

(13) Position 15K SRW clutch control lever to DISENGAGED.

(14) Pull out cable, attach the snatch block, then attach hook of snatch block to towing vehicle towing pintle. Pay out enough cable to attach end of mired vehicle winch cable to mired vehicle front bumper tow clevis.

(15) Position 15K SRW clutch control lever to ENGAGED.

(16) Position PTO switch to on.

(17) Position winch switch to on.

(18) Hold WINCH IN/OUT switch in the WINCH IN position until vehicle is recovered.

(19) Release WINCH IN/OUT switch.

(20) Pull out SYSTEM PARK control.

(21) Remove snatch block from towing vehicle and stow.

(22) Hold WINCH IN/OUT switch in the WINCH IN position to reel in cable until cable socket contacts rollers.

(23) Position winch switch to off.

(24) Position PTO switch to off.

4. Assess the battle damage of the vehicle. **THINK SAFETY FIRST!**

a. Visually check for unexploded ordnance around or in the immediate vicinity of the vehicle.

b. Check for chemical contamination. Notify supervisory chain if dangers are identified.

c. Look for fire, smoke, unusual odor, unusual mechanical noise, leaking fluids, fault warning light and alarms, and loss of mobility or system function.

d. If vehicle is loaded with cargo, determine the extent of damage to the load and ensure it is secured or should be off-loaded to affect vehicle recovery.

e. Perform the basic steps in assessing damage.

(1) Visually inspect interior and exterior for damaged parts and systems.

(2) Visually determine if vehicle main systems appear to be operable.

(3) Perform equipment self-test function - using a built-in test equipment (if possible).

(4) Assess system performance (exercise each system if engine can be safely started).

(5) Determine which sub-systems are affected.

(6) Determine if crewmembers can repair the damage.

(7) Estimate the repair time.

(8) Estimate the number and type of repair personnel needed and the associated risk. Ensure command approval to perform repairs.

(9) Determine what materials are required.

(10) Determine what the vehicle limitation will be after using BDAR or standard repair.

(11) Determine the recovery status - self/like/deliberate.

f. Once vehicle has been recovered, ensure all BDAR repairs are annotated on DA Form 5988-E or DA Form 2404 and identified as BDAR.

Evaluation Preparation:

Setup: Provide the Soldier with a vehicle that is designated to have been damaged due to enemy contact. Explain to the Soldier the requirement to recover the vehicle and assess its' battle damage.

Performance Measures	GO	NO GO
1 Performed hasty vehicle recovery.	_____	_____
2 Attempted to self-recover the vehicle using the Central Tire Inflation System (CTIS) in EMERGENCY mode.	_____	_____
3 Self-recovered the M1083 series vehicle using the self-recovery winch.	_____	_____
4 Assessed the battle damage of the vehicle.	_____	_____

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

References

Required

Primary

FM 4-01.45 Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations {MCCRP 4-11.3H; AFTTP(I) 3-2.58; NTP 4-01.3}

FM 4-30.31 Recovery and Battle Damage Assessment and Repair

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7j}

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

551-88M-1662

Change a Tire on a Wheeled Vehicle and Trailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given a tactical wheeled vehicle (2.5-ton or larger) and associated pintle-connected trailer or semitrailer with a tire to replace, applicable basic issue items (BII), tools, and assistance as needed.

Special Conditions: This task requires two personnel for vehicles 2.5-ton and larger.

Standards: Replace a tire/wheel assembly on a 2.5-ton (or larger) tactical wheeled vehicle and a pintle-connected trailer or semitrailer without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit maintenance has received a new set of replacement tires for your assigned vehicle and trailer. The maintenance supervisor has directed that all spare tire assemblies be placed on the vehicle so that new tires may be used as spares.

Note: Ensure assistance is provided to handle larger-heavy tire-wheel assemblies. If tire davit is provided, its use is MANDATORY to remove and replace spare tire assembly.

Performance Steps

1. Make preparations for tire/wheel assembly replacement.
 - a. Position vehicle or trailer on as level ground as possible.
 - b. Chock wheels opposite from flat to prevent inadvertent movement.

- c. Remove spare tire from stowage location using vehicle-mounted spare tire davit and assistance from another crewmember.
- d. Gather all necessary tools to complete the tire-change.
- e. Ensure spare tire is inflated to correct pressure.
- f. If vehicle is equipped with Central Tire Inflation System (CTIS), ensure all components are removed and replaced according to the vehicle technical manual (TM). Steps may vary between front and rear tires.

NOTE: DO NOT use the CTIS to attempt to maintain air pressure in a flat tire.

2. Remove defective/flat tire/wheel assembly from vehicle or trailer.

- a. If CTIS equipped, remove system lines and fittings as directed in the applicable TM.
- b. Using a lifting device, slightly raise vehicle or trailer until weight is off the tire but tire still contacts the ground.

NOTE: Depending on consistency of ground surface, it may be necessary to support lifting jack with a solid object such as thick boarding or plating that can sustain the partial weight of the vehicle or trailer/semitrailer.

- c. Using lug wrench, slightly loosen lug nuts in a crisscross pattern.
- d. Raise vehicle or trailer high enough to remove and replace wheel/tire assembly. Use hydraulic jack (BII) or other suitable lifting device. If using hydraulic jack, be sure base of jack is supported by thick wood or other materials so that jack will not sink into the ground under vehicle weight.
- e. Block/support vehicle before handling tire using jack stands or any suitable item that will support vehicle weight.
- f. Finish loosening lug nuts and remove wheel/tire assembly.
- g. Lay disabled wheel/tire assembly out of the way in such a manner that will prevent it from falling and injuring personnel or damaging other equipment.
- h. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.

3. Replace tire/wheel assembly.

- a. With assistance, lift spare tire/wheel assembly into position onto hub.

WARNING

WARNING:

Do not allow vehicle weight to rest on lug studs without ensuring lug nuts are fully tightened. Failure to comply may snap one or more lug studs and cause vehicle to collapse which can cause injury or death to personnel and/or damaging wheel hub or wheel.

- b. Secure all lug nuts hand tight.

- c. Fully tighten lug nuts in a crisscross pattern. If necessary, lower vehicle until tire touches the ground to prevent tire from turning.
 - d. Lower the vehicle or trailer to the ground.
 - e. Recheck tightness of all lug nuts.
 - f. If CTIS equipped, ensure all lines and fittings are re-connected. Exercise the CTIS to ensure there are no leaks.
 - g. If CTIS equipped, notify organizational maintenance as soon as possible to ensure all CTIS lines and fittings are reinstalled properly and tested.
 - h. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.
4. Stow disabled tire/wheel assembly.
- a. Using assistance, move tire/wheel into position to be lifted.
 - b. Attach davit/lifting device to the rim of the wheel and lift into position on the vehicle or trailer.
 - c. If lifting device is not available as in the case with some trailers, ensure assistance is obtained before attempting to lift tire/wheel into stowage location.
 - d. Secure with mounting brackets/hardware.
 - e. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.
5. Recover from tire/wheel change procedure.
- a. Secured all tools and materials used to perform tire/wheel change.
 - b. Annotate of DA Form 2404 (Equipment Inspection and Maintenance Worksheet)/DA Form 5988-E (Equipment Inspection Maintenance Worksheet) that spare tire/wheel is unserviceable and to be repaired as soon as possible to regain full "mission capable" status.

NOTE: Some CTIS equipped vehicles are considered "Not Fully Mission Capable" if one or more tires are missing or unserviceable. Ensure chain of command is notified and tire is repaired or replaced to regain "Full Mission Capability."

- c. As soon as possible, take vehicle to organizational maintenance to torque hub lug nuts and have the CTIS checked (if applicable).

Evaluation Preparation:

Provide for the Soldier an M1083 series truck, and M1082 or M1095 MTVT, all required BII which must include an hydraulic jack w/handle, and lug wrench, level, hard ground, and work gloves.

Performance Measures	GO	NO GO
1 Made preparations for tire/wheel assembly replacement.	_____	_____
2 Removed tire/wheel assembly from vehicle or trailer.	_____	_____
3 Replaced tire/wheel assembly.	_____	_____

Performance Measures	GO	NO GO
4 Stowed disabled tire/wheel assembly.	_____	_____
5 Recovered from tire/wheel change procedure.	_____	_____

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

References

Required

Primary

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC:
BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: BR2)

TM 9-2330-394-13&P OPERATOR'S, FIELD
LEVEL MANUAL FOR THE M1082 SERIES, 2
1/2 TON

551-88M-1363

Operate Vehicle With or Without Trailer/Semitrailer Under Blackout Conditions

Conditions: Given a mission-ready 5-ton cargo vehicle, with or without a trailer/ or a truck tractor with semitrailer, hearing protection, and a lead vehicle, and guidance over a controlled driving route or range.

Standards: You are to operate the vehicle under blackout conditions at night using only blackout operating lights as directed to maintain proper vehicle distance without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue:Your unit is required to conduct a convoy during nighttime for a resupply mission.

Note: Soldier must be allowed proper time for nighttime sight transition prior to being obligated to conduct this task.

Performance Steps

1. Ensure the proper operation of all blackout lights and markers.
 - a. Check blackout marker lights on both front and rear of vehicle.
 - b. Check blackout drive lights.
 - c. Check blackout stop light.
 - d. Ensure all lenses are free of dirt, mud, or paint.
2. Operate vehicle at a low speed (5 to 10 MPH/8 to 16 KMPH) or as directed during blackout operations.

WARNING

WARNING:

When operating in an assembly area, use dismounted ground guides for safety. Follow nighttime hand and arm signals (guide using flashlight) as necessary.

3. Maintain a proper interval (60 to 180 feet) from the vehicle ahead. If you are following the correct distance, each pair of blackout lights appears as one red light.

Evaluation Preparation:

Setup: Provide for the Soldier 5-ton cargo truck with or without a trailer/ or a Truck tractor with semitrailer that has operational blackout drive and marker lights, a lead tactical vehicle equipped with blackout marker lights to be operated during blackout conditions at night. There should be little or no ambient light in the vicinity of the controlled driving area.

Brief Soldier: Instruct the Soldier to operate the vehicle using blackout drive lights only over a designated, controlled route at nighttime. Soldier is not to use any night vision enhancement device and to follow the lead vehicle at the prescribed following distance. Soldier must navigate using only night vision while following the lead vehicle's rear blackout lights to determine proper distance and speed. All driving actions are to be completed without injury to any Soldier or damage to either vehicle.

Performance Measures	GO	NO GO
1 Ensured the proper operation of all blackout lights and markers.	_____	_____
2 Operated vehicle at a low speed (5 to 10 MPH/8 to 16 KMPH).	_____	_____
3 Maintained a proper interval (60 to 180 feet) from the vehicle ahead.	_____	_____

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

References

Required

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-211-10 Operator's Manual For Truck, Chassis: 5-Ton, 6X6, M39, M39A2, M40, M40A1, M40A2, M40A1C, M40A2C, M61, M61A1, M61A2, M63, M63A1, M63A2, M63C, M63A1C, M63A2C, M63A1D, M63A2D, M139A1, M139A2, M139C, M139A2C, M139D, M139A2D, M139F, M139A1F, M13

TM 9-2320-260-10 OPERATORS MANUAL FOR TRUCK, 5-TON, 6X6, M809 SERIES (DIESEL): TRUCK, CARGO: M813, M813A1 AND M814;TRUCK, BOLSTER, LOGGING;M815;TRUCK, WRECKER, MEDIUM: M816;TRUCK, DUMP: M817;TRUCK, TRACTOR: M818;TR

TM 9-2320-272-10 OPERATORS MANUAL FOR TRUCK, 5-TON, 6X6, M939, M939A1, AND M939A2 SERIES TRUCKS (DIESEL), TRUCK, CARGO: 5-TON, 6X6 DROPSIDE, M923 (2320-01-0505-2084) (EIC: BRY);M923A1 (2320-01-206-4087) EIC: BSS);M923A

Required**Primary**

TM 9-2320-273-10 OPERATOR'S MANUAL FOR TRUCK, TRACTOR, LINE HAUL, 6X4 M915 (NSN 2320-01-028-4395) (EIC B4A)M915P1 (NSN 2320-01-525-7451) (EIC BAY)TRUCK, TRACTOR, LINE HAUL, 6X4 M915A1 (NSN 2320-01-125-2640) (EIC B4B) M915A1P1 (NSN 2320-01-525-7444) (EIC BAZ) LIGHT EQUIPMENT TRANSPORTER (LET), 6X6, W/WINCH M916 (NSN 2320-01-028-4396) (EIC B4C)

TM 9-2320-279-10-1 OPERATORS MANUAL FOR M977 SERIES 8X8 HEAVY EXPANDED MOBILITY TACTICAL TRUCKS (HEMTT), TRUCK, CARGO, WITH WINCH, M977 (NSN 2320-01-097-0260) TRUCK, CARGO, WITH WINCH, M977A2 (2320-01-493-3774)

TM 9-2320-280-10 OPERATORS MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD);M998A1 (2320-01-371-9577) (EIC:BBN);TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4,

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-365-10 OPERATORS INSTRUCTIONS MANUAL FOR M1078 SERIES, 2-1/2 TON, 4X4 LIGHT MEDIUM TACTICAL VEHICLES (LMTV) TRK, CAR., LMTV, M1078 W/WN (NSN 2320-01-360-1898) (EIC: BHH) W/O WN (2320-01-354-3385) (EIC: BHD) TRK

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS

Required

INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O
WN (2320-01-354-3386) (EIC: BR2)

Primary

551-88M-1364

Operate Vehicle with Standard, Automatic/Semiautomatic Transmission

DANGER

Refer to vehicle TM for all DANGER statements.

WARNING

Refer to vehicle TM for all WARNING statements.

CAUTION

Refer to vehicle TM for all CAUTION statements.

Conditions: In an operational environment, given a tactical wheeled vehicle with a standard or automatic/semiautomatic transmission, with before-operation maintenance performed, basic issue items (BII), dispatch, -10 series technical manual (TM), accident forms, and guidance on route to operate.

Standards: Operate the vehicle by following all starting and operating procedures in the referenced TM. Shift gears (manual transmission), use the proper gear mode or gear range for road conditions, and maintain control of the vehicle during all movement (forward and backward). All driving maneuvers are to be completed without injury to personnel or damage to vehicle.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You have received a mission to operate a tactical wheeled vehicle with a standard or automatic/semiautomatic transmission.

Note: None

Performance Steps

1. Prepare for vehicle operation.
 - a. Ensure all operator maintenance, dispatch and accident documentation is present in equipment records folder.
 - b. Depress throttle and merge into roadway.
 - c. Adjust the seats (as needed).
 - d. Adjust driving mirrors (as needed).
 - e. Fasten seat belt.
 - f. Ensure the parking brake is applied.
 - g. On vehicles with winch, ensure that power takeoff is disengaged.

-
- h. Insert hearing protection prior to starting vehicle.
 - i. Start vehicle engine (refer to TM).
 - j. Observe all instruments and warning lights and buzzers for proper operation.
 - k. Allow engine to warm up and brake system air tank warning buzzer to go off (as applicable).
2. Set the vehicle in motion.
 - a. Turn on lights as required.
 - b. Check for approaching traffic.
 - c. Signal to indicate your direction of movement (if tactically permitted).
 - d. Release parking brake.
 3. Shift the gears (as applicable). Bring vehicle to desired speed by shifting, as necessary, through the gear pattern (manual transmission) or selecting different gear ranges (automatic transmission).
 4. Turn the vehicle.
 - a. Prepare to turn (full turn).
 - (1) Signal a right or left turn (when permitted).
 - (2) Observe responses of other vehicles to your signals.
 - (3) Reduce speed to make the turn safely. Keep in mind terrain and load (if applicable) when determining your speed through the turn.
 - b. Start the turn. Rotate the top of the steering wheel in the direction of turn and adjust as desired.
 5. Stop the vehicle (nonemergency).
 - a. Remove foot from accelerator.
 - b. Apply engine retarder if equipped and as needed.
 - c. Apply service brakes as needed to bring vehicle to complete and safe stop.
 6. Back the vehicle.
 - a. With vehicle at a complete stop, set the parking brake.
 - b. Place transmission in Neutral (N).
 - c. Post ground guides if available.
 - d. Check behind vehicle to ensure there are no obstructions or personnel.

- e. Sound horn (if tactically permitted).
 - f. Place transmission in Reverse (R).
 - g. Release parking brake.
 - h. If ground guide is posted, observe and adhere to signals to move vehicle into position.
 - i. If no ground guide is present, check all views through rear view mirrors and slowly steer the vehicle backward into position. If necessary, repeat steps 6 a through g above to complete the rearward movement.
 - j. Stop the vehicle.
7. Park the vehicle.
- a. Place the transmission selector lever in Neutral (N).
 - b. Set the parking brake.
 - c. Shutdown the engine (refer to TM).
 - d. Emplace chocks blocks as needed.
 - e. Drain air reservoir if vehicle is no longer needed.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Prepared for vehicle operation.	_____	_____
2 Set the vehicle in motion.	_____	_____
3 Shifted the gears (as appropriate).	_____	_____
4 Turned the vehicle (left/right).	_____	_____
5 Stopped the vehicle (non-emergency).	_____	_____
6 Backed the vehicle.	_____	_____
7 Parked the vehicle.	_____	_____

Evaluation Guidance: None

**References
Required**

Primary
AR 385-10 The Army Safety Program (*RAR 004,
10/04/2011)

AR 600-55 THE ARMY DRIVER AND

Required**Primary**

OPERATOR STANDARDIZATION PROGRAM
(SELECTION, TRAINING, TESTING, AND
LICENSING)

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-280-10 OPERATORS MANUAL
FOR TRUCK, UTILITY: CARGO/TROOP
CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-
01-107-7155) (EIC: BBD);M998A1 (2320-01-371-
9577) (EIC:BBN);TRUCK, UTILITY:
CARGO/TROOP CARRIER, 1-1/4 TON, 4X4,

TM 9-2320-364-10 OPERATORS MANUAL
FOR TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN
2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083
SERIES, 5-TON, 6X6, MEDIUM TACTICAL
VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK,
CAR., MTV, M1083 W/WN (NSN 2320-01-360-
1895) (EIC: BT3) W/O WN (2320-01-354-3386)
(EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083
SERIES, 5-TON, 6X6, MEDIUM TACTICAL
VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK,
CAR., MTV, M1083 W/WN (2320-01-360-1895)
(EIC: BT3) W/O WN (2320-01-354-3386) (EIC:
BR2)

551-88M-1367
Back Vehicle with Semitrailer

DANGER

Adhere to all DANGER statements in the vehicle technical manual or related references.

WARNING

Adhere to all WARNING statements in the vehicle technical manual.

CAUTION

Adhere to all CAUTION statements in the vehicle technical manual.

Conditions: In an operational environment, given a mission to transport general cargo. Given a coupled tractor-semitrailer combination with before-operation preventive maintenance performed, hearing protection (as needed), and area to maneuver.

Standards: Back the tractor with semitrailer combination into designated position. Maintain full control during movement without injury to personnel or damage to surroundings or equipment.

Special Condition: No ground guide is used in the performance of this task.

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to transport general cargo.

Note: Use of ground guides is only stressed during training of this task but not during evaluation. Use of vehicle rear view mirrors is an absolute necessity to successful completion of this task.

Performance Steps

1. Prepare to operate the vehicle.
 - a. Adjust the rear-view mirrors to obtain a clear view to both sides of the vehicle.
 - b. Adjust driver's seat as needed.
 - c. Fasten seat belt.
 - d. Start the tractor (refer to TM).
 - e. Check the vehicle instruments for proper readings (refer to TM).
 - f. Ensure that vehicle air system low air pressure warning buzzer has stopped (as applicable).
2. Set the vehicle in motion.
 - a. Check gauges to make sure the vehicle is ready for operation.

- b. Place transmission in Reverse (R).
 - c. Release the parking brake.
 - d. Depress the accelerator.
3. Back the semitrailer to the left.
- a. Turn the tractor's steering wheel to the right until the trailer is headed in the desired direction.
 - b. Turn the tractor's steering wheel to the left to put the tractor in the line of travel as semitrailer.
4. Back the semitrailer to the right.
- a. Turn the tractor's steering wheel to left until the trailer is headed in the desired direction.
 - b. Turn the tractor's steering wheel to the right to put the tractor in line of travel as semitrailer.
5. Back semitrailer without turning (straight-line).
- a. Use vehicle mirrors to aid in making steering adjustments. To keep semitrailer tracking straight, counter sideways movement of semitrailer by steering in opposite direction as needed.
 - b. Stop at designated point.
6. Park the semitrailer.
- a. Align the tractor in a straight line with the semitrailer.
 - b. Back the semitrailer (if required) into the desired position.
 - c. Apply the parking brake.
 - d. Shut off the engine.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Prepared to operate the tractor.	_____	_____
2 Set the vehicle in motion.	_____	_____
3 Backed the semitrailer to the left.	_____	_____
4 Backed the semitrailer to the right.	_____	_____
5 Backed the semitrailer without turning (straight-line).	_____	_____
6 Parked the semitrailer.	_____	_____

Evaluation Guidance: None

References

Required

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-302-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR,
6X4, M915A3 (NSN 2320-01-432-4847)

TM 9-2330-331-14&P OPERATOR'S,
ORGANIZATIONAL, DIRECT SUPPORT, AND
GENERAL SUPPORT

Primary

551-88M-1367
Back Vehicle with Semitrailer

DANGER

Adhere to all DANGER statements in the vehicle technical manual or related references.

WARNING

Adhere to all WARNING statements in the vehicle technical manual.

CAUTION

Adhere to all CAUTION statements in the vehicle technical manual.

Conditions: In an operational environment, given a mission to transport general cargo. Given a coupled tractor-semitrailer combination with before-operation preventive maintenance performed, hearing protection (as needed), and area to maneuver.

Standards: Back the tractor with semitrailer combination into designated position. Maintain full control during movement without injury to personnel or damage to surroundings or equipment.

Special Condition: No ground guide is used in the performance of this task.

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to transport general cargo.

Note: Use of ground guides is only stressed during training of this task but not during evaluation. Use of vehicle rear view mirrors is an absolute necessity to successful completion of this task.

Performance Steps

1. Prepare to operate the vehicle.
 - a. Adjust the rear-view mirrors to obtain a clear view to both sides of the vehicle.
 - b. Adjust driver's seat as needed.
 - c. Fasten seat belt.
 - d. Start the tractor (refer to TM).
 - e. Check the vehicle instruments for proper readings (refer to TM).
 - f. Ensure that vehicle air system low air pressure warning buzzer has stopped (as applicable).
2. Set the vehicle in motion.
 - a. Check gauges to make sure the vehicle is ready for operation.

- b. Place transmission in Reverse (R).
 - c. Release the parking brake.
 - d. Depress the accelerator.
3. Back the semitrailer to the left.
- a. Turn the tractor's steering wheel to the right until the trailer is headed in the desired direction.
 - b. Turn the tractor's steering wheel to the left to put the tractor in the line of travel as semitrailer.
4. Back the semitrailer to the right.
- a. Turn the tractor's steering wheel to left until the trailer is headed in the desired direction.
 - b. Turn the tractor's steering wheel to the right to put the tractor in line of travel as semitrailer.
5. Back semitrailer without turning (straight-line).
- a. Use vehicle mirrors to aid in making steering adjustments. To keep semitrailer tracking straight, counter sideways movement of semitrailer by steering in opposite direction as needed.
 - b. Stop at designated point.
6. Park the semitrailer.
- a. Align the tractor in a straight line with the semitrailer.
 - b. Back the semitrailer (if required) into the desired position.
 - c. Apply the parking brake.
 - d. Shut off the engine.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Prepared to operate the tractor.	_____	_____
2 Set the vehicle in motion.	_____	_____
3 Backed the semitrailer to the left.	_____	_____
4 Backed the semitrailer to the right.	_____	_____
5 Backed the semitrailer without turning (straight-line).	_____	_____
6 Parked the semitrailer.	_____	_____

Evaluation Guidance: None

References**Required**

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

Primary

TM 9-2320-302-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR,
6X4, M915A3 (NSN 2320-01-432-4847)

TM 9-2330-331-14&P OPERATOR'S,
ORGANIZATIONAL, DIRECT SUPPORT, AND
GENERAL SUPPORT

551-88M-1384

Perform as Wheeled Vehicle Ground Guide Day or Night

Conditions: During daylight and darkness, given a flashlight, assistant ground guide(s), vehicle with driver, an area to maneuver, and hearing protection as needed.

Standards: You are to position yourself and successfully portray each visual hand signal that correctly represents the intended vehicle movement. You are to influence vehicular movement in indicating visual signals of attention to include mount, starting the engine, move forward, slow down, right or left turn, move in reverse, open up, close up, increase speed, halt of stop, stop engine, and dismount. You are to safely employ the visual hand signals for nighttime using a flashlight. There are to be no injuries to personnel or damage to vehicle or surroundings.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is moving into a new tactical company location and all vehicles must be guided into position.

Note: None

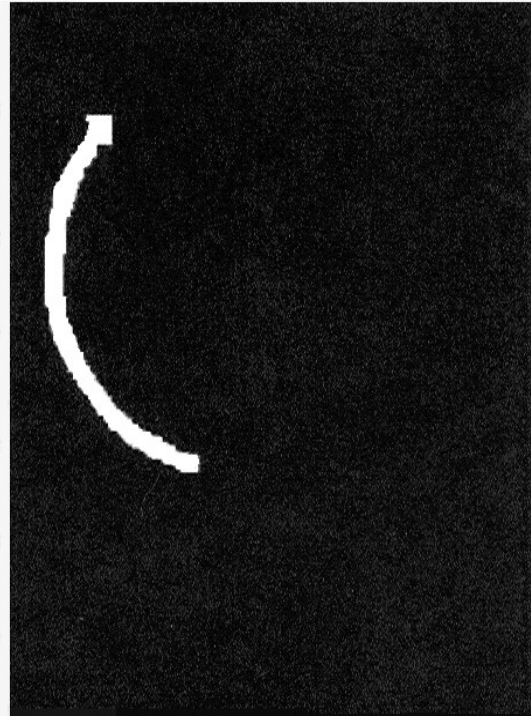
Performance Steps

Mount

Daytime



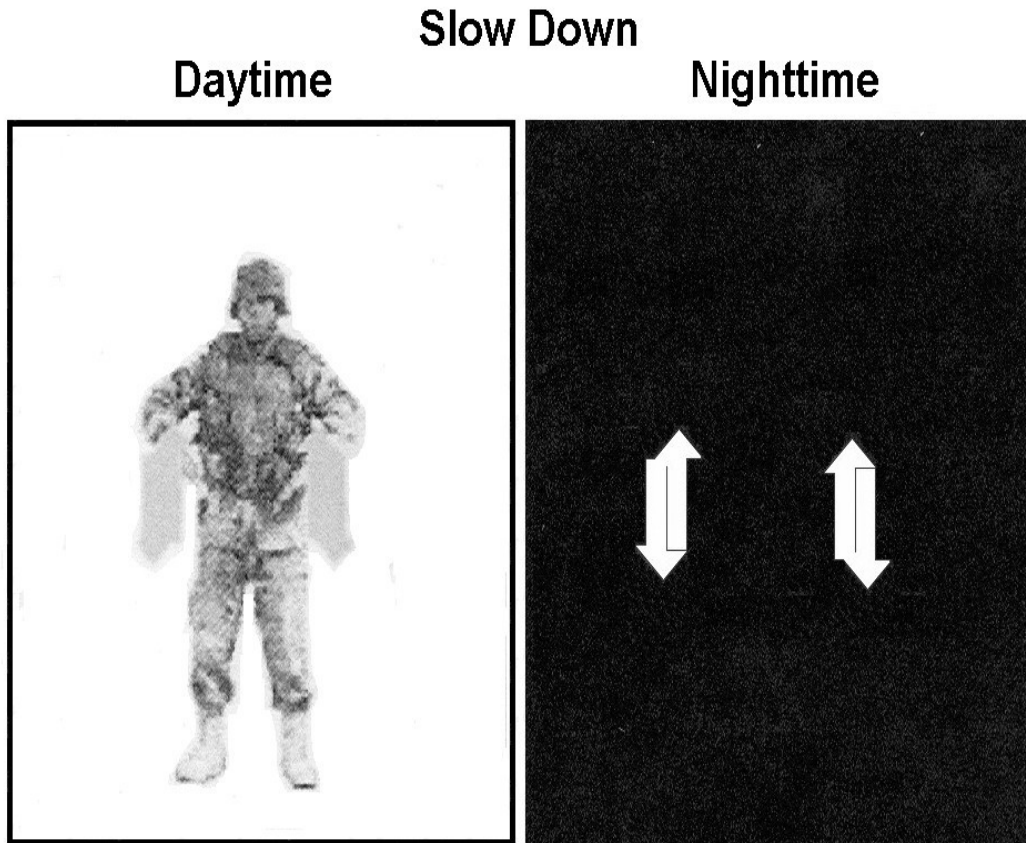
Nighttime



To give this signal, raise the right arm laterally with the elbow locked, fingers and thumb extended and joined, palm facing up. Raise the arm until the hand is higher than the head. Repeat this all until all personnel are mounted.

Figure 3-3

Mount



To give this signal, extend both arms horizontally bending at the elbow bringing both hands in front of the body at chest level, fingers and thumbs extended and joined, palms facing down. Lower both hands down to waist level in a pushing motion.

Figure 3-4

Slow Down

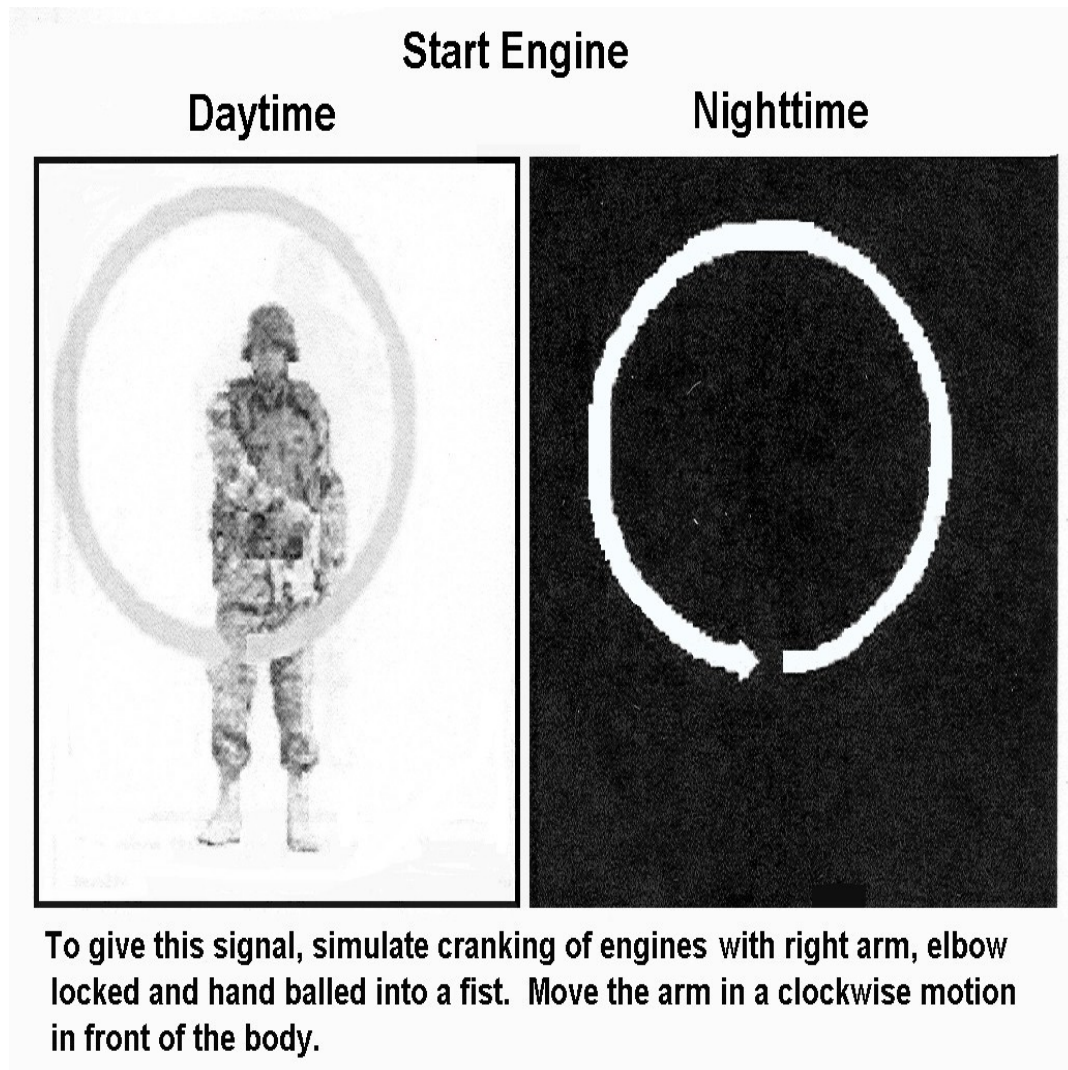


Figure 3-2

Start Engines

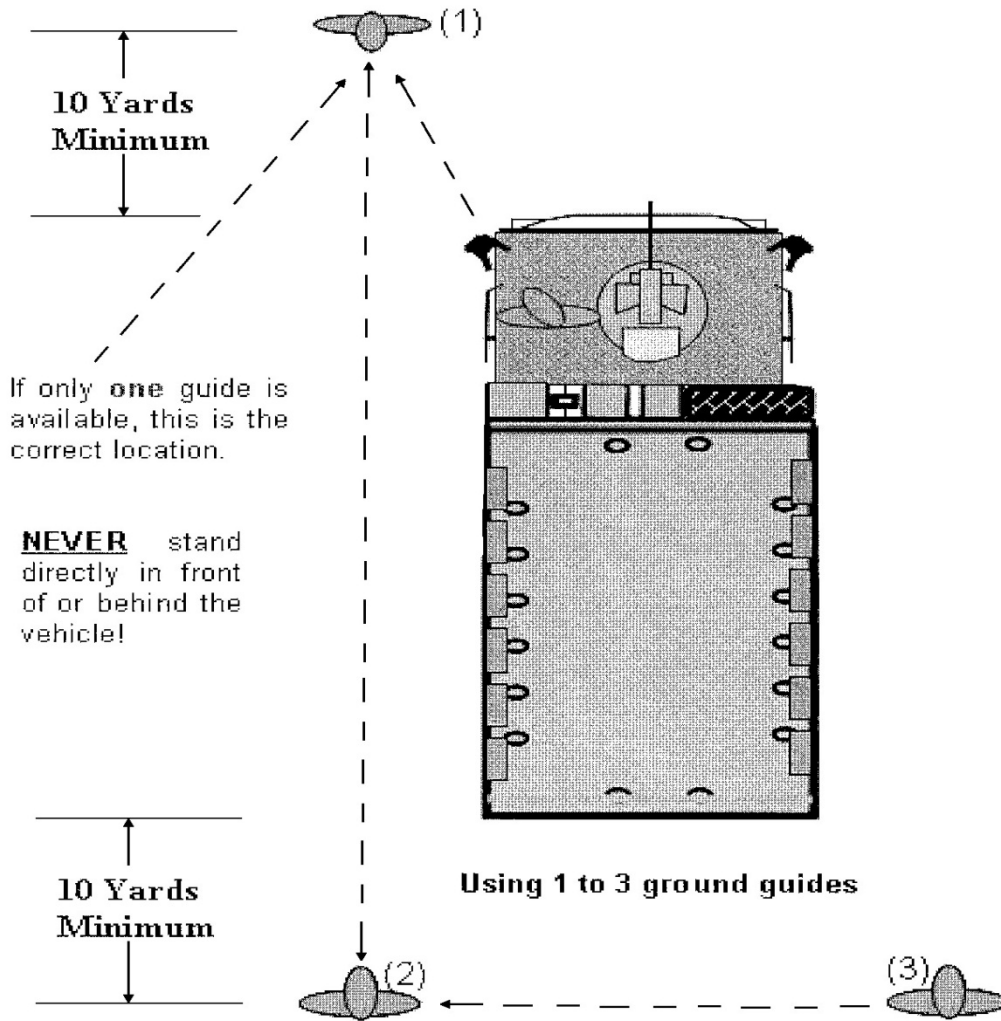
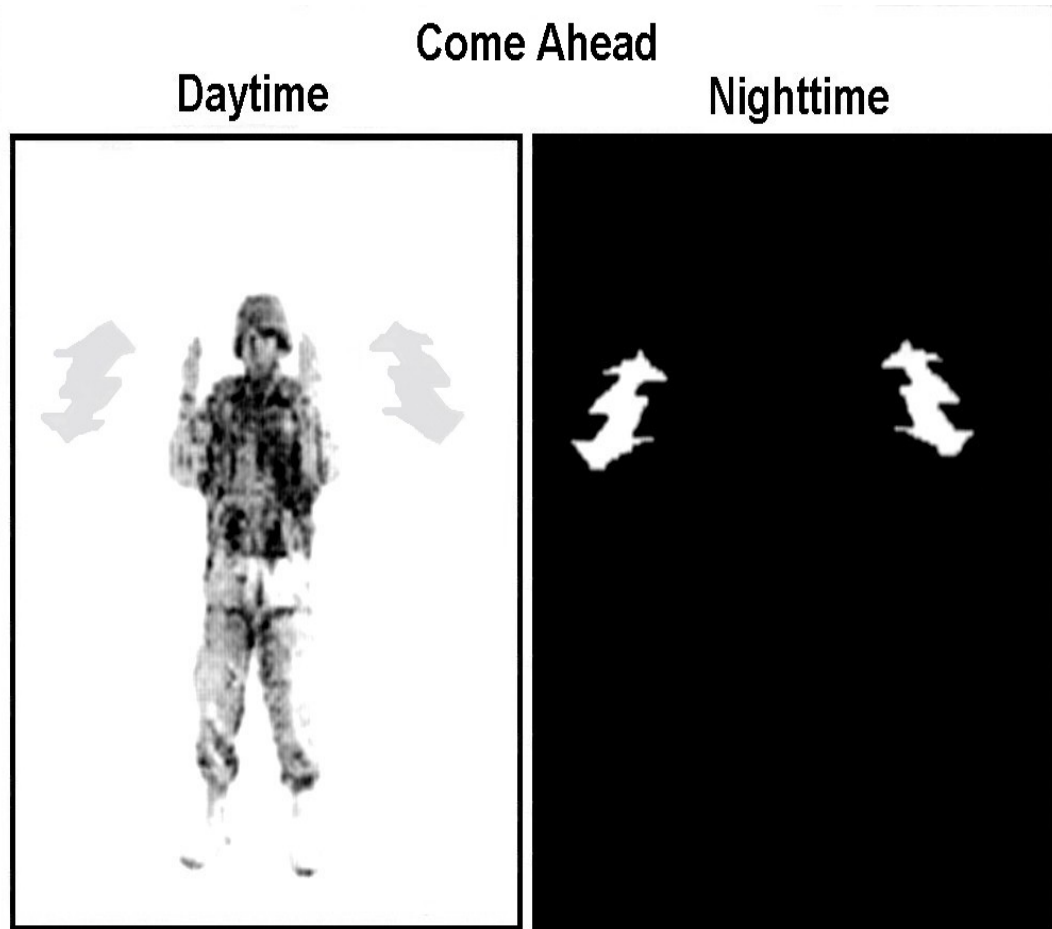


Figure 3-1

Ground Guides



To give this signal, start by raising both arms extended in front of the body, fingers and thumbs extended and joined, palms facing up. Bend at the elbow bringing the palms toward the face.

Figure 3-19

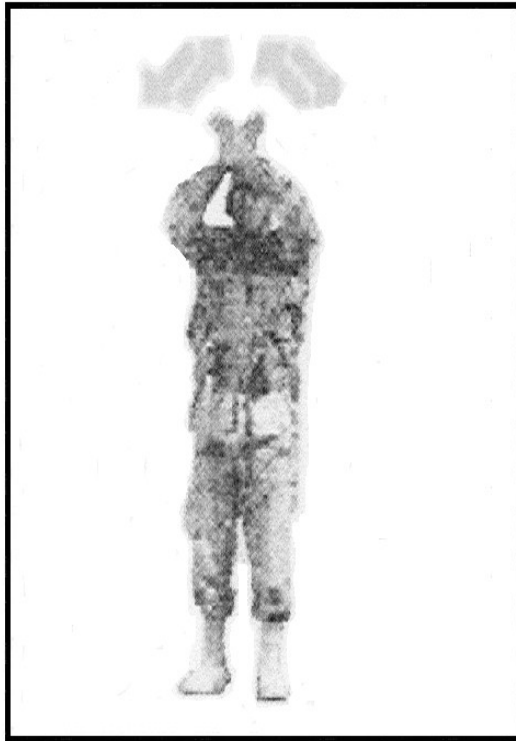
Come Ahead

1. Make preparations to ground guide a wheeled vehicle.
 - a. Ensure that a 360-degree walk around of the vehicle is done to ensure there are no obstructions that will inhibit the vehicle's movement (applies to crew member, guide, or the driver).
 - b. Coordinate with driver to ensure the following:
 - (1) That only one person gives hand signals to the driver (if using more than one ground guide).
 - (2) For the driver to immediately stop vehicle if the driver loses sight of the ground guide or flashlight (at night).
 - (3) If hand signals are not understood, the vehicle must stop and signals must be clarified.
 - (4) To follow the flashlight movements (at night) until the light goes out.
 - c. Determine best line-of-sight location for ground guiding.

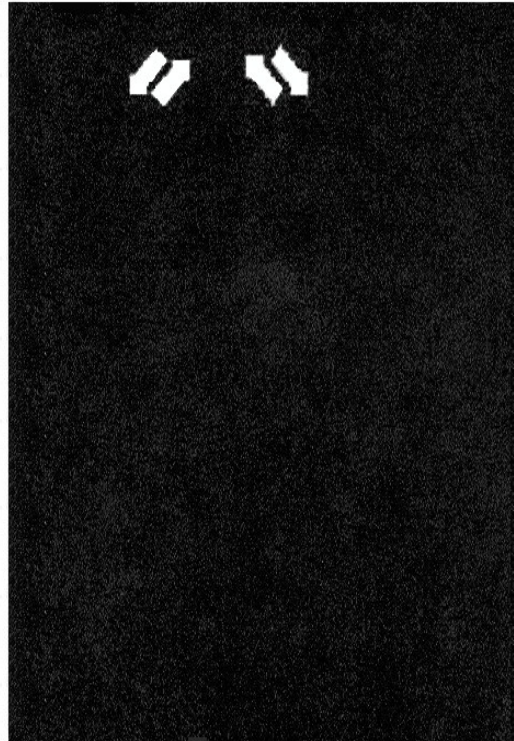
- d. Does not position as ground guide, directly in front of or behind vehicle.
 - e. Ensure driver knows exact position of all ground guides before movement.
 - f. Ensure the driver knows to sound horn (if tactically permitted) before backing.
 - g. Use a blue-screened flashlight to guide vehicle at night.
 - h. Ensure that vehicle does NOT open either vehicle door while backing vehicle.
2. Reconnoiter the area the vehicle will be traveling through.
- a. Ensure area of travel is large enough to accommodate size of vehicle.
 - b. Ensure path of travel is free of obstacles that would impede movement of both ground guide and vehicle such as:
 - (1) Deep gullies.
 - (2) Fallen trees.
 - (3) Submerged areas (unless known to support vehicle travel).
 - (4) Overhead obstructions.
 - (5) Steep downgrades or upgrades.
 - (6) Restricted areas.
 - c. Inform driver if any obstacles that must be negotiated or any operational precautions (use 4-wheel drive or low range) to take before movement.
3. Employ visual hand signals to guide vehicle movement.

As You Were

Daytime



Nighttime



To give this signal, raise both arms and cross wrists above the head, fingers and thumbs extended and joined, palms facing forward. Move the hands from left to right bending at the wrist only.

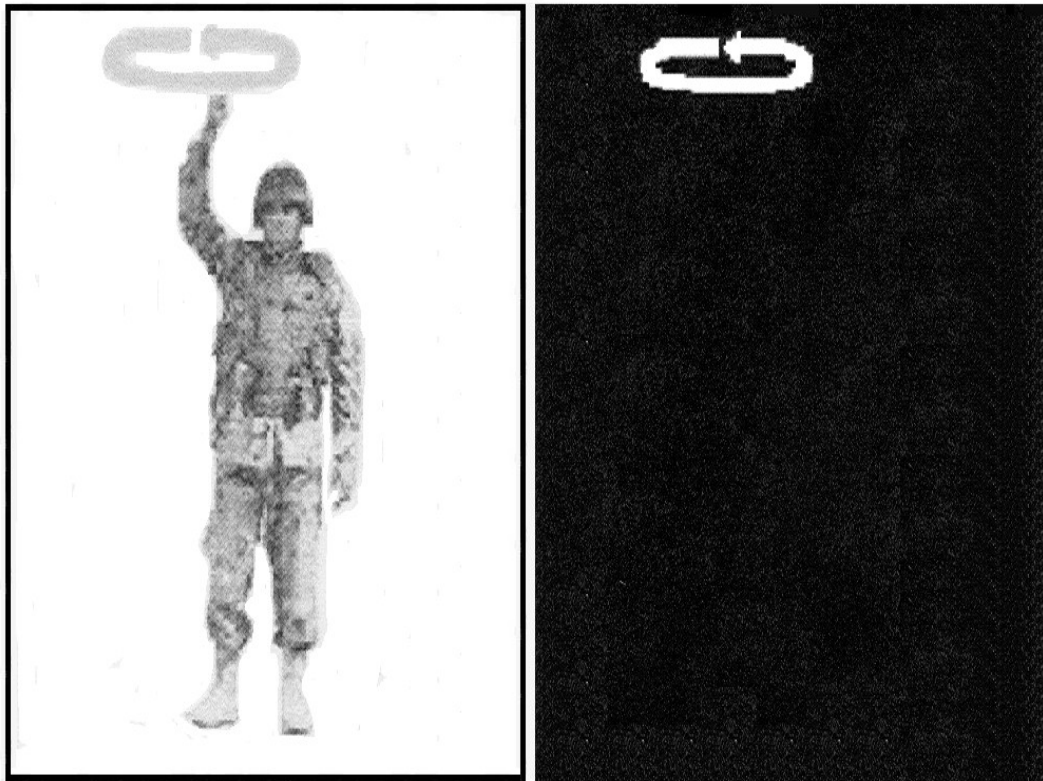
Figure 3-5

As You Were

Assemble

Daytime

Nighttime



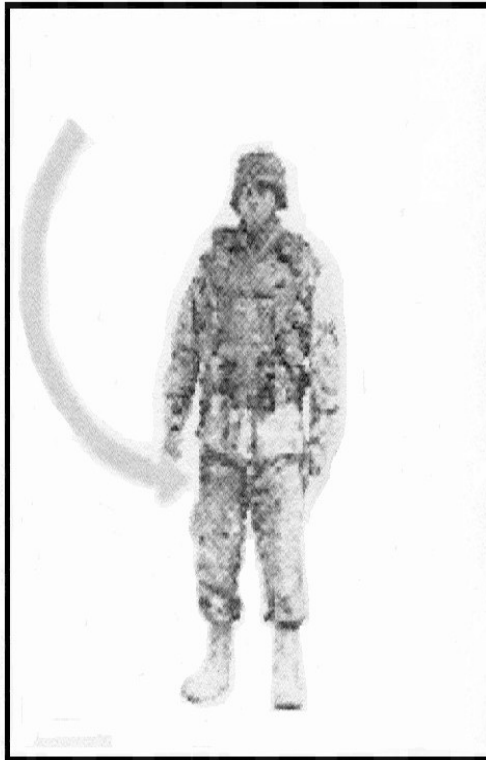
Raise the right arm laterally above the head with elbow locked, fingers and thumb extended and joined, palm facing forward. Rotate the arm in a clockwise motion above the head.

Figure 3-6

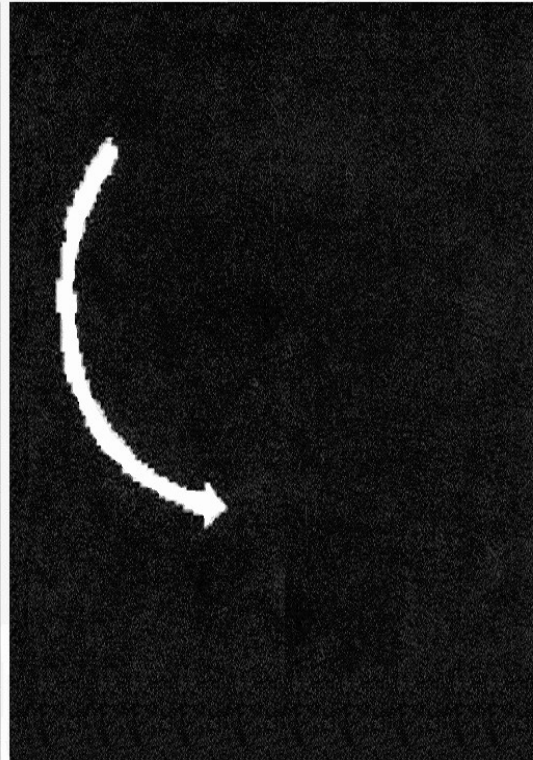
Assemble

Dismount

Daytime



Nighttime



To give this signal, start with the right arm raised laterally above the head, elbow locked, fingers and thumb extended and joined, palm facing downward. Lower the arm in a downward motion.

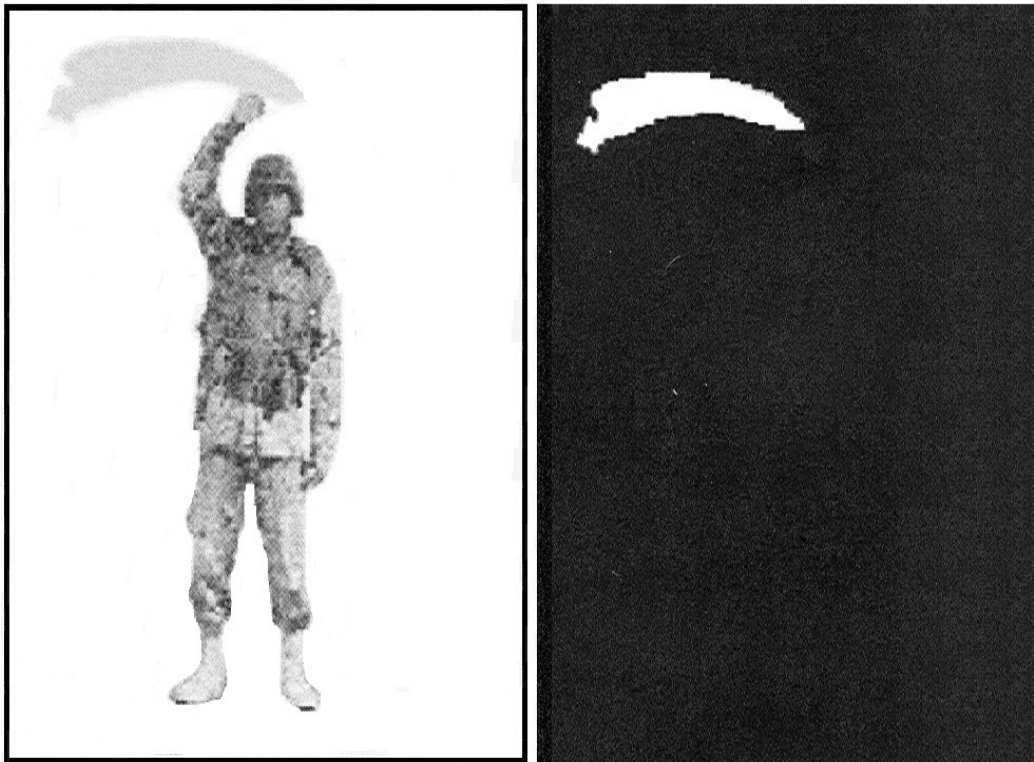
Figure 3-7

Dismount

Attention

Daytime

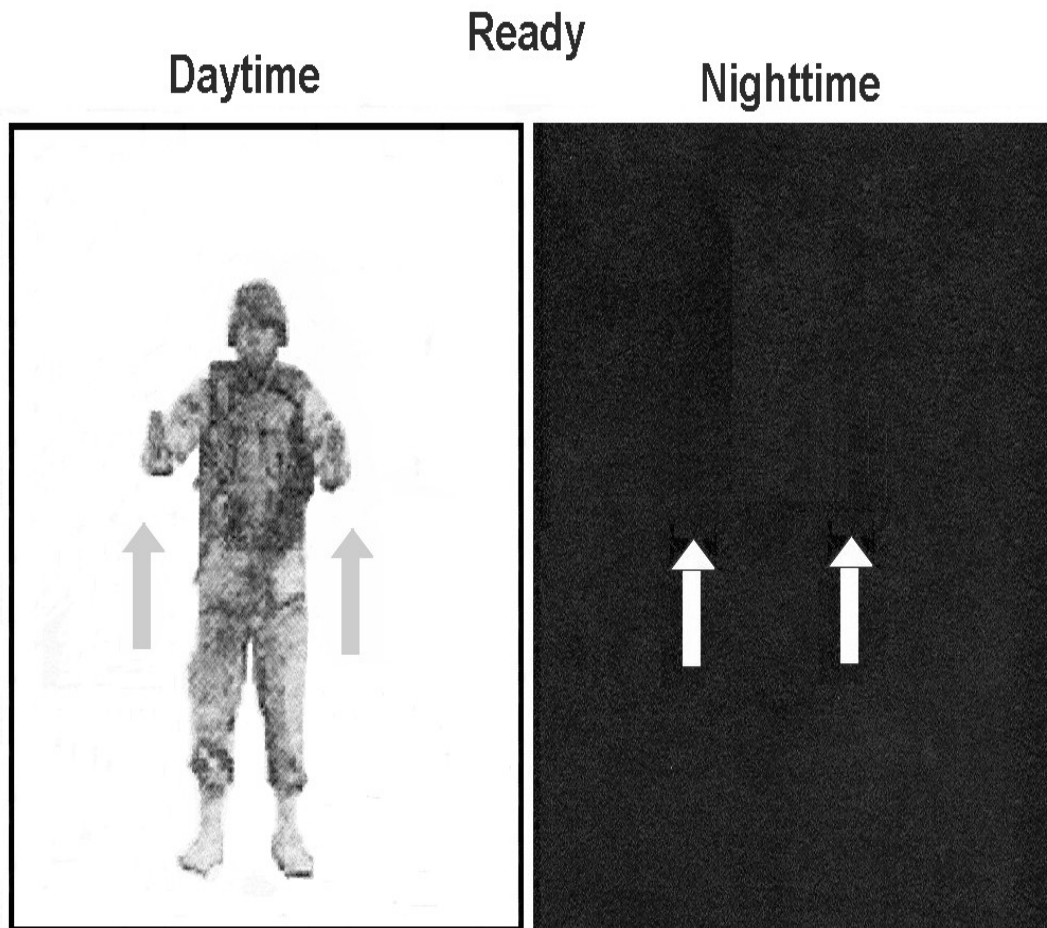
Nighttime



To give this signal, start by raising the right arm laterally above shoulder level, elbow locked, fingers and thumb extended and joined, palms facing forward. Bending at the elbow, wave your hand from left to right.

Figure 3-8

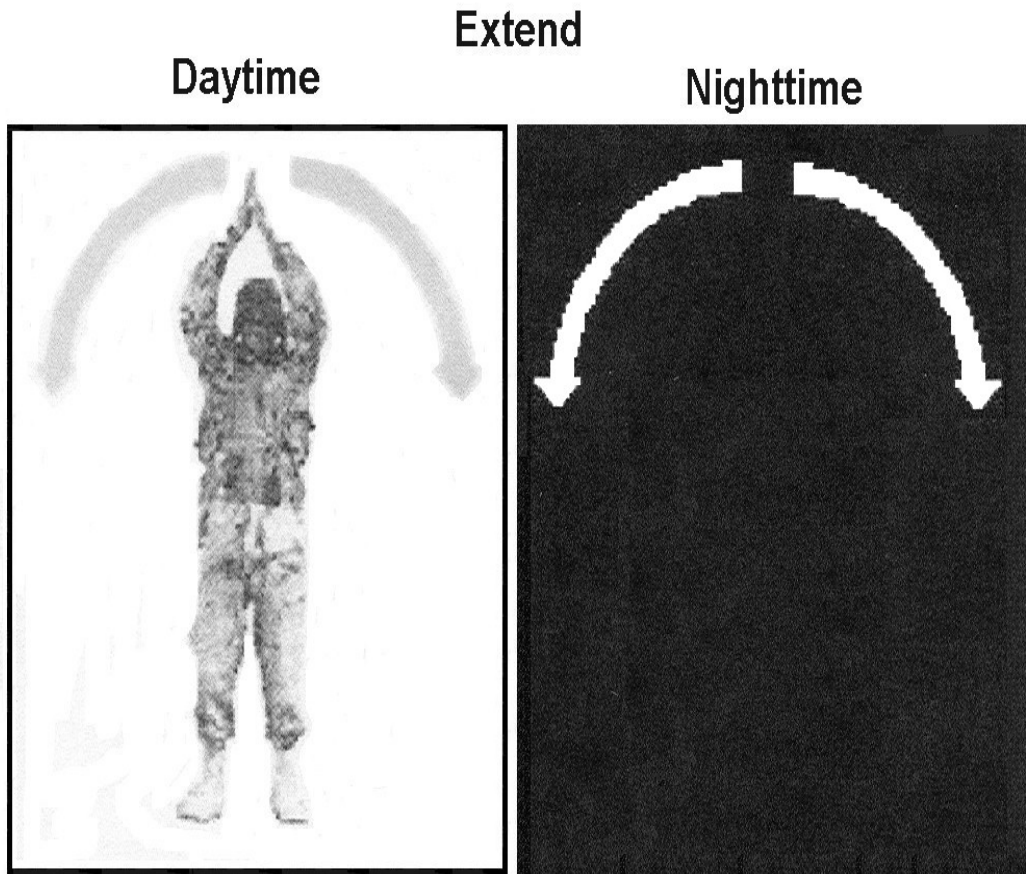
Attention



To give this signal, extend both arms in front of the body, chest level, elbows locked, fingers extended and joined, palms facing forward.

Figure 3-9

Ready



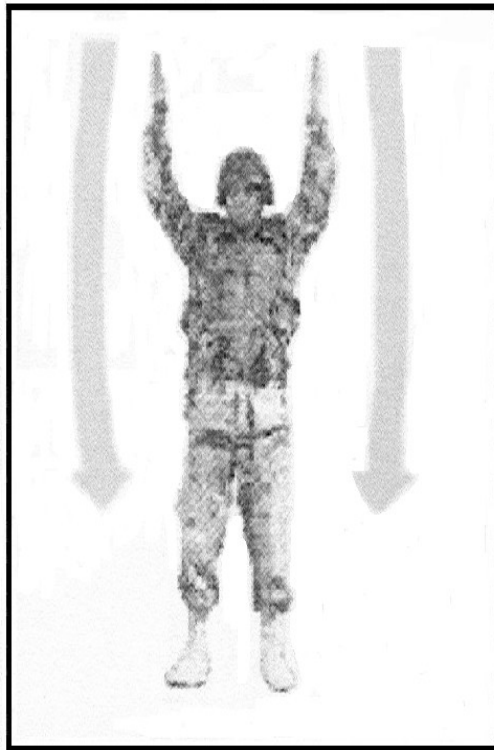
To give this signal, start with both arms above the head, palms together. Keeping the arms straight, lower them laterally keeping the fingers and thumbs extended and joined, palms facing up.

Figure 3-10

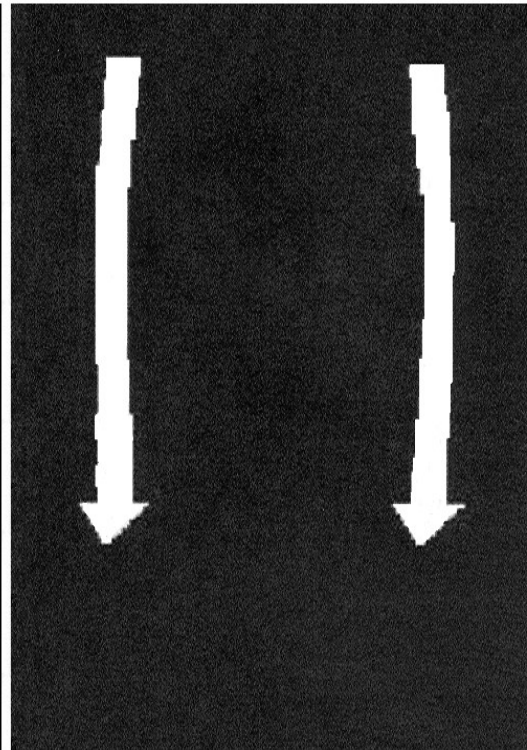
Extend

Close Up and Stop

Daytime



Nighttime



To give this signal, start with the arms extended above the head, elbows locked, fingers and thumb extended and joined, palms facing inward. Slowly bring the arms down in front of the body.

Figure 3-11

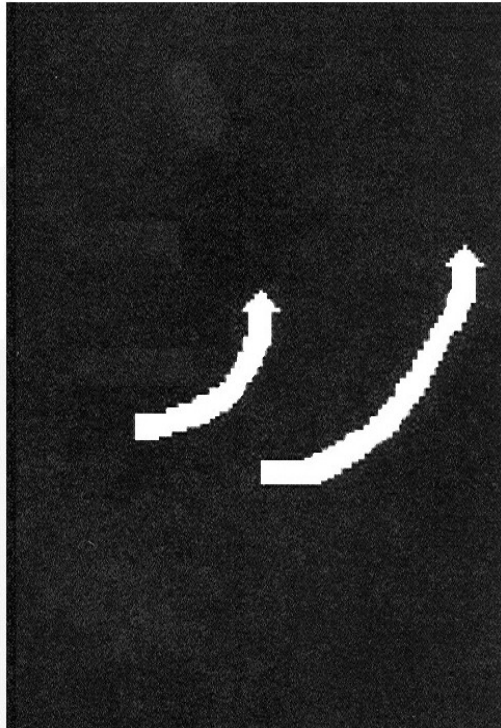
Close Up

By the Flank

Daytime



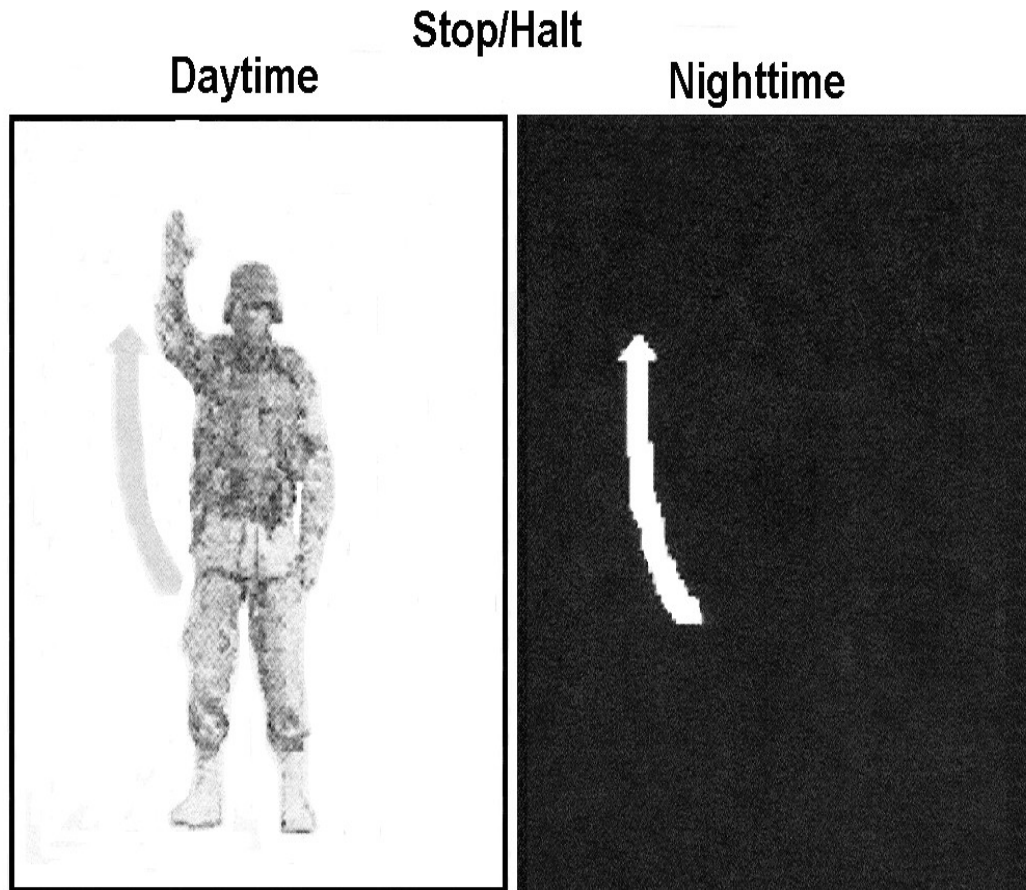
Nighttime



To give this signal, extend arms in the direction you intend for the vehicle to come along side of. Raise the arm on the flank side horizontally with elbow locked, fingers and thumb extended and joined, palm facing outward.

Figure 3-12

By the Flank



To give this signal, start by raising the right arm in front of the body, elbow locked, fingers and thumb extended and joined, palms facing forward.

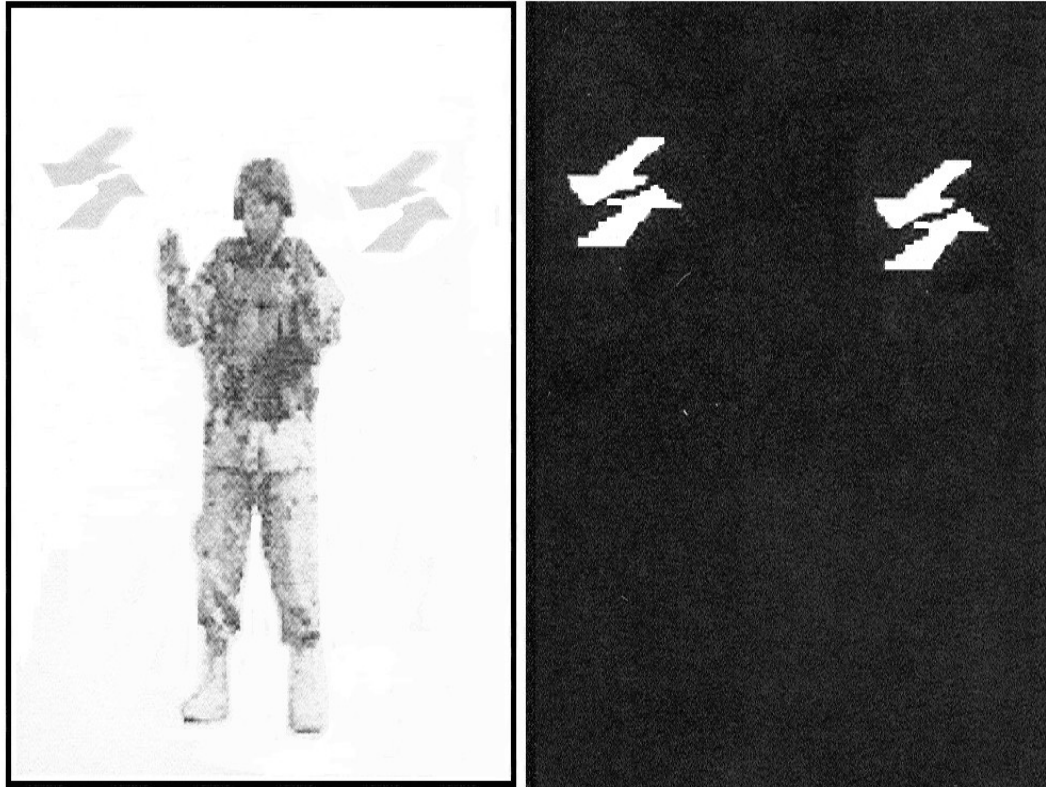
Figure 3-13

Stop/Halt

Move in Reverse

Daytime

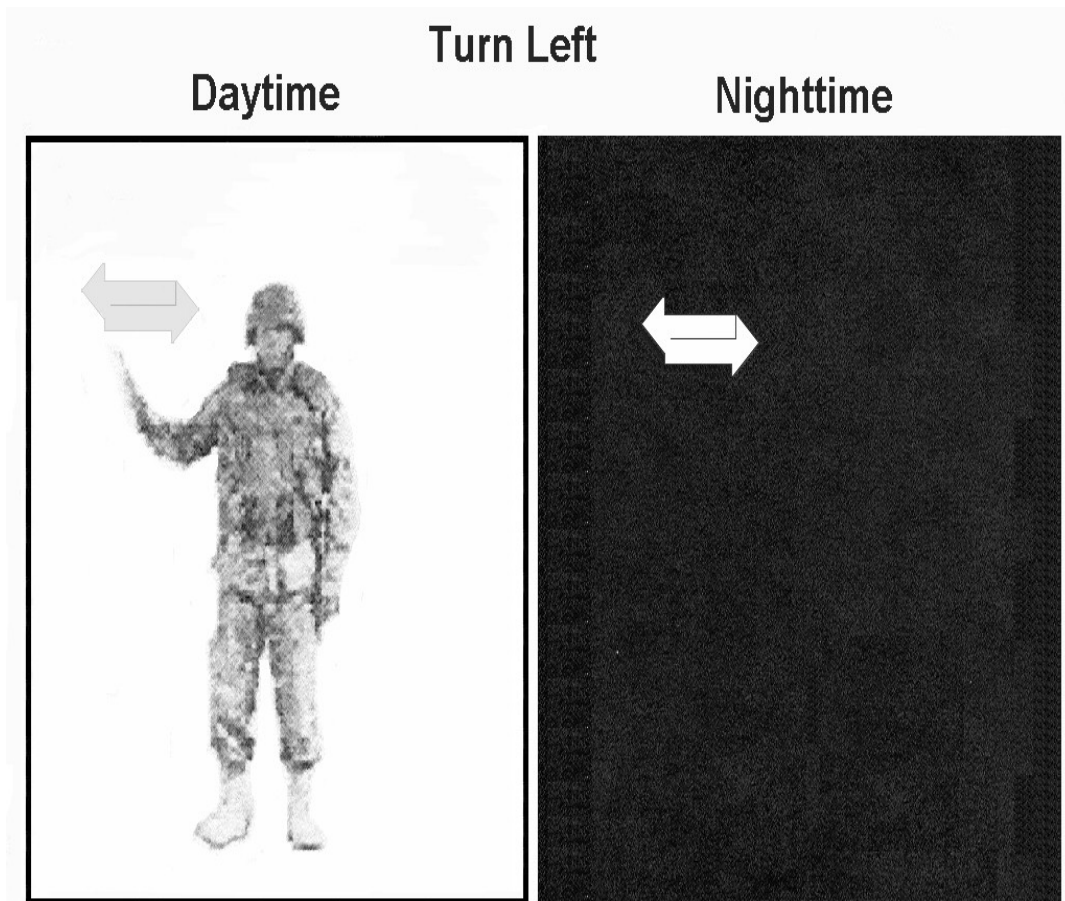
Nighttime



To give this signal, start by raising both hands, shoulder level, fingers and thumbs extended and joined, palms facing forward. Extend the arms outward in front of the body in a pushing motion, back and forth.

Figure 3-14

Move in Reverse



To give this signal, use the right arm. Start by raising the upper arm horizontally and parallel to the ground, fingers and thumb extended and joined. Keeping the upper arm horizontal, bend at the elbow.

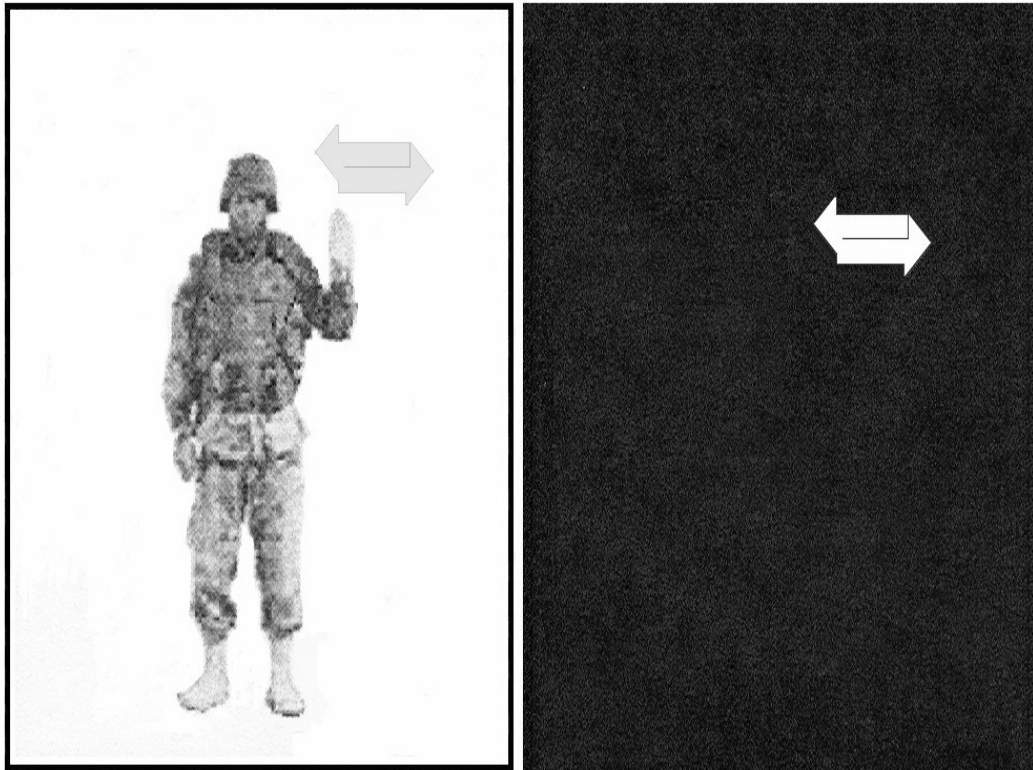
Figure 3-15

Left Turn

Turn Right

Daytime

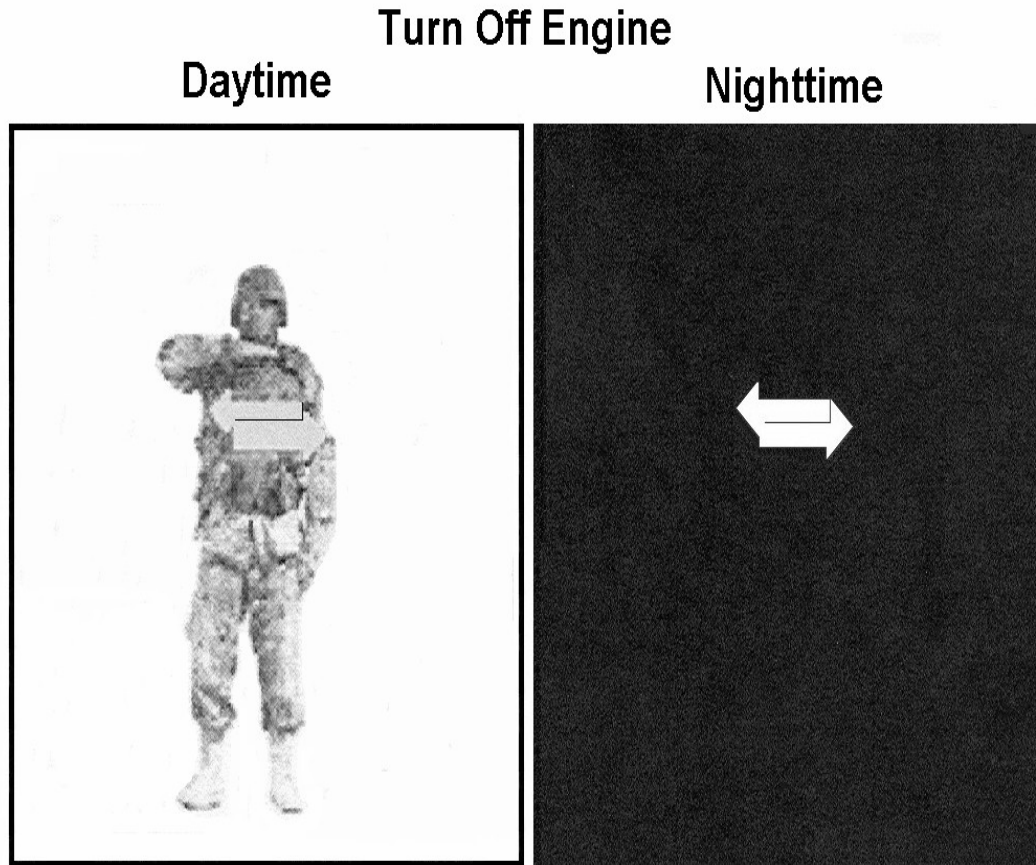
Nighttime



To give this signal, use the left arm. Start by raising the upper arm horizontally and parallel to the ground, fingers and thumb extended and joined. Keep the upper arm horizontal, bend it at the elbow.

Figure 3-16

Right Turn



To give this signal, start with the right arm extended, parallel to the ground, fingers and thumb extended and joined, palm facing down. Bend the arm at the elbow, placing the hand below the chin.

Figure 3-17

Turn Off Engine

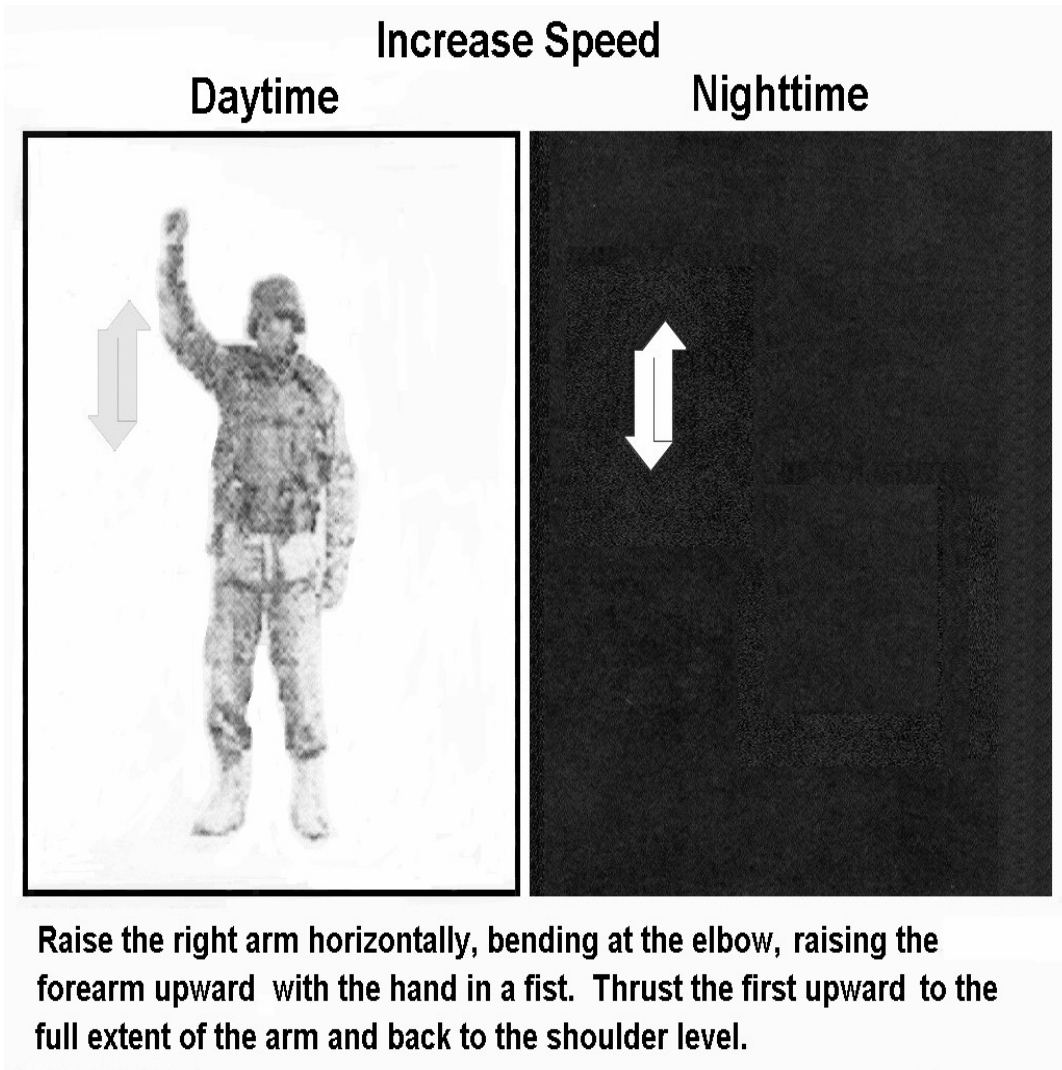


Figure 3-18

Increase speed

Evaluation Preparation:

Setup: Give the Soldier a vehicle and driver, BII, and designated route during both day and night.

Brief Soldier: Tell the Soldier to ground guide the vehicle into a designated area during day and night.

Performance Measures

	GO	NO GO
1 Prepared to ground guide a wheeled vehicle.	_____	_____
2 Reconnoitered the area the vehicle will be traveling through.	_____	_____
3 Employed visual hand signals to guide vehicle 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 any performance measure is failed, tell the Soldier what was done wrong and how to do it correctly.

References

Required

FM 21-60 Visual Signals

Primary

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

551-88M-1600

Operate the Movement Tracking System

Conditions: Given a tactical wheeled vehicle, equipped with a mounted Movement Tracking System (MTS) mobile unit, DAAB 15-99-D-0014, mission traffic information, and target vehicle(s) with which to communicate. **Special Conditions:** The target MTS with which to send message traffic to may either be another MTS Mobile Unit or an MTS Control Station, set up to monitor and provide traffic data.

Standards: Power up the MTS mobile unit (to include PLGR if installed using Legacy System), enter the tactical net, send and receive digital message(s), exit the net, and power down the unit.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been mobilized into a theater of operations.

Note: System installation kits (A-kits) should already be installed on vehicle platform prior to start of this task.

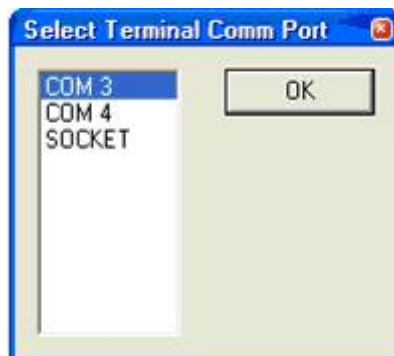
Performance Steps



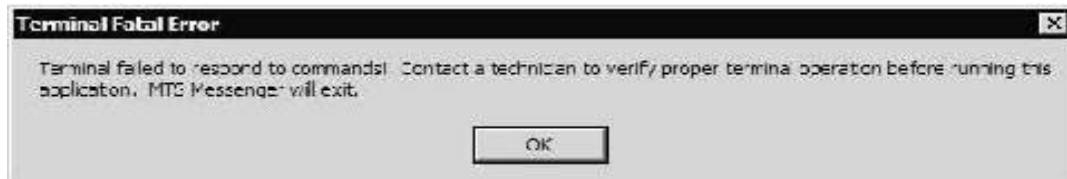
Multiple Instances of MTS Messenger running



Logging into Network



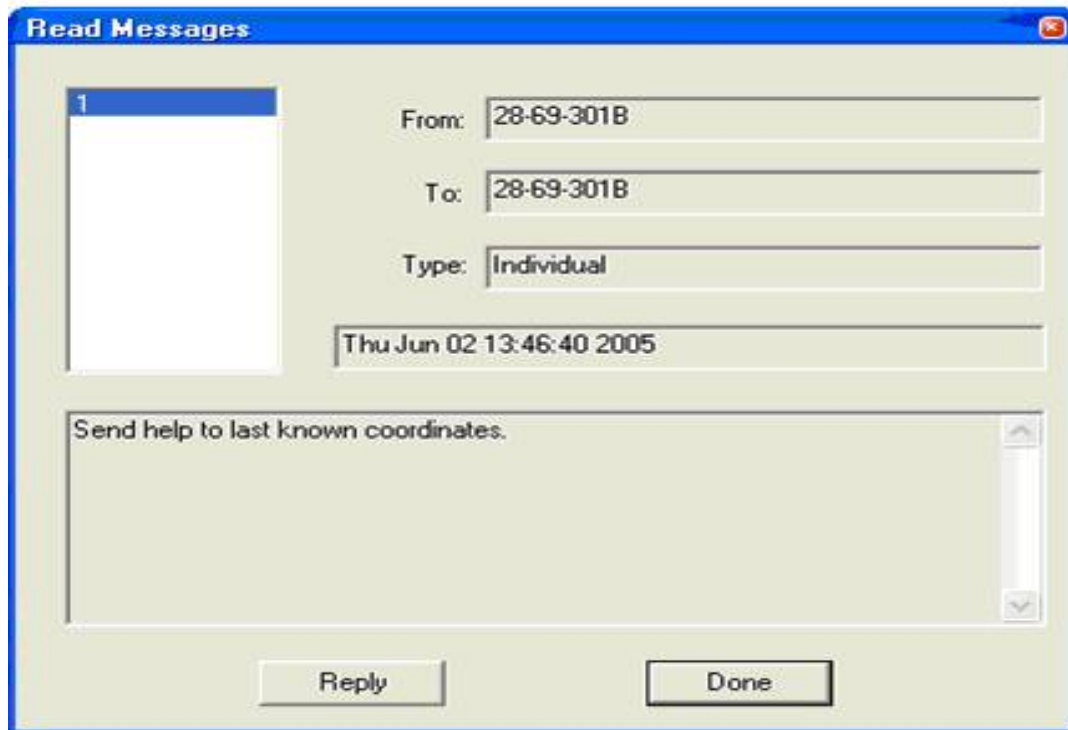
Choosing a COM port



Response Failure error message



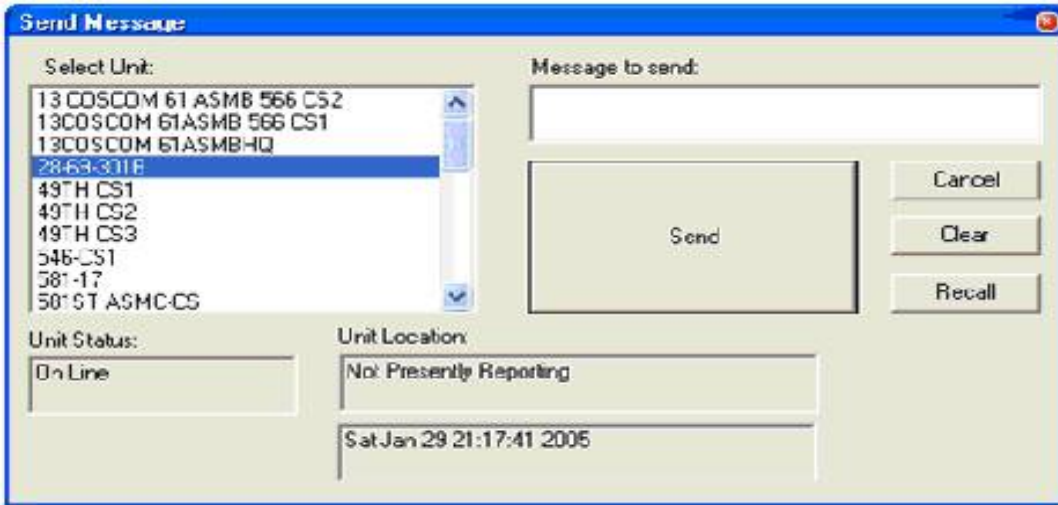
Open to Read Messages menu



Read Messages menu



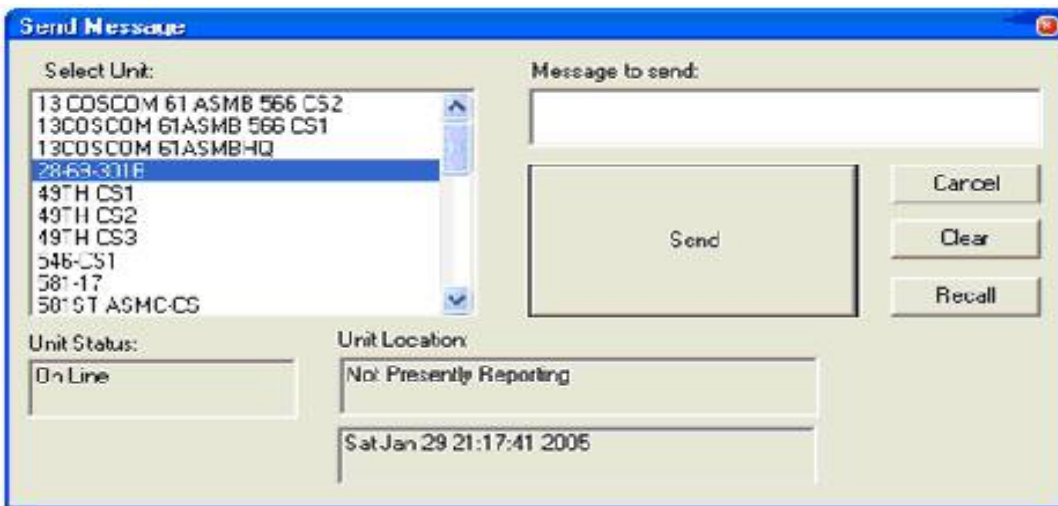
Send messages menu



Choosing a recipient for sending a message



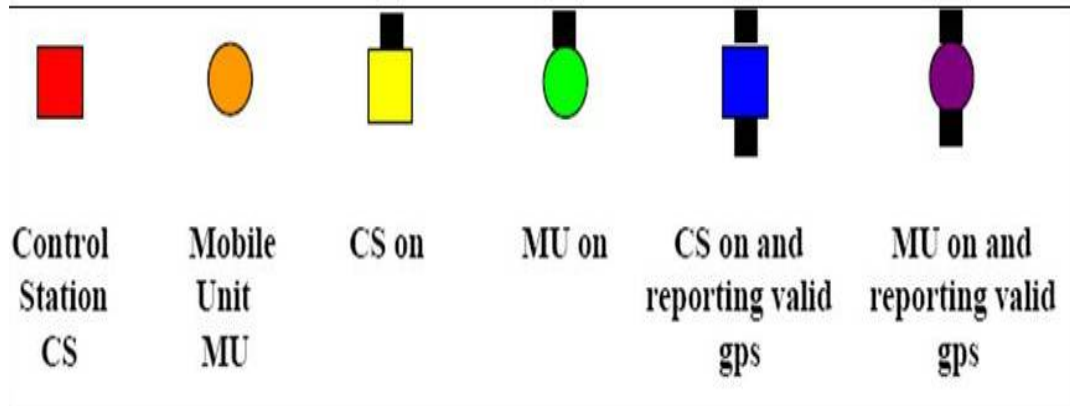
No messages received message



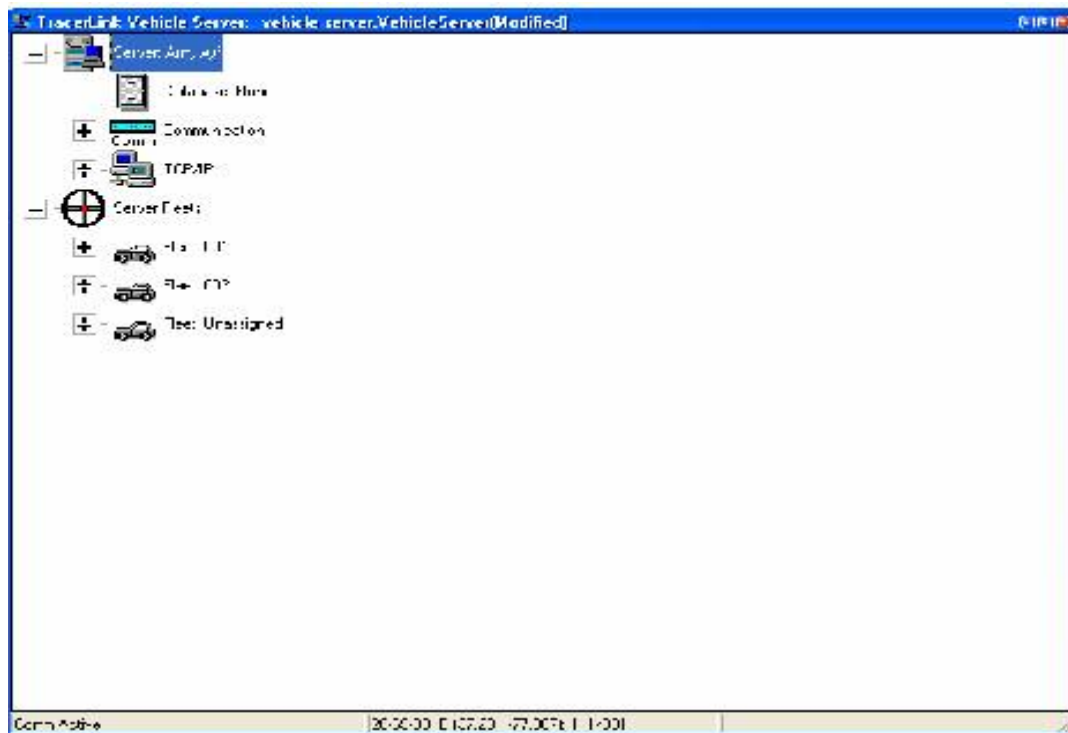
Choosing a recipient menu



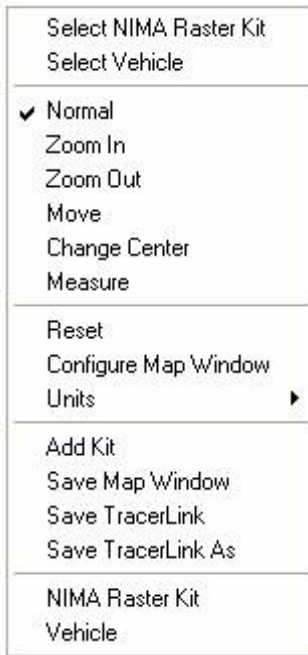
TracerLink Icon to open program



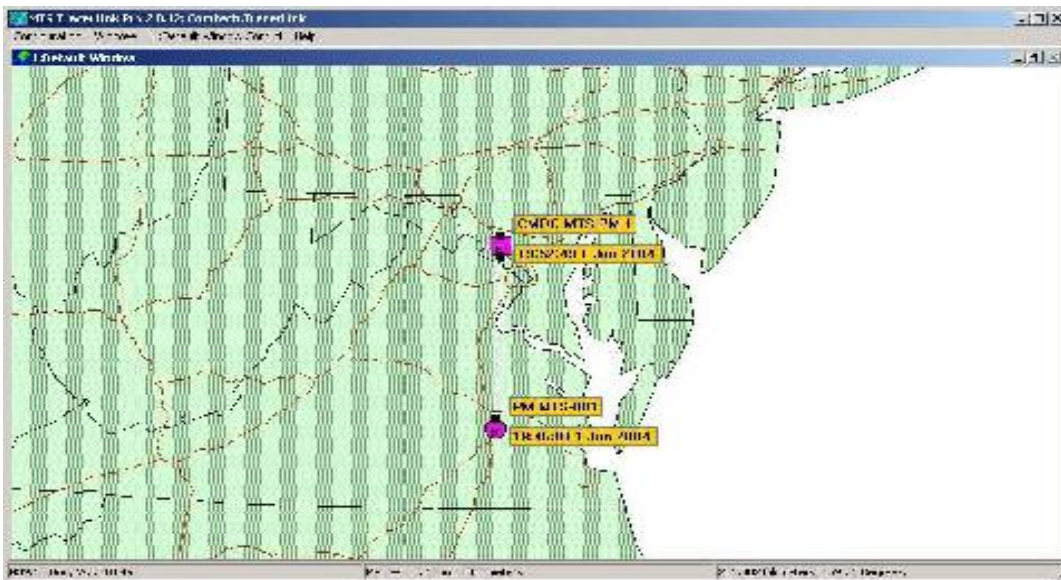
TracerLink Map symbols



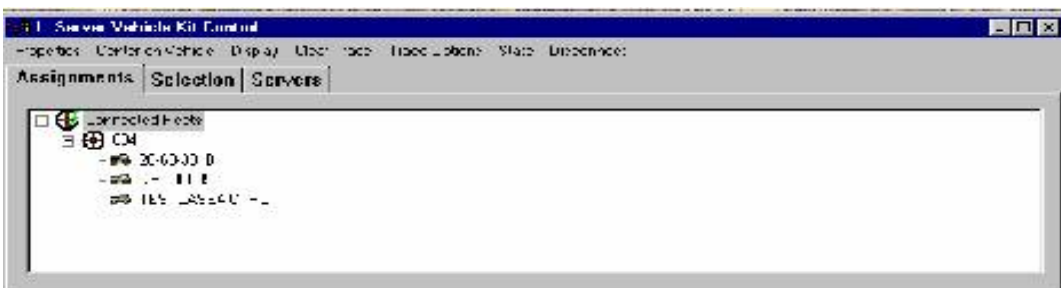
Tracerlink vehicle server window



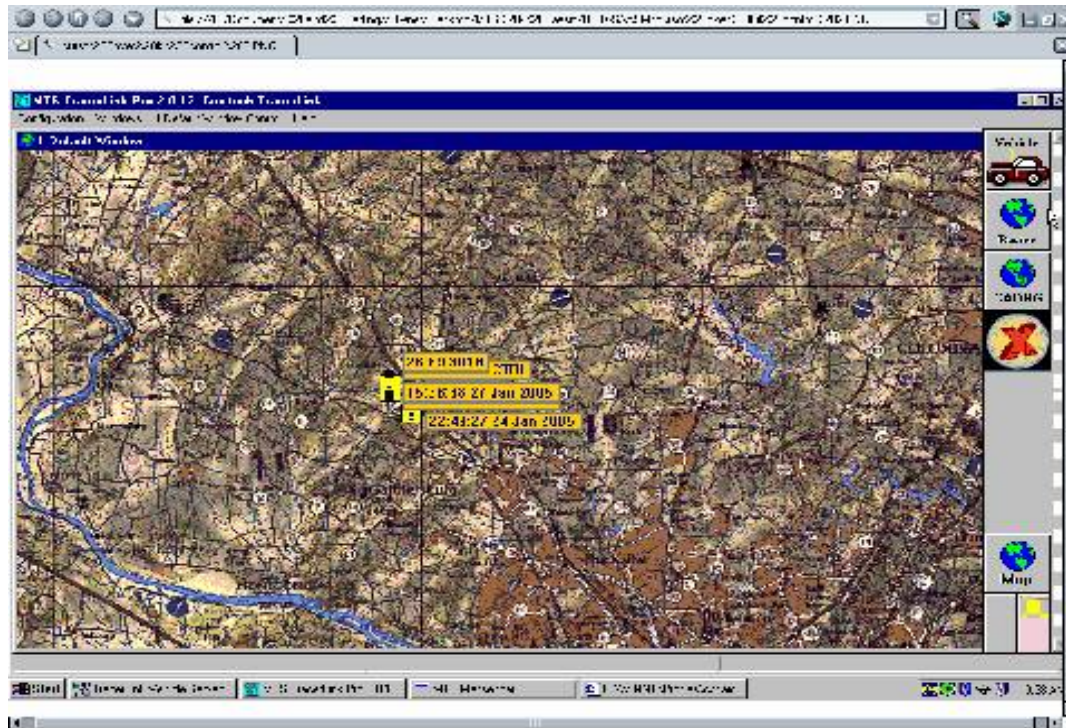
Tracerlink right click menu



Tracerlink Map Viewer



Server Vehicle Kit Control Window



Server Vehicle Kit Bar Menu (on the right)

WARNING

WARNINGS:

A driver should never operate MTS equipment while the vehicle is moving. Only a passenger should operate the components in a moving vehicle. Driver operation of the MTS computer in a moving vehicle could cause an accident injuring the driver and passenger(s) as well as damaging the vehicle.

Use of engineer tape (or some other medium) to mark the equipment's location is advised, if the equipment appears to affect a soldier's normal interaction with the vehicle.

The ruggedized computer (v2) has a small 10.5" screen and keyboard. the screen can cause eyestrain if used for extended periods without breaks. Soldiers should only use the system when necessary. The function of the computer is to send operational messages or view maps and not for playing games or sending personal messages.

The term "low voltage" can be misleading. Voltage measures as low as 50 volts may cause death under certain conditions. Failure to power the control station from a grounded 110/220 ac outlet may result in serious injury (see section on control station installation). Never touch an exposed wire. if a piece of equipment appears damaged, do not touch it. inform your system administrator, sustainment automation maintenance officer (cssamo), or a comtech field service representative (fsr) immediately. A FSR will need to repair/replace the system.

Be careful not to have fingers under the bracket while attaching to the mount. Hold transceiver on the sides with fingers spread as if you were holding a hot dinner plate.

1. Conduct V2 configuration power on procedures.

- a. Power on the V2 control box. Flip the power switch to ON in order to power up the unit. The LED light on the control box will illuminate green. The LEDs on the satellite transceiver, if connected, will also illuminate.

- b. Power on the ruggedized computer.

- (1) The computer will power on when the control box switch is on. Wait for the computer to load/initialize software.

- (2) When prompted, press CTRL-ALT-DEL to login. If the system does not have a keyboard, users will follow this function on the virtual keyboard loaded on the tablet.

- (3) A security window similar to the one below will appear. Read over the text in the window, and click OK with agreement to the terms.

- (4) Enter username and password, and then click OK. The Windows desktop contains the MTS Messenger and TracerLink icons. MTS Messenger will automatically start. If it does not, start the MTS Messenger software manually by double clicking on the MTS Messenger icon.

2. Start MTS Messenger.

NOTE:

Multiple instances of the MTS Messenger application should not be open at the same time. The following error message will display if the user opens MTS Messenger while it is already open and running. The user should click OK. This will close the second instance of MTS Messenger.

The computer should open MTS Messenger automatically. However, if Messenger does not start, and a Comtech Mobile Datacom Field Service Representative (FSR) is not available, follow the steps listed below.

- a. To start MTS Messenger double-click the MTS Messenger icon located on the desktop.

- b. Enter the bumper number (logging into the network). The bumper number can be up to 32 characters long including letters, numbers, spaces, and dashes (-).

- c. If connected to a MT 2012 transceiver, the system will automatically find the COM ports. If connected to a MT 2011 transceiver, users will be asked to select the Terminal COM Port. V2 users select COM 3 (J4).

- d. V2 users select COM 1 (J3). After successfully starting MTS Messenger, the standard display screen also known as the command reference will appear.

- e. Ensure all status blocks are displayed at bottom of screen.

- f. Wait for network registration. The bumper number and transceiver ID will appear in status block 4 at the bottom when network registration completes.

NOTE: The MTS Messenger status blocks, found on the bottom of the display screen, are numbered from left to right starting with block one (1).

1. Status block one (1) displays the communication between the transceiver and the computer. When the number in this queue reaches 40, restart MTS Messenger to clear the queue.

2. Status block two (2) contains the incoming messages queue, which displays the number of unread messages.
3. Status block three (3) contains MIL GPS status. A FOM (Figure of Merit) displays as “MILGPS: 1 to 5 degrees when the SAASM receives a valid GPS Fix. If the crypto keys are cleared or zeroed, a unit will still receive commercial grade GPS position, but ERROR will appear. To check FOM, simply go to the standard command reference through the Help menu. A FOM of five (5) or below will allow the MTS to report the unit’s position. If using a MT2011 transceiver, GPS status: PLGR 1 – 5 displays.
4. Status block four (4) contains the bumper number (BN) and the transceiver ID (XCVR). The BN will appear after the network registration response from the ground station has been received, about 5 to 10 minutes.
5. Status block five (5) contains the time in Universal Time Code (UTC).
 - g. Ensure that all three programs; MTS Messenger, TracerLink, and Map Viewer are running on the laptop for the MTS to function.

3. Read messages.

NOTE: When the incoming messages queue indicator in status block two (2) contains unread messages, the bottom bar will turn YELLOW until all messages are read. If the bottom bar turns RED, a distress signal has been sent out by another unit and is in the message queue.

- a. Select Read Messages, then Read Current, Press F1, or press ALT and R sequentially to read messages.
 - b. In the Read Messages screen, click the message number you wish to read. It will default to the most recent message received. The text of the message will appear in the Message Text Field. Click the Reply button to return a message to the sender or the Done button to go back to the main window. Use the up and down arrow keys to move between messages.

NOTE: If you have not received messages, (for example, right after you started MTS Messenger) and you selected Read Messages, Read Current via the pull down menu, pressing F1, or by pressing the ALT and R keys sequentially, this dialog box will display.

4. Send messages.
 - a. To an individual unit.
 - (1) Select the send messages pull down menu or use the F2 or F3 function keys on the keyboard.
 - (2) Send message to control station (CS) select send message - to CS or press F2.
 - (3) Send a message to a mobile unit select send message - to mobile or press F3 Send message to a Control Station.
 - (4) Choose recipient for your message by choosing a unit from select unit list. Before you type a message, check the unit status field. This field will let you know if the intended recipient is on line or off line. The unit location field will indicate the position of unit.
 - (5) Type the message into the message text field.
 - (6) Press send once the message is complete. Press cancel button to return to the main window without sending. Press recall button to load the last sent message into the message box. Press clear to clear.
 - (7) Go to read messages - review sent messages to see if the recipient received the message (does not mean they have read it).

b. Send a message to all members of a control group.

(1) Select send messages - to group, or press F4 to send a message to all members of the control group, except the sender. Mobile units will only see one control group, while control stations might be members of several control groups.

(2) Enter the text in the message text field and press the send button. Pressing the recall button will load the message box with the text from the last message sent. To close the window without sending a message, press the cancel button. To erase any text in the message text field, press the clear button.

(3) After sending message, go to read messages - review sent messages to see if any group members received the message.

5. Start TracerLink program.

a. Double-click on the TracerLink icon located on the desktop to start the TracerLink application. TracerLink connects to the MTS Messenger program over a TCP/IP socket to receive position data.

NOTE: In order for TracerLink to function, MTS Messenger must be running.

b. Identify the following program controls and indicators.

(1) Symbols.

(a) Mobile Unit. Round symbols represent mobile units. A square lug on top of the symbol indicates the unit is turned on and transmitting. No lug on top indicates the unit is turned off.

(b) Control Station. Square symbols represent control stations. A square lug on top of the symbol indicates the unit is turned on and transmitting. No lug on top indicates the unit is turned off.

NOTE: A square lug at the bottom of a symbol indicates the vehicle is reporting valid GPS. If a unit is powered on, but it not reporting valid GPS, then the location of the icon on the screen reflects the last known position of the vehicle, and may not reflect the current position of the vehicle.

(2) Right Click Pop Up Menu. Simply right click with the mouse on the Map Viewer.

(3) Zoom the Map. To zoom, right click on the map to show the popup menu. Select Zoom In or Zoom Out. Click on the map at the point you wish to become the center of the map. The map will zoom with the point clicked becoming the new center of the map.

(4) Change Center. Right click the mouse over the map to pop up the menu, select Change Center. Click on the map and the map will move with the point clicked becoming the new center of the map.

(5) Pan a Map (Move). Right click the mouse over the map to pop up the menu, select Move. The cursor becomes a hand. Click on the map and hold down the left mouse button, then drag the map to the desired position. When you release the mouse, the map will redraw in the new position.

(6) Measure Distance on a Map. Right click on the map and then select Measure. Click and drag the cursor from point A to point B on the map. Before releasing the button, look at the scale display at the bottom of the map window. It displays the distance in kilometers, nautical miles, or statute miles. Once you release the mouse, the distance measurement will disappear.

(7) Reset Map to Initial View. Right click on the map and select Reset.

(8) Units-Changing Units of Measure. Right click on the map and select Unit. Select whether you want the map in Kilometers, Nautical Miles, or Statute Miles.

c. Navigate through the Server Vehicle Kit Control Window. Use the Server Vehicle Kit Control Window to trace a vehicle's route, hide a vehicle, or display a vehicle that was previously hidden, or hide/display a vehicle's name and last position report time.

(1) Display the Server Kit Control Window.

(a) Method One. Right click the mouse and choose Select Vehicle on the popup menu. This will change your cursor into a hand with a pointed finger. Left click on the map (with the hand) whether over a vehicle's icon or over a bare spot. If you clicked over a vehicle's icon, the vehicle kit window will display the clicked vehicle(s) in the pane. If you clicked over a bare spot the window will be empty.

(b) Method Two. Slowly slide the cursor off the screen to the right side of the map. When you approach the edge of the map the Kit Bar will appear.

(2) Display information in the Server Kit Control Window.

(a) The Assignments Tab. Click on the Assignment Tab to display vehicle information in a hierarchical fleet view.

(b) The Selection Tab. Click on the Selection Tab to display vehicle information listed by vehicle.

(c) Enable Autotrack function.

- 1) Right click on the map to get the popup menu.
- 2) Choose the Select Vehicle option from the pop-up window.
- 3) Click on the vehicle you wish to track. The Server Vehicle Kit Control window will open with the Selection tab containing a list of vehicles.
- 4) Right click on the vehicle you wish to track, select State - Track.

NOTE: If the vehicle you are tracking is off the map, use the Assignments tab instead of the Selection tab to make the change.

(d) Enable Trace function.

- 1) Right click on the map to get the popup menu.
- 2) Choose the Select Vehicle option from the pop-up menu.
- 3) Click on the vehicle you wish to trace. The Server Vehicle Kit Control window will open with the Selection tab containing a list of vehicles.
- 4) Right click on the vehicle you wish to trace, and then select Display - Trace.

(e) Hiding/Show and individual vehicle's name.

- 1) Right click on the map to get the popup menu.
- 2) Choose Select Vehicle.
- 3) Click on the vehicle you wish to name (un-name). The Server Vehicle Kit Control window will pop up listing the vehicles.
- 4) To turn the name on, right click on the name in the Server Vehicle Kit Control window and select Display - Name.

(f) Hide/Show entire control groups.

- 1) Right click on the map to get the popup menu.
- 2) Choose Select Vehicle.

- 3) Click on the map so that the Server Vehicle Kit Control window pops up.
- 4) Select Assignments tab. The various control groups will be listed with expandable plus boxes next to each one.
- 5) Right click on a Control Group (such as 001, 002, 003, and so forth), and select All Vehicles - Hide. If a control group is already hidden, to show it, simply select All Vehicles - Show.

(g) Display/Hide Report Time Labels for an Individual Vehicle.

- 1) Right click on the map to get the popup menu.
- 2) Choose Select Vehicle.
- 3) Click on the map with the mouse so that the Server Vehicle Kit Control window pops up.
- 4) Select the Assignments tab.
- 5) Right click on a vehicle, and select Display - Time. If the time was not previously displayed, it will be. If the time was previously displayed, it will be turned off.

(h) Display/Hide Report Time Labels for an Entire Control Group.

- 1) Right click on the map to get the popup menu.
- 2) Choose Select Vehicle.
- 3) Click on the mouse so that the Server Vehicle Kit Control window pops up.
- 4) Select the Assignments tab.
- 5) Right click on the fleet name and select All Vehicle -Time - Display or All Vehicles - Time - Hide.

(i) Center the map on a vehicle.

- 1) Right click on the map to get the pop-up menu.
- 2) Choose select vehicle.
- 3) Click on the map with the mouse so that the Server Vehicle Kit Control window pops up.
- 4) Select the Assignments tab.
- 5) Open the control group, right click on the vehicle you wish to find and select Center on Vehicle.

CAUTION

Improper shut down of system may result in data loss.

6. Perform power off procedures.
 - a. Close all applications (MTS Messenger, TracerLink Vehicle Server, TracerLink Map Viewer).
 - b. Press CTRL and ESC keys at the same time or click the Start button in bottom left corner of the screen.
 - c. Press the U key or select the Shut Down option.
 - d. Press ENTER or select Shut Down and then click OK.
 - e. The Magnus tablet will automatically power off. Once this occurs, flip the toggle switch on the power box to off. This discontinues power going to the transceiver.

CAUTION

CAUTIONS:

- Failure to turn off the Power ON/OFF button on the Control Box will allow the terminal to continue operation and drain the emergency battery.
- Improper shutdown of system may result in data loss.

f. If using the Legacy System and have the PLGR ON, press OFF and wait for the timer, or press the OFF button two times to power down immediately.

Evaluation Preparation:

Setup: Ensure that MTS mobile unit is installed in the vehicle to be used and target MTS platforms are ready and powered up to receive message traffic. Provide information to the student for use in sending and receiving message traffic communication purposes.

Brief Soldier: You are required to ensure that all connections involved in the proper installation of the MTS mobile unit have been made and the unit is securely mounted. You will then be required to perform a power on procedure followed by starting and operating the software for the system and finally, you will perform the power off procedures. All procedures must be performed in sequence, if applicable. All procedures and communication with other elements will be performed without injury to personnel or damage to equipment.

Performance Measures	GO	NO GO
1 Conducted V2 configuration power on procedures.	_____	_____
2 Started MTS Messenger.	_____	_____
3 Read messages.	_____	_____
4 Sent messages.	_____	_____
5 Started TracerLink program.	_____	_____
6 Performed power off 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 any performance measure is failed, tell the Soldier what was done wrong and how to do it correctly.

551-88M-1660

Perform Coupling Operations with a Pintle-Connected Trailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNINGS applicable to coupling and uncoupling a pintle-connected trailer to a prime mover.

CAUTION

Adhere to all CAUTIONS applicable to coupling and uncoupling a pintle-connected trailer to a prime mover.

Conditions: In an operational environment, given a pintle-connected trailer, fully operational 2.5-ton or larger prime mover, medium tactical vehicle trailer (MTVT) or single axle 2.5T -5.0T trailer, or Palletized Loading System (PLS) truck and PLS trailer (mission-ready), BII, hearing protection, and assistance from a ground guide.

Standards: Couple then uncouple the pintle-connected trailer to and then from the prime mover (2.5-ton or larger wheeled vehicle) without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to transport water and bulk cargo using your units 5-ton vehicle fleet with pintle-connected trailers.

Note: None

Performance Steps

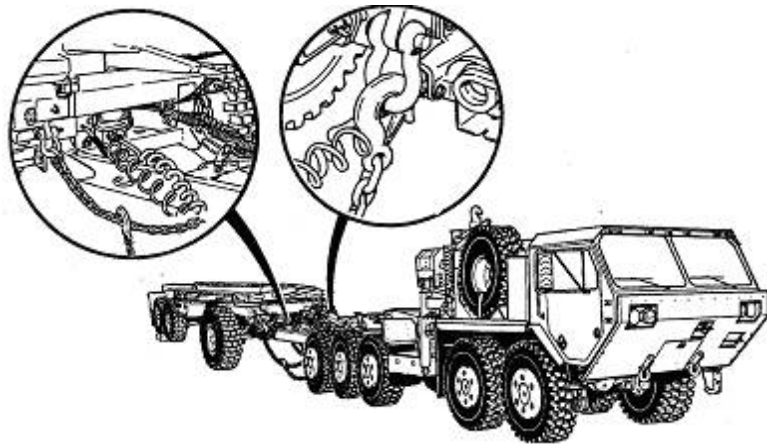


Figure 3-20a.

Coupling continued

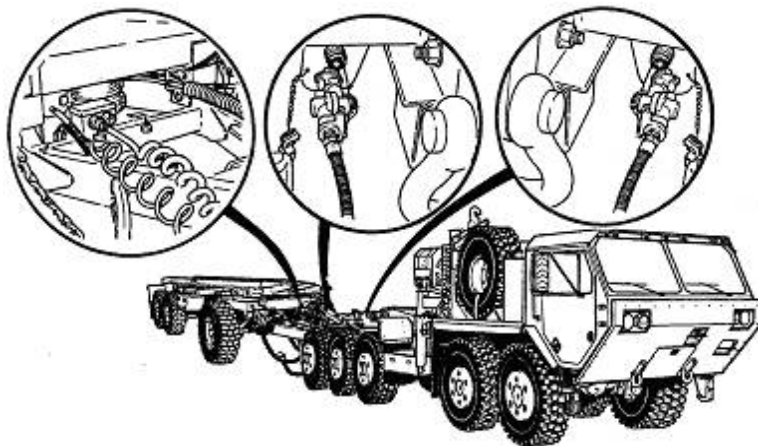


Figure 3-20b.

Coupling continued

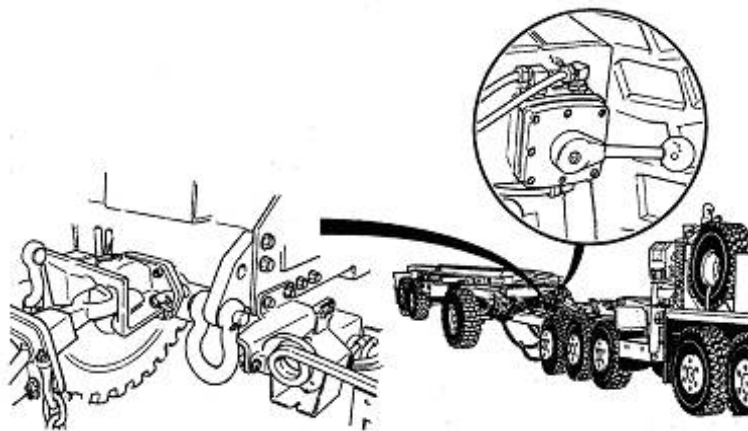


Figure 3-20c.

Coupling continued

WARNING

WARNING:

All personnel must stand clear of towing vehicle and trailer during coupling operations. Failure to comply may result in serious injury or death to personnel.

CAUTION:

Have assistant direct you during backing operations. Damage to equipment may result if caution is not followed.

1. Couple vehicle to trailer (for vehicle-trailer combinations other than PLS).
 - a. Remove chock blocks from vehicle tires.
 - b. Start vehicle (see vehicle -10 series TM).
 - c. Following visual hand signals from ground guide, align vehicle with trailer and slowly back vehicle until pintle is adjacent to drawbar ring.
 - d. Remove pintle lock pin and open pintle.
 - e. Release trailer hand brake.
 - f. Move trailer as required (with assistance) to engage drawbar ring in pintle.
 - g. Close pintle and install pintle lock pin.
 - h. Cross safety chains under drawbar ring and attach to towing vehicle eye bolts.
 - i. Connect inter vehicular cable to towing vehicle receptacle.
 - j. Connect service air hose to towing vehicle glad-hand. If coupling an M105A2C, also connects emergency air hose to towing vehicle glad-hand.
 - k. Turn on towing vehicle air valves to apply vacuum or pressure as required.

WARNING

WARNING:

If cargo trailer is equipped with an old-style single wheel adjustable caster assembly, use extreme caution to ensure that locking pin of handle has securely locked the adjustable caster assembly in the raised position. If locking pin is not fully locked, adjustable caster assembly may fall, resulting in serious injury.

- l. Pull out release handle and at same time, begin raising adjustable caster assembly. Let go of release handle while raising adjustable caster assembly.
 - m. Raise adjustable caster assembly until release handle locks adjustable caster assembly in position. Ensure the release handle is fully engaged.

WARNING**WARNING:**

All personnel must stand clear of towing vehicle and trailer during uncoupling operation. Failure to follow this warning may result in serious injury or death. If cargo trailer is equipped with an old-style single wheel adjustable caster assembly, use extreme caution to ensure that locking pin of handle has securely locked the adjustable caster assembly in the raised position. If locking pin is not fully locked, adjustable caster assembly may fall, resulting in serious injury.

2. Uncouple the trailer from vehicle (for vehicle-trailer combinations other than PLS).
 - a. Support adjustable caster assembly and at the same time pull out release handle. Lower adjustable caster assembly. Ensure that release handle is fully engaged.
 - b. Disconnect air hose from towing vehicle glad-hand. If uncoupling from an M105A2C, also disconnect emergency air hose from towing vehicle glad-hand.
 - c. Disconnect inter vehicular cable from towing vehicle receptacle and stow on trailer.

WARNING**WARNING:**

Ensure that trailer is prevented from movement prior to disconnecting from vehicle or sudden movement could cause injury to personnel or damage to trailer.

- d. Disconnect safety chains from towing vehicle eye bolts and stow on trailer.
- e. Ensure trailer brakes are set or trailer wheel is chocked prior to disconnecting trailer from vehicle.
- f. Remove pintle lock pin and open pintle.
- g. With assistance, move trailer as required to disengage drawbar ring from pintle. Apply trailer handbrakes.
- h. Move vehicle a safe distance from trailer.

WARNING**WARNINGS:**

Do not stand between trailer drawbar and truck coupler during hook-up procedures to prevent being pinned between truck and trailer. Serious injury or death could result to personnel.

Wheels on trailer must be chocked to prevent trailer from moving during hook-up procedures. Serious injury or death to personnel could result.

NOTE: Align truck coupler with drawbar prior to beginning hookup procedures. Follow ground guide signals.

3. Couple PLS truck to PLS trailer (PLS/HEMTT-LHS systems only).

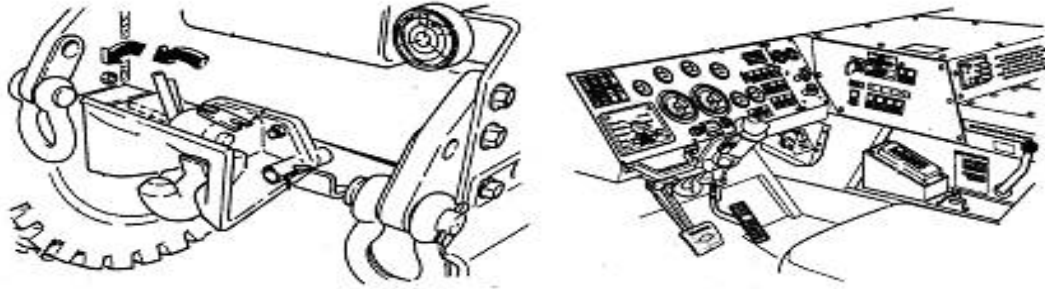


Figure 3-21.

Locking Pin and Coupler

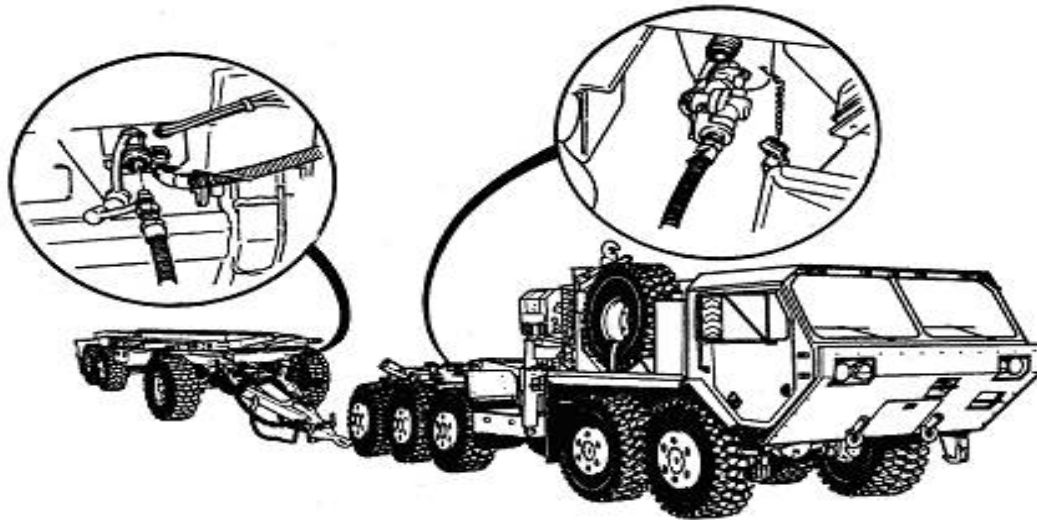


Figure 3-22.

Air Coupler

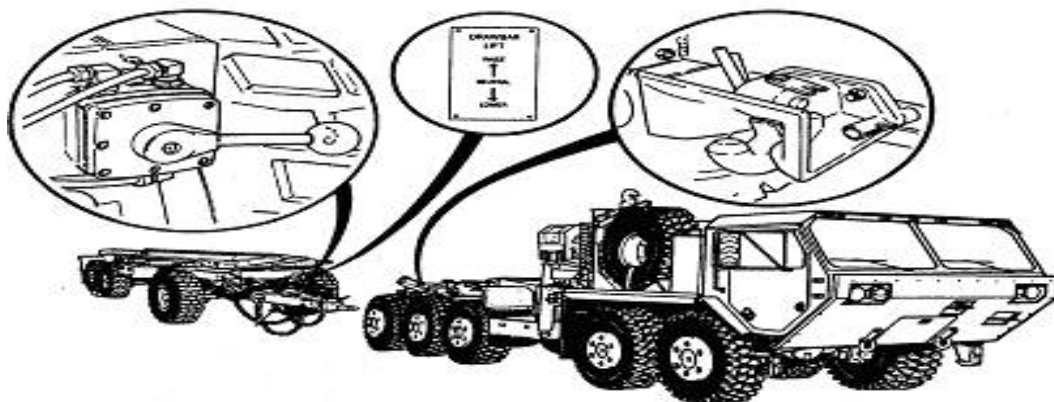


Figure 3-23.

Air Coupling

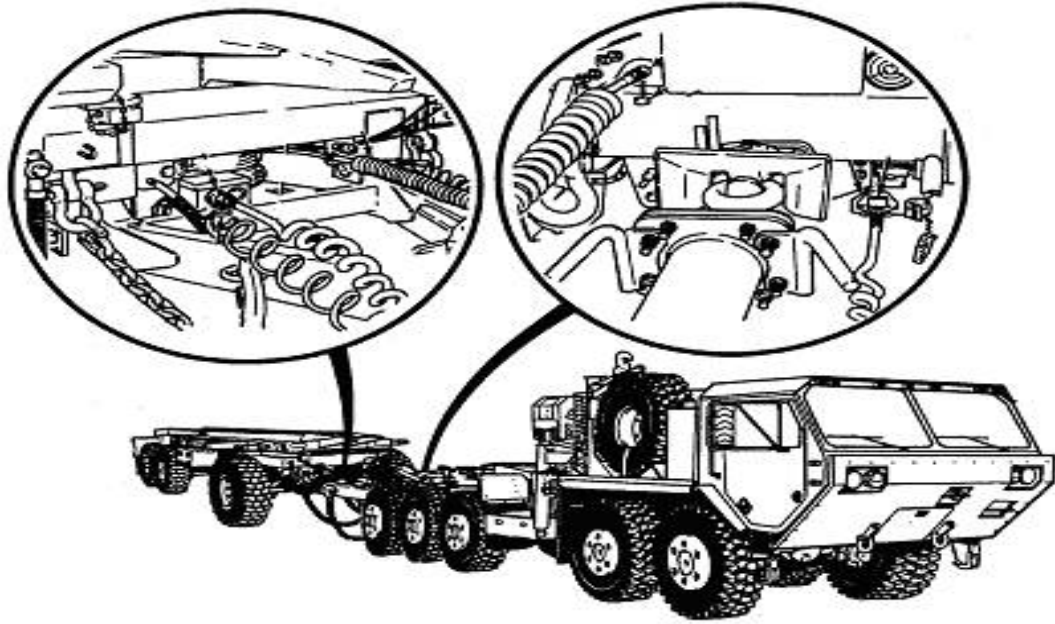


Figure 3-24.

12-24 Volt Receptacle

- a. Chock wheels of trailer.
- b. Adjust drawbar if necessary.
- c. Start truck (see vehicle TM) and following ground guide hand and arm signals, back truck to within 6 inches from end of drawbar.
- d. Apply parking brake and place transmission range selector in Neutral (N). Shut off truck.

NOTE: Rotation locking pin should be in locked (UP) position to prevent coupler rotation during hook-up.

- e. Lock rotation locking pin on coupler.
- f. Lift up locking gate on coupler.
- g. Pull locking lever out and pull lever back at the same time to open coupler jaw.

NOTE: Air tank No. 1 must be charged with air for air assist lever to work. If it is not charged, remove the charging hose from the trailer stowage box and perform steps h through t below. If air tank is charged, perform step u.

- h. Remove cover from emergency air glad-hand.
- i. Connect charging hose glad-hand to emergency air glad-hand.
- j. Remove cover from charging hose connector.
- k. Remove cover from trailer quick disconnect.
- l. Connect charging hose connector to trailer quick disconnect.

- m. With truck running, push trailer air supply valve on dash to charge No. 1 air tank.
- n. When fully charged (three to five minutes), release trailer air supply valve on dash and shutoff engine.
- o. Disconnect charging hose connector from trailer quick disconnect.
- af. Remove cover from 12-pin receptacle on trailer and connect 24-volt cable on receptacle.
- ag. Remove cover from 12-pin receptacle and connect 24-volt cable on receptacle.
- ah. Lift upper right receptacle cover on the truck and connect 24-volt cable on receptacle.
- ai. Remove two covers from air couplings.
- aj. Install emergency air glad-hand to air coupling.
- ak. Install service air glad-hand to air coupling.
- al. Install safety chains on hooks from large links on chains.
- p. Install cover on trailer disconnect.
- an. Unhook two safety chains from trailer and attach to truck clevises.
- ao. Remove wheel chocks.

WARNING

WARNING:

Drawbar weighs 425 pounds, 850 pounds with drawbar extension (if equipped). Drawbar may rise quickly or fall suddenly to the ground when released from coupler. Do not allow feet or body to get under or above drawbar. Serious injury or death to personnel may result.

- s. Install cover on emergency air glad-hand.
- t. Move air assist lever on drawbar air assist valve to UP position and raise drawbar to level of coupler.

WARNING

WARNINGS:

Do not stand between trailer drawbar and truck coupler during hook-up procedures to prevent being pinned between truck and trailer. Serious injury or death to personnel could result.

Wheels on trailer must be chocked to prevent trailer from moving during hook-up procedures. Serious injury or death to personnel could result.

- u. Place air assist lever in Neutral position.

- v. Start truck and slowly back up until drawbar makes contact and locks with coupler.
- w. Pull truck forward slightly to verify coupler has latched onto drawbar.
- x. Shut off truck.
- y. Release air pressure by moving air assist lever down for five seconds.
- z. Close locking gate on coupler.
- aa. Unlock rotation locking pin on coupler.
- ab. Remove cover from truck receptacle.
- ac. Connect load lock status line to truck receptacle.

CAUTION

CAUTION:

Both the 12 and 24-volt cables must NOT be connected at the same time. Only one cable can be hooked up during operation or damage to equipment will result. Ensure that receptacle latch is engaged on cable or damage to cable may result. The 12-volt cable is standard for this trailer. Use the 24-volt cable system only when the 12-volt cable cannot be used or blackout lights are used. Perform steps ad and ae for 12-volt system only. Cables are located in the stowage box.

- ad. Remove cover from 7-pin receptacle on trailer and connect 12-volt cable on receptacle.
- ae. Lift receptacle cover on truck and connect 12-volt cable on receptacle.

NOTE: Perform steps af and ah for 24-volt system when not equipped with drawbar extension.

NOTE: Perform steps ag and ah for 24-volt system equipped with drawbar extension.

WARNING

WARNINGS:

Do not stand between trailer drawbar and truck coupler during hook-up procedures to prevent from being pinned between truck and trailer. Serious injury or death to personnel could result.

Wheels on trailer must be chocked to prevent trailer from moving during hook-up procedures. Serious injury or death to personnel could result.

- 4. Uncouple PLS truck from PLS trailer.
 - a. Chock wheels of trailer.
 - b. Unhook two safety chains from clevises and attach to trailer.
 - c. Hook safety chains to chain links.

- d. Remove emergency glad-hand from air coupling and stow on stowage coupler.
- e. Remove service air glad-hand from air coupling and stow on stowage coupler.

CAUTION

CAUTION:

Both the 12 and 24-volt cables must NOT be connected at the same time. Only one cable can be hooked up during operation or damage to equipment will result.

- f. Install covers on air couplings.
- g. Remove 24-volt cable from receptacle on truck and close receptacle cover.
- h. Remove 24-volt cable on trailer from receptacle and install cover on receptacle and install cover on receptacle and stow in trailer stowage box.
- i. Remove 24-volt cable on trailer from receptacle and install cover on receptacle and stow in trailer stowage box.
- j. Remove 12-volt cable on truck from receptacle and close receptacle cover.
- k. Remove 12-volt cable on trailer from receptacle and install cover on receptacle and stow in trailer stowage box.
- l. Remove load lock status line from truck receptacle and place on stowage hook.
- m. Install cover to receptacle.
- n. Lock rotation locking pin and check coupler to make sure it will not rotate.
- o. Lift up locking gate on coupler.
- p. Pull locking lever out while pulling lever back at the same time.

WARNING

WARNING:

Drawbar weighs 425 pounds, 850 pounds with drawbar extension (if equipped). Drawbar may raise quickly or fall suddenly to the ground when released from coupler. Do not allow feet or body to get under or above drawbar. Serious injury or death to personnel may result. Do not leave drawbar in elevated position after disconnecting from truck. Drawbar could fall causing serious injury to personnel.

- q. Release locking lever prior to releasing lever, to unlock coupler jaw.
- r. Use air assist valve to apply air pressure to hold drawbar from falling when released from coupler.

- s. Start truck, release parking brake, and slowly pull forward until drawbar releases from coupler.
- t. Apply parking brake and place transmission range selector to Neutral.
- u. Push up on coupler jaw to close.
- v. Close locking gate on coupler.

Evaluation Preparation:

Provide for the Soldier a mission-ready 5-ton MTV (M1083 series), and M1095 MTVT OR a HEMTT-LHS and PLST, assistance of a spotter/ground guide, hearing protection, and level ground to accomplish the task.

Performance Measures	GO	NO GO
1. Coupled vehicle to trailer (for vehicle-trailer combination other than PLS).	_____	_____
2. Uncoupled the trailer from vehicle (for vehicle-trailer combination other than PLS).	_____	_____
3. Coupled PLS truck to PLS trailer (PLS/HEMTT-LHS systems only).	_____	_____
4. Uncoupled PLS truck from PLS trailer.	_____	_____

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

References

Required

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-304-14&P OPERATORS, ORGANIZATIONAL, AND DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR LOAD HANDLING SYSTEM, HEAVY EXPANDED MOBILITY TACTICAL TRUCKS (HEM

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-364-14&P INTERACTIVE TECHNICAL MANUAL FOR THE PALLETIZED LOAD SYSTEM (PLS) M1074, M1075, M1076, M1077 (THIS ITEM IS INCLUDED ON EM 0206)

TM 9-2320-365-10 OPERATORS INSTRUCTIONS

Required

MANUAL FOR M1078 SERIES, 2-1/2 TON, 4X4 LIGHT MEDIUM TACTICAL VEHICLES (LMTV) TRK, CAR., LMTV, M1078 W/WN (NSN 2320-01-360-1898) (EIC: BHH) W/O WN (2320-01-354-3385) (EIC: BHD) TRK

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

TM 9-2330-213-14&P OPERATORS, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS) FOR TRAILER, CHASSIS: 1 1/2-TON, 2-WHEEL, M103A1 (NSN 2330-00-835-8629), M103A3 (2330-00-1

Primary

Subject Area 4: Transportation of Cargo

551-88M-1663**Operate a Vehicle-Mounted Crane**

Conditions: In an operational environment, given a vehicle equipped with a vehicle-mounted crane on which before-operation PMCS has been performed, applicable TM, flat surface in which to operate, and directions/hand signals from another Soldier.

Standards: Setup vehicle-mounted crane for operation to include outriggers, as applicable. Operate the crane while following visual hand and arm signals. Prepare crane and outriggers, as applicable, for travel. All crane operations must be performed without injury to personnel or damage to any equipment or load.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are required to off-load your cargo from your 5-Ton tactical vehicle.

Note: Vehicle must be positioned on level ground.

Performance Steps

1. Start vehicle engine (except LMTV).
 - a. M1084/1086 MTV with MHE. Refer to TM 9-2320-366-10-1.
 - b. M977 (HEMTT) crane-mounted vehicles. Refer to TM 9-2320-279-10-1.
 - c. M1074/M1075 (PLS) crane-mounted vehicles. Refer to TM 9-2320-364-10.
2. Prepare crane for use.
 - a. M1084/1086 (MTV) vehicles. Refer to TM 9-2320-366-10-1.
 - b. M977/M985 (HEMTT) vehicles. Refer to TM 9-2320-279-10-1.
 - c. M1074/M1075 (PLS) vehicles. Refer to TM 9-2320-364-10.
3. Operate crane following visual hand and arm signals for movement.
 - a. M1084/1086 (MTV) vehicles with MHE. Refer to TM 9-2320-366-10-1
 - b. M977/M985 (HEMTT) vehicles. Refer to TM 9-2320-279-10-1.
 - c. M1074/M1075 (PLS) vehicles. Refer to TM 9-2320-364-10.
4. Stow the crane for travel.
 - a. M1084/1086 (MTV) vehicles. Refer to TM 9-2320-366-10-1.
 - b. M977/M985 (HEMTT) vehicles. Refer to TM 9-2320-279-10-1.

- c. M1074/M1075 (PLS) vehicles. Refer to TM 9-2320-364-10.
- 5. Shutdown vehicle engine (except LMTV/MTV).
 - a. M1084/1086 (MTV) vehicles. Refer to TM 9-2320-366-10-1.
 - b. M977/M985 (HEMTT) vehicles. Refer to TM 9-2320-279-10-1.
 - c. M1074/M1075 (PLS) vehicles. Refer to TM 9-2320-364-10.

Evaluation Preparation:

Provide the Soldier with a vehicle that has an integrated material handling crane. Vehicle may be an M977/985 HEMTT Cargo truck or a 5-Ton MTV, M1089 W/MHE. Vehicle should be positioned on a level, solid surface with NO overhead restrictions such as power lines or trees that would restrict swing movement.

Performance Measures	GO	NO GO
1 Started vehicle engine.	_____	_____
2 Prepared crane for operation.	_____	_____
3 Operated crane while following visual hand and arm signals.	_____	_____
4 Stowed crane for travel.	_____	_____
5 Shutdown vehicle engine.	_____	_____

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

References

Required	Primary
TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}	

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977; Truck, Cargo, Wit

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,

Required

M1083 W/WN (NSN 2320-01-360-1895) (EIC:
BT3) W/O WN (2320-01-354-3386) (EIC: B

Primary

551-88M-1664
Operate Vehicle in a Contaminated Area

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules. Additionally, all precautions should be taken with respect to proper uniform and MOPP level along with all required detection devices before such travel is attempted.

WARNING

Adhere to all WARNING statements relevant to the dangers of a contaminated area and the operation of any detection and decontamination equipment used.
Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements relevant to the dangers of a contaminated area and the operation of any detection and decontamination equipment used.
Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, as the operator of a tactical wheeled vehicle required to support a convoy mission traveling through a contaminated area. You and your vehicle will be exposed to chemical agents. Given a mission-ready tactical wheeled vehicle, an M40A1 protective mask, protective clothing, and vehicle-mounted M11 or M13 Decontamination Apparatus, and either an M291 or an M258A1 Skin Decontamination Kit.

Standards: Operate your vehicle within the contaminated area. Upon exiting the contaminated area you are to perform skin decontamination, a wipe-down of your personal equipment and then an operator's spray-down of vehicle components without succumbing to the affects of the contaminates. Decontamination procedures performed are in preparation for unit deliberate decontamination.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is required to conduct a convoy movement through a known contaminated area.

Note: None

Performance Steps

1. Prepare for entering a contaminated area.

- a. Stop the vehicle.
 - b. Don protective mask and protective clothing (assume a MOPP 4 posture).
 - c. Ensure that M8/M9 paper is placed on clothing and equipment.
 - d. Ensure that chemical alarms, if available, are serviced and mounted on the vehicle.
 - e. Ensure M11 or M13 Decontamination Apparatus (DAP) is serviced, filled, and mounted on vehicle.
 - f. Acquire an M291 or M258A1 kit.
2. Exercise precautions to prevent contamination.
 - a. Use a hard surface road if available.
 - b. Operate the vehicle safely through the contaminated area.
 - c. Avoid unnecessary splashing if roads are muddy.
 - d. Guard against splashes from tree branches.
 - e. Move through the area at extended intervals if in a convoy.

WARNING

WARNING:

Use extreme caution at all times when handling ds2. Do not mix ds2 and stb because it will cause a fire. Do not allow ds2 to spray on personnel or protective clothing. Ds2 is combustible solution. Severe chemical burns can result if personnel fail to observe all safety precautions. Ds2 can severely injure eyes and skin, and if inhaled, can cause illness. Ds2 can damage the nbc protective overgarment. Long-term contact with ds2 can damage the nbc protective gloves, hood, and overboots.

- f. Move through the area, as quickly as all safety rules will allow.
3. Decontaminate self, vehicle, and equipment (immediate decontamination).
 - a. Proceed as directed to the decontamination point upon leaving contaminated area.
 - b. Report reactionary indication of M8 detector paper to supervisor.
 - c. Perform skin decontamination using M258A1 or M291 Kits.
 - d. Perform personal wipe-down (personal equipment) (using M291 Kit).
 - e. Perform operator's spray-down (vehicle components needed to operate until unit deliberate decontamination can be affected).

Evaluation Preparation:

None

Performance Measures

GO **NO GO**

- | | | | |
|---|--|-------|-------|
| 1 | Prepared for entering a contaminated area. | _____ | _____ |
| 2 | Exercised precautions to prevent contamination while operating in a contaminated area. | _____ | _____ |
| 3 | Decontaminated exposed skin, personal equipment, and vehicle components (immediate decontamination). | _____ | _____ |

Evaluation Guidance: None

References

Required

Primary

FM 3-11(Updated 1 Jul 2011) MULTISERVICE TACTICS, TECHNIQUES, AND PROCEDURES FOR NUCLEAR, BIOLOGICAL, AND CHEMICAL DEFENSE OPERATIONS

FM 3-11.5 Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination {MCWP 3-37.3; NTTP 3-11.26; AFTTP(I) 3-2.60} (This item is included on EM 0205)

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 3-4230-204-12&P OPERATORS AND UNIT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR DECONTAMINATING APPARATUS, PORTABLE, DS2, 1 1/2 QUART, ABC-M11 (NSN 4230-00-720-1618)D ON E

TM 3-4230-216-10 OPERATORS MANUAL FOR DECONTAMINATING KIT, SKIN: M258A1 (NSN 4230-01-101-3984) AND TRAINING AID, SKIN DECONTAMINATING: M58A1 (6910-01-101-1768)

551-88M-1382**Perform Payload Vehicle Loading/Unloading Operations With a Semitrailer**

Conditions: You are the operator of a truck-tractor semitrailer combination tasked to transport a payload vehicle. The semitrailer has been properly parked and chocked against an alley or loading dock for this operation. You are provided a tractor-semitrailer combination, payload vehicle with operator, work gloves, all tiedown equipment to include chains and loadbinders, an alley dock or loading ramp, and load measuring tools (either a 25-foot retractable tape measure, or a telescoping pole with measuring graduations up to 25 feet). Special Conditions: Truck tractor, semitrailer, payload vehicle, and all tiedown devices have been inspected and found to be mission-ready.

Standards: You are to load and position a payload vehicle onto a flatbed semitrailer by guiding payload vehicle operator using visual hand and arm signals. With proper tiedown configuration, secure the payload vehicle to the semitrailer for transport and measure the height and width of load. Once the payload configuration has been inspected by supervisor and deemed safe for transport and meets height and width restrictions, you are to remove all tiedown devices and unload the payload vehicle from the semitrailer by providing hand and arm visual signals to payload vehicle operator. All procedures must be performed without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is required to transport several wheeled vehicles to a new location.

Note: None

Performance Steps

1. Prepare for loading operations.
 - a. Guide payload vehicle into position on loading dock in a line that is centered both on the payload vehicle and the semitrailer.
 - b. Remove semitrailer sideboards (if installed).
 - c. Place centering marks on the semitrailer to use as a reference when positioning payload vehicle.
 - d. Clean semitrailer of all obstructions, nails, or any foreign objects that may interfere with payload vehicle.
 - e. Prepare payload vehicle for loading.
 - (1) Reduce the payload outer dimensions by folding in outside rearview mirrors, lowering or removing antenna(s), and removing crew-served weapon (if mounted).
 - (2) Check payload vehicle canvas to ensure all loose ends are secured. Canvas may have to be removed if it interferes with height-width restrictions.

WARNING

WARNING:

Ensure all tires are inflated to proper pressure and that no tire is leaking. If any tire prematurely deflates during movement, the payload vehicle will become unstable and may shift or fall from semitrailer, causing serious injury or death to personnel and severe damage to equipment.

(3) If payload vehicle is combat-loaded, with assistance from payload vehicle operator, ensure all items are secured on inside of vehicle or removed prior to transport.

(4) Have payload vehicle operator check tire pressure on all tires to ensure proper inflation.

(5) Check total load of payload vehicle with combat-load (or not) to ensure that it does not exceed load capacity of semitrailer before loading.

(6) Ensure payload vehicle center of gravity is clearly marked on both sides (to include load if combat-loaded).

CAUTION

CAUTION:

Ensure that weight of payload vehicle (whether combat-loaded or not) does not exceed load capacity of semitrailer. Failure to comply may damage the semitrailer.

2. Position payload vehicle onto semitrailer.

a. Position yourself on the ground to the driver side of the semitrailer, in a clear line-of-sight to the payload vehicle operator, to guide the payload vehicle onto the semitrailer.

b. Slowly guide payload vehicle onto semitrailer by providing appropriate hand and arm visual signals to payload vehicle operator.

c. Note shifting of weight to semitrailer when payload vehicle's weight is added.

d. Make hand and arm signal adjustments to center payload vehicle onto semitrailer along the centerline of the semitrailer.

e. Stop payload vehicle movement if vehicle moves off center line of semitrailer to either side, makes adjustments as necessary.

f. Once centering marks are aligned on both the semitrailer and the payload vehicle, stop payload vehicle movement.

g. Have payload vehicle operator shutdown vehicle and set parking brake.

3. Secure payload vehicle onto semitrailer.

a. Emplace wheel chocks.

b. Using a combination of chains and loadbinders, attach payload vehicle to tiedown points on edge of semitrailer and tiedown clevises of payload vehicle.

- c. Use a double set of tiedowns on rear of payload vehicle to compensate for inertial forces in braking during movement.
 - d. Tighten all loadbinders sufficiently to prevent payload vehicle from shifting during movement.
 - e. Secure all loose ends of tiedowns by string, rope, or metal wire.
4. Measure the height and width of load before movement.
 - a. Use suitable measuring device such as a 25-foot retractable tape or a telescoping pole with graduated measurement.
 - b. Double check to ensure that ground from which to measure is level in front of semitrailer wheels (not higher or lower).
 - c. Extend measuring device from the ground next to side of semitrailer to a point of the highest part of the payload vehicle. This distance must NOT exceed 13 feet, 5 inches in CONUS and 13 feet, 1 inch OCONUS. Take a minimum of two measurements to ensure accuracy and record measurement.
 - d. If load exceeds limit in item 4c above, reject or adjust load to meet limitations.
 - e. Measure the width of load by extending measuring device to the extreme outside limits of load and record measurement.
 - f. Provide load measurements to supervisor for comparison to route restrictions.

WARNING

WARNING:

Extreme caution should be taken to ensure that payload vehicle has not dangerously shifted during movement prior to loosening any tiedowns. Failure to comply may result in payload vehicle falling from semitrailer causing serious injury or death to personnel or severe damage to equipment.

5. Prepare for unloading of payload vehicle.
 - a. Visually check to ensure that payload vehicle has not shifted prior to loosening of tiedowns. If shifting is suspected, refer to supervisor for guidance.
 - b. With assistance from payload vehicle operator, remove all tiedown devices from payload vehicle.
 - c. Direct payload vehicle operator to mount vehicle and prepare for movement (includes vehicle starting procedures and pressurization of vehicle brake reservoirs).
 - d. Remove wheel chocks.
 - e. Position yourself on the ground, in a clear line of sight on driver-side of semitrailer.
6. Unload payload vehicle from semitrailer.
 - a. Provide hand and arm visual signals to payload vehicle operator to guide payload vehicle off the semitrailer and onto the loading dock.

- b. Signals payload vehicle operator to stop vehicle once in position on loading dock.

Evaluation Preparation:

Setup - Provide for the Soldier a coupled truck tractor with semitrailer combination to include all necessary tiedown devices, chock blocks, load measuring tools, hearing protection, work gloves, alley or loading dock, and payload vehicle with operator.

Brief Soldier - You are required to load the payload vehicle onto the semitrailer using the loading dock by providing the payload vehicle operator the necessary visual hand and arm signals. You are to position yourself in such a manner as to afford a clear field of view at all times while guiding. You are to position the payload vehicle properly using the centerline of the semitrailer with the centerline of the payload vehicle and guide the payload vehicle forward until properly positioned for transport. Once positioned, you are to secure the payload vehicle to the semitrailer using available tiedown devices. Once secure, you are to measure the height and width of the payload and semitrailer to ensure it does not exceed route restrictions. Once measurements are taken, you are to provide this information to your supervisor. Once supervisor has checked load and height/width restrictions and approved for movement, you are to remove all tiedown devices and guide payload vehicle from the semitrailer back onto the loading dock.

Performance Measures	GO	NO GO
1 Prepared for loading operations.	_____	_____
2 Positioned payload vehicle onto semitrailer.	_____	_____
3 Secured payload vehicle onto semitrailer.	_____	_____
4 Measured the height and width of load before movement.	_____	_____
5 Prepared for unloading of payload vehicle from semitrailer.	_____	_____
6 Unloaded payload vehicle from semitrailer.	_____	_____

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

References

Required **Primary**
 TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-303-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR, 6 X 4, M915A4 (NSN 2520-01-458-1207)

TM 9-2330-359-14&P OPERATORS, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS) FOR SEMITRAILER, FLATBED:

Required

BREKBUK/CONTAINER TRANSPORTER, 34
TON M872 (T

Primary

551-88M-1411
Perform Tiedown Procedures

DANGER

Adhere to all DANGER statements provided in the technical reference materials for the specific equipment being used.

WARNING

Adhere to all WARNING statements provided in the technical reference materials for the specific equipment being used.

CAUTION

Adhere to all CAUTION statements provided in the technical reference materials for the specific equipment being used.

Conditions: In an operational environment, your unit is tasked with a supply mission. Given either a 5-ton cargo vehicle loaded with general cargo, a tractor-semitrailer combination loaded with a vehicle payload, or a HEMTT-LHS/PLS truck loaded with containerized cargo, and all necessary basic issue items, tools, and tiedown materials capable of securing the load to the vehicle.

Standards: Ensure proper placement of the load on the vehicle keeping the vertical center of gravity as low as possible and the horizontal center of gravity as indicated on the vehicle data plates; inspect the tiedown materials to be used and secure the load by properly blocking and bracing (if needed) and using the proper tiedown configuration. The load is to be inspected by supervisor or other proper authority and deemed secure and ready for movement.

Special Condition: None

Special Standards: None

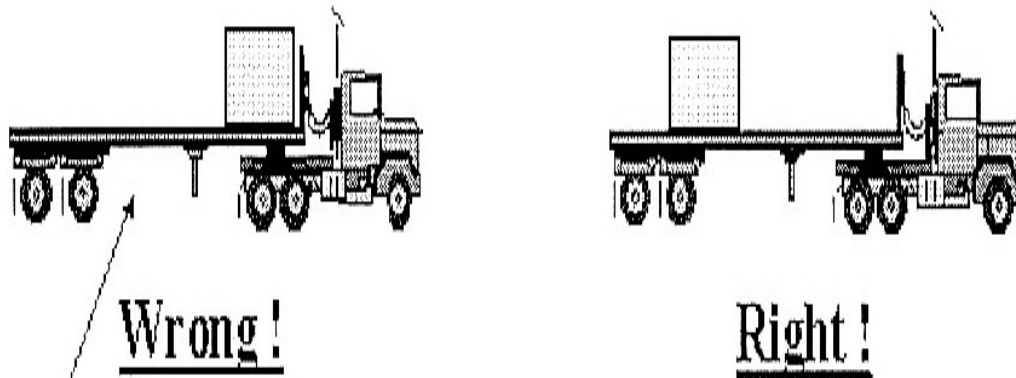
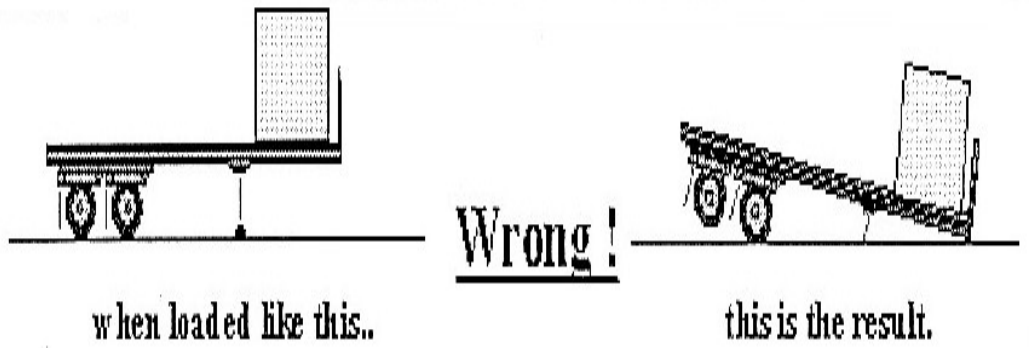
Special Equipment: None

Cue: You are required to tie down the cargo load on a tactical wheeled vehicle. Your mission is in support of a tactical movement of supplies and equipment.

Note: This task exercises the loading of some configurations of cargo and payload vehicles. There are numerous other configurations that are possible but this task cannot cover them all. Extreme discretion is required in order to provide a safe tiedown of cargo and safe shipment/movement of materials.

Performance Steps

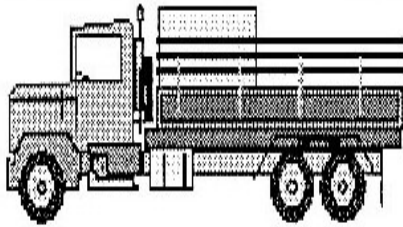
1. Ensure load is properly positioned for tiedown.



This overloads and shortens tire life, bends the truck rear axle housing.
Applying the trailer brakes may lock the wheels, cause flat spots and skidding.

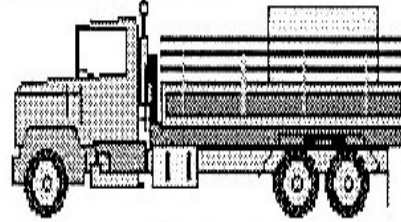
Figure 3-25a.

Load Balancing



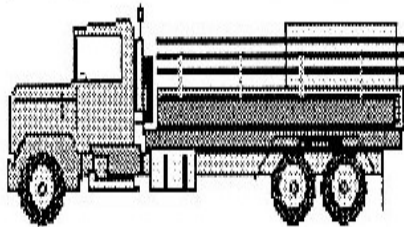
Wrong!

This will bend the frame, overload the front tires, make steering harder



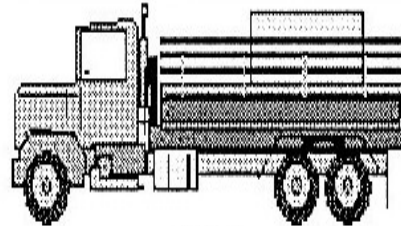
Right!

Place heavy part of load near rear axle for proper tire loading and to keep frame from bending



Wrong!

This kind of weight distribution bends the frame, overloads rear tires, and makes steering almost impossible.

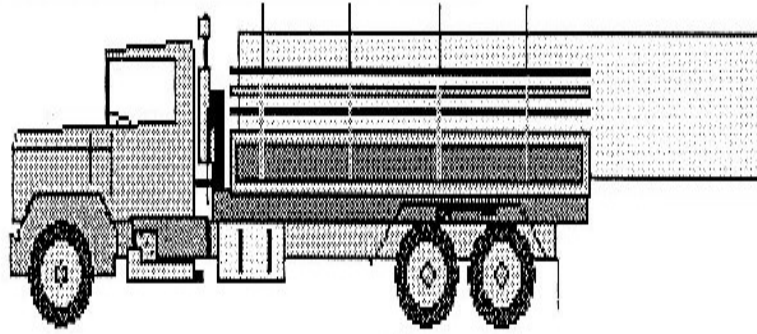


Right!

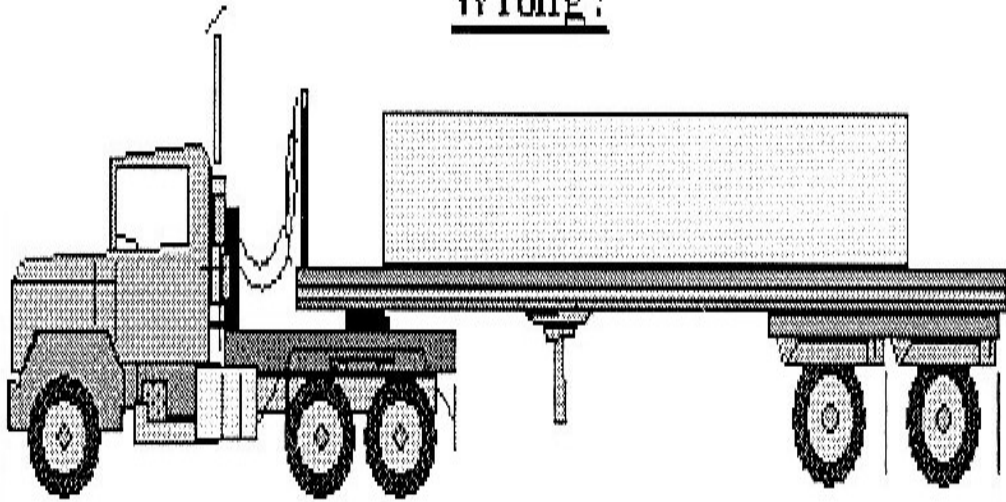
Set a concentrated load just ahead of the rear axle with the longest side on the floor, if possible.

Figure 3-25b.

Load Balancing



Wrong!

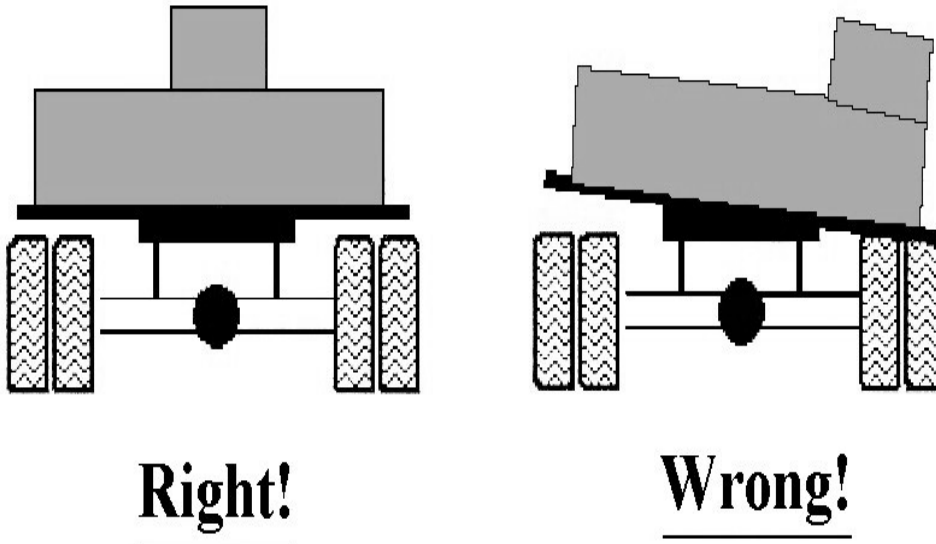


Right!

Figure 3-25c.

Load Balancing

Weight and Balance



Nothing overloaded.
 Frame will not twist and
 loosen cross-member rivets.

This overloads one spring and
 set of tires. Brakes lock on the
 right side, causing skids.

Figure 3-25d.

Load Balancing

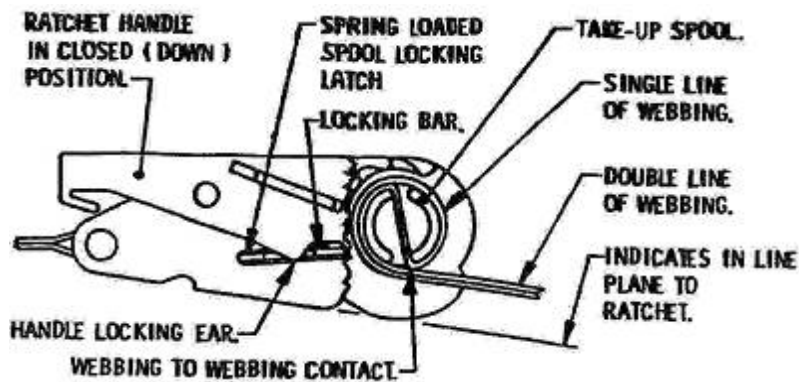


Figure 3-26.

Web-to-Web Contact

THIS VIEW DEPICTS THE LOCATION OF THE FIXED MARK ON THE RATCHETING HANDLE, WITH ANOTHER MATCHING MARK ON THE END OF THE TAKE-UP SPOOL, AFTER WEBBING-TO-WEBBING CONTACT HAS BEEN MADE.

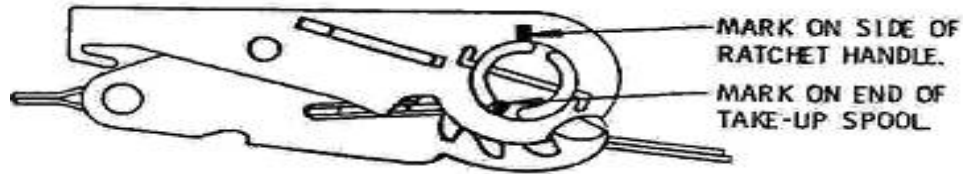


Figure 3-27.

Locking Latches

a. Check configuration of general cargo load.

(1) Ensure that cargo is placed on vehicle with the heaviest items on the bottom and spread evenly across the vehicle both longitudinally and laterally.

(2) Ensure items are not stacked too high to allow for the lowest center of gravity.

(3) If the load extends more than 4 feet beyond the end of the bed, ensure that a red flag (measuring not less than 12 x 12 inch square) is attached to the load. During nighttime, use a red light (if tactical situation permits).

(4) Check vehicle data plate and TM to ensure that vehicle weight and cube limitations have not been exceeded.

b. Check configuration of ammunition (on HEMTT and PLS flatrack).

(1) Ensure that cargo is placed on vehicle/flatrack with the heaviest items on the bottom and spread evenly across the vehicle both longitudinally and laterally.

(2) Ensure items are not stacked too high to allow for the lowest center of gravity.

(3) Ensure that load does not extend past vehicle cargo area perimeters and that cargo truck tailgate is raised and locked in place.

(4) Check vehicle data plate and TM to ensure that vehicle weight and cube limitations have not been exceeded.

c. Check configuration of vehicle payload.

(1) Ensure that payload vehicle center of gravity is located over the desired point on the semitrailer. Center of gravity marking should be legible on both sides of payload vehicle.

CAUTION

CAUTION:

Do not use bumperettes, axles, towing pintles, or towing hooks as points of attachment for chains.

(2) Ensure that all shackles are on the vehicle.

(3) Remove or band canvas and bows to prevent wind damage (as applicable).

(4) Protect windshield of payload vehicle if needed.

(5) Ensure that fuel tank of payload vehicle is no more than three-quarters full.

(6) Reduce payload vehicle to lowest height configuration consistent with the operational requirement and unit SOP.

(7) Secure any materials or equipment loaded in the beds of cargo vehicles by banding, chains, or cargo straps.

(8) Remove all sensitive or pilferable items that cannot be secured.

(9) Ensure that vehicle antennae are tied down or removed in accordance with local SOP.

d. Ensure containerized cargo is properly placed on the HEMTT-LHS/PLS truck.

2. Inspect tiedown materials.

a. Chains and load binders (used for vehicle payload). Inspect chains including the hooks, at least once a month. Inspect those that are used for heavy and continuous loading more frequently. Give particular attention to the small radius fillets at the neck of the hooks for any deviation from the original inner arc. Examine each link and hook for small dents and cracks, sharp nicks and cuts, worn surfaces, and distortions. Replace any of those that show any of these weaknesses. If several links are stretched or distorted, do not use the chain; it probably was overloaded or hooked improperly, which weakened the entire chain. Inspect load binders for structural cracks in the metal. Inspect chain and hooks using same criteria cited above; if ratchet type, ensure mechanism works freely without binding. Inspect lever pivot mechanism for excessive signs of wear or stress on pin. Do not use if any portion of the load binders possesses any of the above signs of wear or misuse.

b. Web tiedown straps (used for general cargo and ammunition tiedown). Before each use, straps should be inspected for burns, tears, punctures, cuts, caustic damage, oil or grease contamination, and fraying or broken stitches. Inspect metal parts for improper operation, corrosion, cracks, or distortion. If any of these conditions exist, the tiedown should be replaced. They should not be used for any mode of transport if they have been damaged. No strength testing of straps will be made.

c. Blocking and bracing materials (as needed, depending on platform and load). Ensure that if needed, the materials are of a size and configuration to support the tiedown of the load. Use 4X4 materials if available. All lumber used for blocking must be free of knots and strong enough to provide a rigid and stable support for the load en route.

d. Locking mechanisms on the HEMTT-LHS/PLS trucks.

3. Secure general cargo to bed of 5-ton cargo truck using web tiedown straps.

NOTE: Not all loads will require blocking and bracing. Blocking and bracing is used for applications involving a partially loaded vehicle to prevent from shifting.

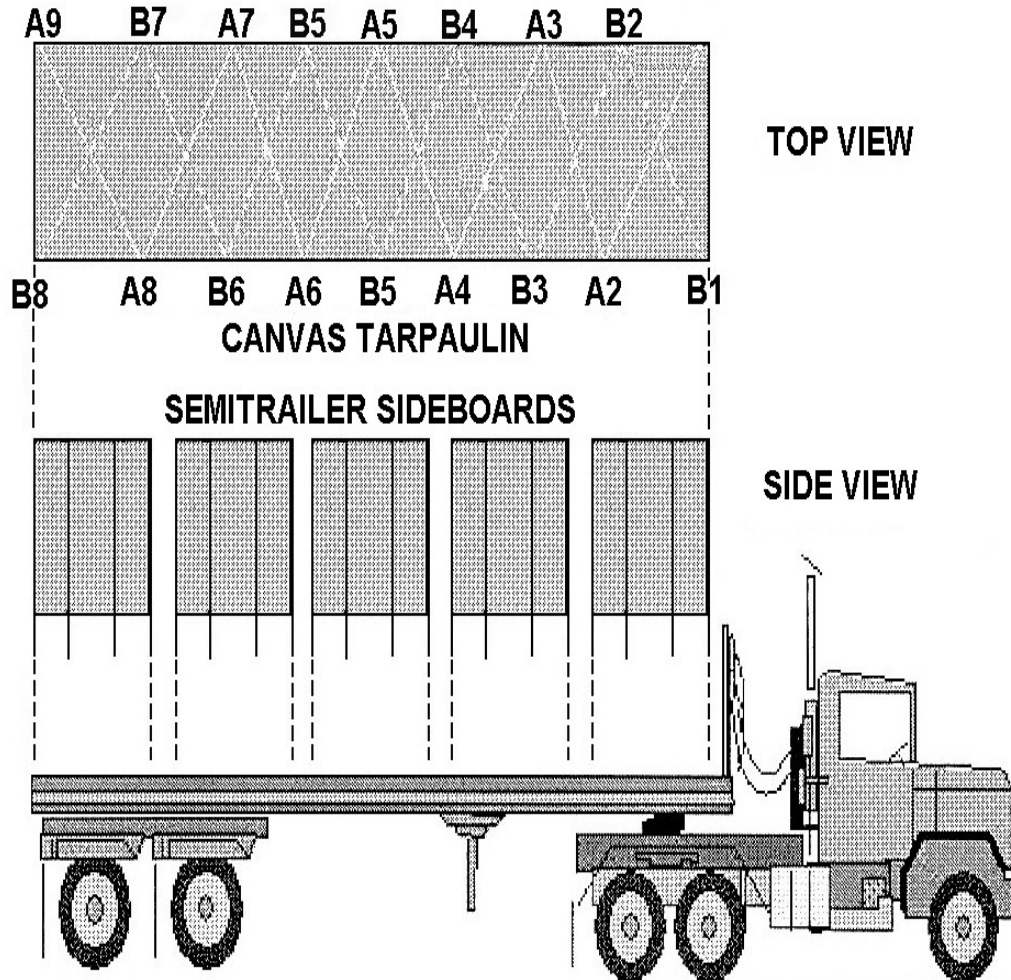


Figure 3-29.

Load Lashing

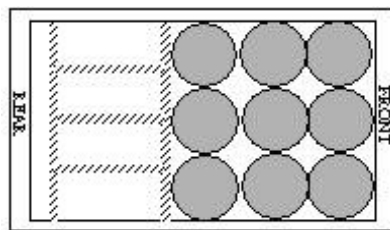


Figure 3-28.

Blocking and Bracing

- a. Block and brace load as needed.
- b. Attach and secure all necessary web tiedown straps.

(1) Ensure all strap hooks are completely engaged and safety latches are completely closed around tiedown anchor point.

(2) Ensure that strap is tensioned to form at least 1 1/2 turns on the take-up spool. This is accomplished after web-to-web contact has been made on the take-up spool. To prevent movement of cargo, each tiedown must be tightened until about equal tension is applied throughout the tiedown arrangement.

(3) After tensioning is completed, the take-up spool-locking latch must be checked to ensure that it is fully seated at both ends of the spool in the matching locking notches. The scuff sleeve may have to be removed to allow tightening of tiedowns. Secure loose ends of straps by suitable means.

(4) Reinforce sharp edges of cargo with suitable materials to prevent both crushing edges of the load when strap is tensioned and to prevent slicing into strap webbing.

c. Lash the load and canvas to the truck.

NOTE: Load lashing is done to protect the load and prevent casual observation for sensitive items.

(1) Fasten the end of one rope to one of the front lash hooks or rings (A1).

(2) Pass the rope diagonally across the top of the load through or under the second rope support on the opposite side (A2).

(3) Pass the rope diagonally back across the top of the load through or under the third rope support (A3). Pull the rope tight.

(4) Continue this process until you reach the rear of the vehicle. Secure the rope.

(5) With the second rope, repeat the entire process, starting at the front lash hook or ring (B1).

4. Secure ammunition to PLS/HEMTT-LHS flatrack using web straps.

NOTE: The M1077 and M1 flatracks are applicable to this step. Web straps are used to secure boxes, pallets, and off shaped cargo.

NOTE: All items, no matter how small, should be secured in place.

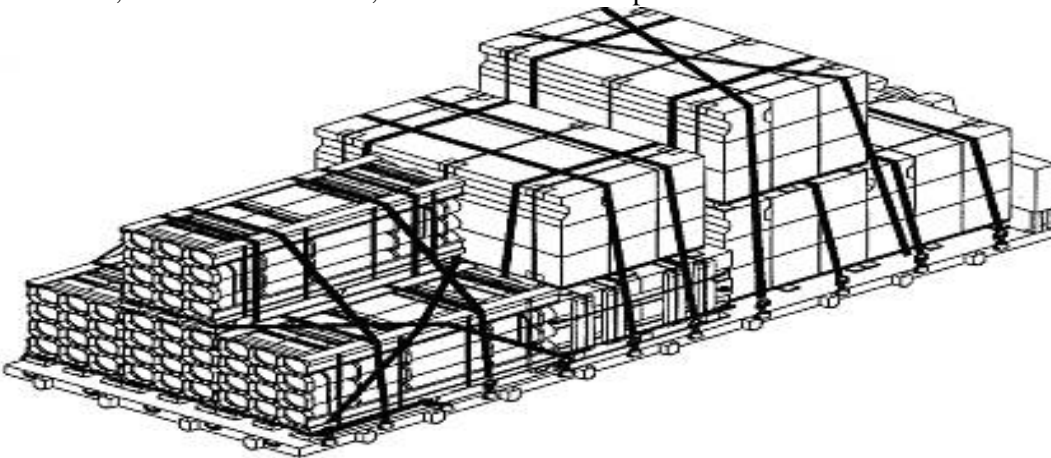


Figure 3-30.

Tiedown on Flatrack

a. Refer to flatrack data plate for particular characteristics regarding the flatrack you are using.

- b. Use small tiedown rings for cargo no heavier than 10,000 pounds.
- c. Use large tiedown rings for cargo no heavier than 25,000 pounds.
- d. Check for proper center of gravity (CG) mark on flatrack and use as basis for load positioning. CG markings on the M1077 and M1 are different.
 - (1) CG for the M1077 is 106 inches from front edge of flatrack.
 - (2) CG for the M1 is 116 inches from front edge of flatrack.
- e. Attach all web strap tiedown to load.
 - (1) Ensure all strap hooks are completely engaged and safety latches are completely closed around tiedown anchor point.
 - (2) Ensure that strap is tensioned to form at least 1 1/2 turns on the take-up spool. This is accomplished after web-to-web contact has been made on the take-up spool. To prevent movement of cargo, each tiedown must be tightened until about equal tension is applied throughout the tiedown arrangement.
 - (3) After tensioning is completed, the take-up spool-locking latch must be checked to ensure that it is fully seated at both ends of the spool in the matching locking notches. The scuff sleeve may have to be removed to allow tightening of tiedowns. Secure loose ends of straps by suitable means.

WARNING

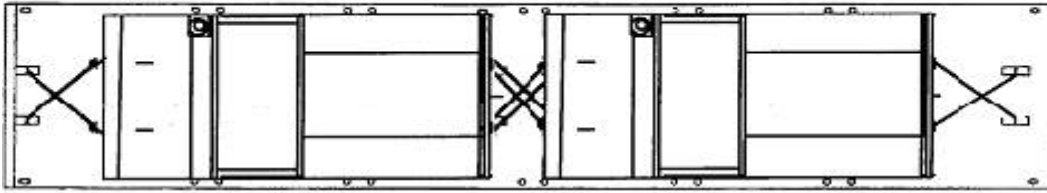
WARNING:

Extremely hazardous handling behavior can occur if payloads near the gross load rating are loaded in such a way that their CG falls rearward of the longitudinal center of the flatrack.

NOTE: Cargo such as boxes, pallets, and odd shaped cargo should be loaded as far forward and as low as possible on the flatrack.

- (4) Reinforce sharp edges of cargo with suitable materials to prevent both crushing edges of the load when strap is tensioned and to prevent slicing into strap webbing.
- 5. Secure payload vehicle to semitrailer using load binders and chains (general procedures applicable to M872 semitrailers).

TOP VIEW



SIDE VIEW

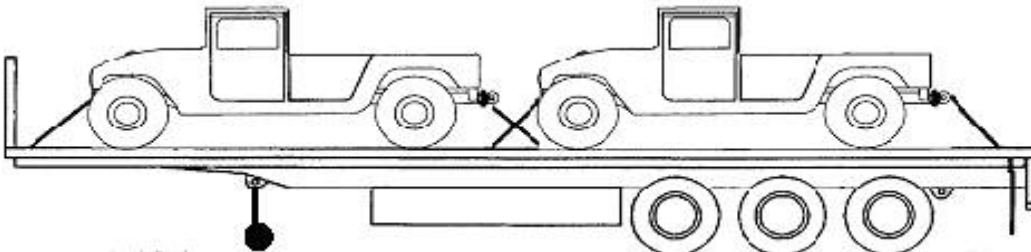


Figure 3-31.

Vehicle Payload on M872 Semitrailer

- a. Emplace chock blocks as necessary.
- b. Adhere to all safety issues concerning chains and load binders.
 - (1) Failure to use load binder properly may result in serious injury or even death.
 - (2) Do not operate load binder while standing on the load.
 - (3) Move handle with caution. It may whip - keep body clear.
 - (4) Keep yourself out of the path of the moving handle.
 - (5) You must be familiar with state and federal regulations regarding size and number of chain systems required for securing loads on trucks.
 - (6) Always consider the safety of nearby workers as well as yourself when using load binders.

WARNING

WARNINGS:
 USE CAUTION WHEN MOVING AROUND LOAD ON SEMITRAILER. A FALL FROM THE SEMITRAILER COULD CAUSE SERIOUS INJURY.

NEVER USE A CHEATER PIPE OR HANDLE EXTENDER TO RELEASE HANDLE. USE A STEEL BAR AND PRY UNDER THE HANDLE AND STAY OUT OF THE PATH OF HANDLE AS IT MOVES UPWARD.

- (7) While under tension, load binders must not bear against an object.

c. Attach chains and load binders to front and rear of vehicle.

NOTE: It is not possible to illustrate all possible configurations in this step of tying down a vehicle on the M872 semitrailer. The vehicle included is the M998 HMMWV, 1 1/4 ton vehicle. Similar vehicles may be used as substitute.

d. The following restrictions apply to this procedure (NTE = Not To Exceed).

(1) Vehicle payload NTE 12,000 lbs. Use 3/8-inch chain. One chain required for each corner of vehicle.

(2) Vehicle payload NTE 17,000 lbs. Use 3/8-inch chain. One chain for left and right front corners of payload vehicle. Two chains required for left and right of rear corners of vehicle.

(3) Vehicle payload NTE 19,000 lbs. Use 7/16-inch chain. One chain for each front corner of vehicle payload. Two chains required for left and right rear corners of vehicle payload.

(4) Vehicle payload NTE 27,000 lbs. Use 7/16-inch chain. One chain for left and right front corners of payload vehicle. Two chains required for left and right rear corners of vehicle payload.

(5) Vehicle payload NTE 48,000 lbs. Use 3/4-inch chains. One chain for left and right front corners of payload vehicle. Two chains required for left and right rear corners of vehicle payload.

CAUTION

CAUTION:

All chains are attached to the cargo tiedown rings. DO NOT use the outside stake pockets of the semitrailer for vehicle payloads.

NOTE: Additional chains are required on the rear of the vehicle, because forces seen when braking are higher than when accelerating.

(6) Vehicle payload NTE 67,000 lbs. Use 3/4-inch chains. One chain for left and right front corners of payload vehicle. Two chains required for left and right rear corners of vehicle payload.

e. Use only tiedown provisions on the vehicle to attach chains (refer to 1c(2) above).

f. Attach load binder hooks to chains so that open part of hook throat faces upward whenever possible. Secure load binder handle by wiring to chain.

6. Ensure supervisor checks load for security prior to vehicle movement.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Ensured load was properly positioned for tiedown.	_____	_____
2 Inspected tiedown materials.	_____	_____
3 Secured general cargo to bed of 5-ton cargo truck using web tiedown straps.	_____	_____

Performance Measures	GO	NO GO
4 Secured ammunition to flatrack or CROP using nylon tiedown web straps.	_____	_____
5 Secured payload vehicle to semitrailer using load binders and chains.	_____	_____
6 Ensured that supervisor checked load prior to movement.	_____	_____

Evaluation Guidance: None

References

Required

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TEA PAM 55-20 Tiedown Handbook for Truck Movements

TM 3-34.86 Rigging Techniques, Procedures, and Applications {MCRP 3-17.7j}

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977; Truck, Cargo, Wit

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-365-10 OPERATORS INSTRUCTIONS MANUAL FOR M1078 SERIES, 2-1/2 TON, 4X4 LIGHT MEDIUM TACTICAL VEHICLES (LMTV) TRK, CAR., LMTV, M1078 W/WN (NSN 2320-01-360-1898) (EIC: BHH) W/O WN (2320-01-354-3385) (EIC: BHD) TRK

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,

Required

M1083 W/WN (2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: BR2)

Primary

Subject Area 5: Adverse Terrain/Weather Operations

551-88M-1361

Operate Vehicle Under Adverse Conditions

WARNING

WARNING:

Wear hearing protection while operating vehicle.

Wear seat belts while operating vehicle.

WARNING:

Operation in sand and around sand dunes may cause front wheels to be violently jerked to one side or another. As a precaution vehicle operator should steer the vehicle by placing hands only on outside rim. Placing hands or fingers on a steering wheel spoke when the steering wheel is violently jerked to one side or the other may cause serious personal injury.

WARNING:

When operating vehicle over gullies, ravines or ditches, vehicle operator should grasp steering wheel only by the outside rim. Grasping by a spoke in steering wheel may cause personnel injury when front wheels encounter a large rock, rut, or other obstacle and spins steering wheel.

CAUTION

Road surfaces are especially slick just after the rain or drizzle begins. Loosed grease and oil mix with raindrops, quickly covering the surface with a slippery film.

Conditions: In an operational environment, your unit is moving through an area that is undergoing significant adverse weather conditions that range from extreme heat (desert), extreme cold mountainous terrain (32 degrees F to -24 degrees F), heavy rain, blowing sand, or snow in which vehicle performance is considered to be under "unusual" conditions (as defined in the vehicle TM). You are given mission-ready tactical wheeled vehicle with radiator cover, goggles, face mask, gloves, seasonal uniform and mission requirement to travel under these conditions as part of a convoy movement.

Standards: Operate the vehicle using cold weather starting and operating procedures according to the appropriate vehicle TM. Operate the vehicle while complying with all extreme hot weather operating procedures/precautions. Control the vehicle at all times following traffic regulations and rules of the road. If vehicle is so equipped, use the applicable CTIS setting to enable safe vehicle operations. All driving maneuvers must be made under these extreme conditions without becoming mired or succumbing to a conditionally-related mechanical failure.

Special Condition: Proper conduct of this task implies varied extreme conditions in which most training locations cannot replicate. To this end and for training this task to standard, the unit or institution may use a simulator such as the Common Driver Trainer (vehicle driver training simulator) to inject the various seasonal / terrain conditions for this task.

If the task is conducted under actual adverse conditions using an MRAP series vehicle, extra precautions should be taken with respect to reduced visibility and the use of a gunner to relay route and condition information to the driver. Additionally extra care should be exercised as a precaution against vehicle rollover under adverse weather and terrain conditions.

Special Standards: If an RVTT simulator is used for this task, the standard will have been met when the simulation indicates successful navigation through the obstacles/conditions without becoming mired or involved in a vehicle accident.

Special Equipment: None

Cue: Your mission is requiring you to maneuver across uneven terrain and must occur in any type weather conditions.

Note: None

Performance Steps

CAUTION

CAUTION:

Road surfaces are especially slick just after a rain or drizzle begins. Loosed grease and oil mix with raindrops, quickly covering the surface with a slippery film.

1. Operate vehicle in heavy rain.

a. If CTIS equipped, select mode for this type of weather or terrain (as necessary). Watch for indicator lamp showing correct mode selection on CTIS panel and adhere to speed restrictions.

NOTE: Recognizes that the M1078/1083 and M939 series vehicle CTIS starts automatically when engine is started and adjusts pressure to highway mode.

b. Accelerate moderately.

c. Reduce speed as necessary for conditions.

d. Moderately apply the brakes when slowing down.

e. Make no quick turns.

f. Allow at least twice the normal following distance.

g. Do not pump the brakes (ABS only).

h. Hold the brake pedal down and let the ABS system work.

i. During emergencies, steer and brake at the same time (ABS only).

j. Release enough pressure on the brakes to get the vehicle rolling again to regain steering (front ABS only).

k. Recover from skid by:

(1) Staying off the brakes.

(2) Turning quickly. Turn the steering wheel in the direction you want the vehicle to go. This lines the front of the vehicle up with the back.

(3) Countersteer-turn back the other way. As soon as the vehicle begins to straighten out, turn the wheel back the other way so that the vehicle will not turn too far.

(4) Continue to correct your steering left and right until you recover from the skid.

(5) Turn back to straight ahead.

2. Operate vehicle in extremely hot, dusty, desert environment.

NOTE: As a general rule, vehicles in a convoy should not follow directly behind one another due to high concentrations of dust in the air. Visibility may be reduced to zero facilitating a vehicle accident.

a. Don protective goggles and other facial protection if available.

b. If CTIS equipped, select mode for this type of terrain, watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.

c. Select a gear or range that will start you with a minimum of, or no clutch slippage (manual transmission) and wheel spinning.

d. Use rear wheel drive if possible due to the front wheels tendency to dig into the sand.

e. Accelerate slowly.

f. Check instrument panel gauges more frequently while operating vehicle to prevent a mechanical failure due to extremely hot temperatures.

g. Maintain a steady and even rate of movement.

h. Avoid unnecessary shifting of gears (manual transmission).

i. Anticipate difficult spots and bypass if possible.

j. Approach a dune from the windward side slope at a 90-degree angle.

k. Follow the track of preceding vehicle or break a new path depending on conditions.

l. Make wide turns.

m. Let your vehicle roll to a halt as practicable.

n. Attempt to stop on a downhill slope.

3. Operate vehicle through streams.

a. If CTIS equipped, select mode for this type of terrain; watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.

b. Follow the applicable steps provided in the vehicle TM for fording streams.

c. Check the bottom to see how firm a support can be expected.

d. Keep the cab door open when crossing frozen streams.

e. After reaching dry land, test brakes at a reduced speed by:

(1) Lightly applying and releasing brakes until normal braking is restored (Non ABS only).

(2) Apply light steady pressure on brakes until normal braking is restored (ABS only).

4. Operate vehicle in extreme cold weather (32 degrees F to -24 degrees F) and blowing snow.
 - a. Start the vehicle using cold weather starting procedures referenced in the applicable vehicle TM.
 - b. Turn on vehicle cab heater and adjust to defrost position to clear windows while engine is warming up.
 - c. Remove ice and snow from windows.
 - d. If CTIS equipped, select mode for this type of terrain; watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.
 - e. Place vehicle into motion by following general operating procedures in the applicable vehicle TM under "operation under unusual conditions."
 - f. Begin movement in second or third gear (manual transmission) rather than first of low. Engage clutch gradually to prevent wheel spin.
 - g. For automatic-transmission-vehicles use D2 range and gradually apply throttle.
 - h. Avoid quick acceleration.
 - i. Drive at reduced speed for better control and safer stops.
 - j. Display turn signals earlier than usual (if tactical situation permits).
 - k. Maintain at least double the normal following distance from the vehicle ahead.
 - l. Pump brakes to give early warning to those following of your intention to stop (Non ABS).
 - m. Apply steady brake pressure earlier when stopping for warn others of your intentions (ABS only).
 - n. Descend moderate grades in the gear normally used to climb the same grade.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Operated vehicle in rain.	_____	_____
2 Operated vehicle in extremely hot, dusty, desert environment.	_____	_____
3 Operated vehicle through streams.	_____	_____
4 Operated vehicle in extreme cold weather (32 degrees F to -24 degrees F) and blowing snow.	_____	_____

Evaluation Guidance: None

References

Required

FM 90-3 Desert Operations

Primary

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC:
BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: BR2)

Subject Area 6: Convoy Planning and Operation
551-88M-1658
Prepare Vehicle for Convoy Operations

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. Each Soldier should take every precaution not to become a victim of these dangers by following risk management rules.

WARNING

Adhere to all WARNING statements in reference materials associated with vehicle (and trailer/semitrailer) and all ancillary mission-essential equipment the driver is responsible for that accompanies the vehicle on the mission.

CAUTION

Adhere to all CAUTION statements in reference materials associated with the vehicle (and trailer/semitrailer) and all ancillary mission-essential equipment the driver is responsible for that accompanies the vehicle on the mission.

Conditions: In an operational environment, you are a vehicle operator preparing to conduct operations within a tactical convoy. Given a tactical wheeled vehicle (armored or unarmored), Basic Issue Items (BII), materials to harden vehicle (if needed) such as wire mesh, filled sandbags, rubber or fiber mats, wood shoring material, steel plates, or any other locally available materials that may be used for vehicle hardening; operational vehicle intercom system, crew-served weapon, weapons mount and ammunition, maintenance and dispatch forms, individual field equipment (TA-50 required for mission), tactical radio set with frequencies or mounted Movement Tracking System (MTS), vehicle load plan, mission load (cargo) or equipment and mission guidance.

Standards: Configure the vehicle to best suit the upcoming tactical convoy mission by performing all required before-operational maintenance and safety checks on the vehicle and securing an active unit dispatch. If the vehicle is unarmored, (as required IAW Unit SOP) harden the vehicle by placing protective materials over vital, vulnerable areas such as fuel tanks, in the cab and cargo/passenger areas. All preparations are not to interfere with the required normal operation of the vehicle and vehicle driver has full freedom of movement for control and maneuvering of vehicle. If vehicle is armored, all doors and hatches are configured according to mission requirements. All communications equipment is mounted and secured and communications checks are to be performed (operator is to enter the mission tactical radio net as required). All combat locking mechanisms are placed in the proper configuration to begin mission, as applicable. All individual and crew-served weapons are properly mounted, loaded (as directed), and are ready for test firing. All individual baggage and vehicle load (cargo) is to be loaded and secured (as applicable). If a cargo-carrying vehicle with load, operator possesses all completed load documentation in the equipment records folder as appropriate, and load is positioned and secured.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to conduct a tactical convoy movement. You are designated as a driver within this convoy.

Note: If a vehicle that is unarmored is used in the performance of this task, the use of vehicle hardening materials will always be based on availability of such materials. If the vehicle is armored or has an armor kit, ensure that all components required for mission are readily available for the Soldier and the required assistance and material handling equipment is used to install/remove/adjust such items. If armor kit does not require any installation, ensure that Soldier is provided with guidance on the proper configuration of combat locks (if installed) and other adjustments to be made for mission preparations.

Performance Steps

1. Perform all pre-departure operational and maintenance checks.
 - a. Complete all before-operational preventive maintenance checks on vehicle, and any subsystem such as communications equipment, weapons, mounted night vision devices in accordance with TM, correct deficiencies or refer to proper maintenance level.
 - b. Ensure all completed maintenance, dispatch, and accident forms are present in equipment records folder
 - c. If loading, ensure vehicle load card and load documentation to include DA Form 626 and DA Form 836 are present (HAZMAT loads only) in the equipment records folder. Ensure vehicle is placarded in accordance with TACSOP and as HAZMAT rules require for the specific load.
 - d. Ensure equipment records folder is located in vehicle cab in accordance with unit SOP.
 - e. If vehicle is to be hardened, determine adjusted cargo-carrying capacity of vehicle based on weight of sandbags and other heavy materials used to harden vehicle. Note the adjusted capacity and record in equipment records folder.
 - f. Ensure that canvas and bow assembly is installed over load to conceal from casual observation (as applicable).
 - g. Ensure all combat locking mechanisms are operating properly and in proper position as appropriate (if installed).
 - h. Mount all individual and crew-served weapons using weapons mounts located throughout the vehicle. Ensure all locks are secured as appropriate to prevent any accidental dismounting.
 - i. Load ammunition (as directed) in crew-served weapon. Ensure spare ammunition containers are located and secured per vehicle load plan.
 - j. Mount (as required) all communications equipment and ensure all items are securely locked to the vehicle. Leave key(s) in the lock while vehicle is occupied to allow for quick removal in case of vehicle rollover or other accident. If the Movement Tracking System or other satellite-based communications/tracking system is installed, ensure that system is powered up and operational.

-
- k. Check vehicle intercom system (if installed) to ensure all components are present and in working order.
- l. If the Driver's Vision Enhancer (DVE) is installed on vehicle, ensure that the system is operational.
- m. If vehicle is a cargo-carrying vehicle and is to be loaded for mission, ensure that it is loaded according to vehicle load plan by placing large, heavier items on bottom, weight is distributed evenly, and total of load does not exceed vehicle load limitations. Ensure load compatibility prior to loading. Load must be secured properly using appropriate serviceable tiedown devices.
- n. If vehicle is a prime mover ensure that the trailer or semitrailer is prepared in accordance with items 1a, b, c, d, f, and l above.
- o. Ensure that convoy control number is displayed on all sides of vehicle in accordance with convoy commander's guidance.
2. Harden the vehicle (vehicle without armor kit)(as required).
- a. Ensure all armor kit components are installed properly as required by mission.
- b. Ensure all combat locks (if installed) are configured as required by SOP for mission.
- c. If directed, harden the fuel tank by inserting steel plates under the straps.
- d. Harden vehicle doors using steel plates.
- e. If possible, place sandbags under the driver and passenger seats of the vehicle.
- f. Cover the sandbags with rubber or fiber mats to prolong the life of the sandbags and to reduce risk of injury from sand and fragments
- g. Attach steel plate to the cab floor of the vehicle, and cover it with sandbags.
- h. Stack sandbags to the top of the steel plating, using a wood frame to support them.
- i. Attach steel plates to the sides of the beds of troop-carrying vehicles to protect troops.
- j. Cover the bed of troop-carrying vehicles with steel plate and a double interlocking layer of sandbags.
3. Configure armored vehicle cab.
- a. Ensure all armor kit components (doors, access panels, hatches, turret) are installed properly as required by mission.
- b. Ensure all combat locks (if installed) are configured as required by SOP for mission.
- c. Ensure that all tools for emergency egress (combat locks) of vehicle are present
4. Report vehicle status to supervisor.
- a. Ensure that all required forms such as maintenance, dispatch and cargo-related forms are readily available for supervisor prior to movement.

- b. Provide vehicle cab configuration status.
- c. Provide status of all communications equipment to include vehicle intercom system (if installed).
- d. Provide status of all night vision devices of both individual and vehicle mounted.
- e. Provide status of all weapons and ammunition mounted/stored on vehicle.
- f. Provide vehicle maintenance status, if prime mover, provide status of trailer or semitrailer.
- g. Provide status of load (cargo) if loaded for mission.

Evaluation Preparation:

Setup: Provide the Soldier with a tactical wheeled vehicle that may or may not be armored, all materials required for PMCS and dispatching; cargo load (if applicable for mission); ancillary equipment such as radio system, CS weapon system, and any other mission-essential vehicle-mounted items.

Performance Measures	GO	NO GO
1 Performed all pre-departure operation and maintenance checks.	_____	_____
2 Hardened the vehicle.	_____	_____
3 Configured armored vehicle cabin.	_____	_____
4 Reported vehicle status to supervisor.	_____	_____

Evaluation Guidance: Give the Soldier a GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. Tell the Soldier what was done wrong and how to perform it correctly.

References

Required **Primary**
 ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-260-10 OPERATORS MANUAL FOR TRUCK, 5-TON, 6X6, M809 SERIES (DIESEL): TRUCK, CARGO: M813, M813A1 AND M814;TRUCK, BOLSTER, LOGGING;M815;TRUCK, WRECKER, MEDIUM: M816;TRUCK, DUMP: M817;TRUCK, TRACTOR: M818;TR

TM 9-2320-272-10 OPERATORS MANUAL FOR TRUCK, 5-TON, 6X6, M939, M939A1, AND M939A2 SERIES TRUCKS (DIESEL), TRUCK, CARGO: 5-TON, 6X6 DROPSIDE, M923 (2320-01-0505-2084) (EIC: BRY);M923A1 (2320-01-206-

Required**Primary**

4087) EIC: BSS);M923A

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977; Truck, Cargo, Wit

TM 9-2320-280-10 OPERATORS MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD);M998A1 (2320-01-371-9577) (EIC:BBN);TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4,

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-365-10 OPERATORS INSTRUCTIONS MANUAL FOR M1078 SERIES, 2-1/2 TON, 4X4 LIGHT MEDIUM TACTICAL VEHICLES (LMTV) TRK, CAR., LMTV, M1078 W/WN (NSN 2320-01-360-1898) (EIC: BHH) W/O WN (2320-01-354-3385) (EIC: BHD) TRK

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

TM 9-2330-359-14&P OPERATORS, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL

Required

TOOLS LISTS) FOR SEMITRAILER, FLATBED:
BREAKBULK/CONTAINER TRANSPORTER, 34
TON M872 (T

TM 9-2330-381-13 OPERATOR AND FIELD
MAINTENANCE MANUAL FOR SEMITRAILER,
TRANSPORTER, HEAVY EQUIPMENT 70 TON,
M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS
ITEM IS INCLUDED ON EM 0049)

Primary

Subject Area 7: Convoy Execution/Defense
551-88M-1359
Operate Vehicle in Convoy

DANGER

None

WARNING

See reference technical manuals for all applicable WARNING statements applicable to the task standard.

CAUTION

See reference technical manuals for all applicable CAUTION statements applicable to the task standard.

Conditions: In an operational environment (OE), given a vehicle that has not been marshaled into order of march for convoy in a high threat area, given briefing by the convoy commander, a mission-ready tactical wheeled vehicle with trailer or semitrailer, cargo to transport, tiedown materials, load-bearing vest (LBV), with kevlar, protective mask, and hearing protection. DD Form 1384 (TCMD), DD Form 518, SF Form 91, DA Form 5988-E, DA Form 5987-E, and equipment records folder.

Standards: Load or assist in loading a tactical cargo vehicle and operate the vehicle on and off-road as part of a tactical convoy movement according to specific instructions from the convoy or serial/march unit commander. Your load must be properly positioned and secured for transport. You are required to secure and complete all maintenance and operational documents associated with your vehicle and load prior to movement. Exercise heightened situational awareness by performing required scanning procedures to detect enemy threats to convoy during convoy movement. Be situationally aware of the status of your load during movement. Correctly maintain established convoy interval, speed and vehicle position within the convoy. Perform all at-halt checks on vehicle and load, and correctly react to and relay any hand and arm signals used during the convoy. Upon reaching destination unload or assist in unloading cargo and complete any required documentation portraying custody of load. Perform all requirements without injury to Soldiers or damage to the equipment.

Special Condition: Special Conditions: Convoy is operating in an OE tactical environment. Defensive preparations are applicable. "Mission-ready vehicle" is defined as a vehicle that has been hardened as appropriate, has all preventive maintenance checks completed and is in operational condition. This includes any installed communications or navigation equipment and armaments (as applicable). If the convoy column is not divided into serial/march units the convoy commander will be issuing authority for all commands.

Special Standards: Task must be performed under the serial/march unit commander's supervision.

Special Equipment: None

Cue: Mission requirement

Note: None

Performance Steps

DANGER

None

WARNING

None

CAUTION

None

1. Load cargo onto trailer/semitrailer.

NOTE: None

- a. Ensure that vehicle and trailer/semitrailer are chocked and hand brake is set.
- b. Prepare trailer/semitrailer for loading operation.
 - (1) Ensure adequate tiedown materials are on hand and prepared for use.
 - (2) Remove canvas tarpaulin, or other cover if installed.
 - (3) Check trailer/semitrailer bed and ensure cargo area is clear.
 - (4) Remove any sideboards as necessary, if installed.
 - (5) If using MHE, prepare device for operation (see applicable TM).
- c. Place heavy items on the bottom and lighter items on top.
- d. If loading payload vehicle(s) onto a semitrailer/flatrack, a ground guide must slowly guide vehicle into position.
- e. Distribute heavy cargo as evenly as possible over the bed to maintain a safe weight distribution.
- f. Keep the load as low as possible. A high load may make the vehicle difficult to control and may cause it to overturn during movement.
- g. Fill the cargo space to the maximum weight allowable.
- h. For multi-stop loads, separate cargo by destination for easy offloading.
- i. If possible, load items of uniform weight and size together.
- j. Load drums and barrels either upright or on their sides. If blocked on their sides their length should be parallel to the sides of the truck/trailer.

2. Secure cargo onto trailer/semitrailer.

- a. Block and brace cargo with lumber or other materials to keep the load from shifting or falling off the vehicle while enroute.

- b. Block crates, boxes and barrels to keep them from shifting enroute.
- c. Use crib blocking whenever possible. It need not be nailed to the floor or sides if placed tightly against the cargo to reduce damage to the floor and sideboards of the vehicle.
- d. If a gap exists between pipes or lumber and the end of the trailer, block the load with a gate constructed with 4X4 inch boards to prevent it from slipping.
- e. All lumber used for blocking must be free from knots and strong enough to provide a rigid and stable support for the load enroute.

WARNING

Ensure that both the weight limitations of the tiedown straps (or other devices used) and the tiedown anchors on the vehicle cargo bed are not exceeded or injury or death to personnel may occur or damage to equipment may result.

- f. Tiedown the load with available tiedown materials.
 - (1) Use tiedown straps for general cargo and large component items.
 - (2) Use tiedown chains or wire roper and turnbuckles or loadbinders as needed for tiedown of vheicles, CONEXs or MILVANs that are not directly connected to the transporter.
 - g. When the load must be protected from the weather, pad the corners of boxes or crates to prevent damage to the tarpaulin.
 - h. Lash the load with a tarpaulin and rope as necessary to prevent pilferage, weather damage, or casual observation if sensitive.
3. In the staging area, move the vehicle into position according to the convoy order of march.
- a. Refer to the vehicle TM for starting procedures.
 - b. Follow the ground guide to maneuver vehicle into position.
 - c. Shutdown vehicle per the TM (unless told otherwise).
4. Conduct convoy pre-departure checks.
- a. Conduct a communications check (if so equipped).
 - b. Identify by bumper number, the vehicles immediately ahead of and behind your vehicle in the convoy column.
 - c. Check load security. Adjust tiedown devices as needed.
 - d. Check security of all stowage compartments.
 - e. Conduct sensitive items check.

NOTE: Convoy commander or tactical standing operating procedure (TACSOP) may dictate specific items.

f. Ensure that the assigned weapon is loaded/unloaded according to the SOP or convoy commander's guidance.

g. Ensure that all forms required are present with the required signatures in the equipment records folder.

(1) DA Form 5988-E (Equipment Maintenance Inspection worksheet).

(2) DD Form 518 and SF Form 91 (accident forms).

(3) Any cargo load forms required.

(4) DD Form 626 and DD Form 836 (hazardous cargo only).

(5) DA Form 5987-E (Motor Equipment Dispatch).

5. Start the vehicle on signal or order from convoy commander/serial/march unit commander. Recover and stow all wheel chocks.

6. If cargo vehicle is loaded, start off slowly without placing undue strain on vehicle. Recover wheel chock and set the vehicle in motion upon signal or order from the convoy commander or serial/march unit commander.

7. Maintain the convoy speed and vehicle interval during movement.

a. Maintain visual contact with the vehicle immediately in front of and behind your vehicle (if weather permits)

b. Track the vehicle in front and the trailing vehicles to adjust your speed, interval and position.

c. Slow down when approaching curves, especially if heavily loaded, to prevent the vehicle from overturning.

d. Allow extra stopping distance if vehicle is heavily loaded.

8. Maintain a high state of situational awareness.

a. Perform side-to-side scanning 9 o'clock to 1 o'clock.

b. Watch for threats to the convoy such as:

(1) Suspicious individuals or groups along roadway.

(2) Unexploded improvised explosive devices (IEDs).

(3) Abandoned vehicles along the roadway.

(4) Dead animals along the roadway.

(5) Overpasses over the route of march.

-
- (6) Built-up areas, especially multi-story buildings close to the roadway.
 - (7) Intersections.
- c. Respond to threats in accordance with unit TACSOP.
 - d. Monitor vehicle instrument panel gauges, listen, and be aware of any unusual vehicle performance while moving.
- 9. Acknowledge hand and arm signals by adjusting vehicle speed, interval and position during movement. Relay hand-and-arm signals to the trailing vehicle drivers.
 - 10. During halt, position the vehicle as directed.
 - 11. During halt, shutdown the vehicle (unless told otherwise for the mission) (if this method is used).
 - a. Refer to the vehicle TM for proper shutdown procedures.
 - b. Chock the vehicle wheels as necessary.
 - 12. During halt, perform during-operation maintenance checks on the vehicle and trailer (if so equipped). Correct of record any faults noted during movement.
 - a. Record any uncorrectable faults.
 - b. Notify the convoy chain-of-command if the vehicle becomes non-mission capable (NMC).
 - 13. During halt, check security and condition of load (if loaded).
 - a. Check tiedown devices for security.
 - b. Account for all sensitive items prior to halt area departure.
 - c. Ensure that the load has not shifted during movement.
 - d. Notify convoy chain of command if the load was damaged during movement.
 - 14. Resume convoy movement on signal or order from convoy commander.
 - 15. For off-road driving operations ensure all cargo is secure to prevent shifting and perform the following steps.
 - a. Negotiate shallow ditches.
 - (1) Stop the vehicle and check the terrain for obstructions.
 - (2) Select the proper gear or gear range for this type of terrain.
 - (3) Slowly steer the tractor toward the ditch so that one wheel on the axle will leave the ditch as the other wheel on the same axle enters it.

(4) Closely observe for any side movement of trailer or semitrailer to determine any steering corrections while entering ditch. If loaded, vehicle (more top-heavy) is more likely to slide sideways so use extra caution to prevent vehicle rollover.

b. Negotiate deep ditches.

(1) Stop the vehicle and check terrain for obstructions.

(2) If equipped with CTIS, select proper mode for terrain, monitor panel lights to verify system settings to inflate or deflate tires, and adhere to vehicle speed restrictions.

(3) Place the transfer shift lever into all-wheel drive or four-wheel drive and into lowest gear or gear range.

(4) Approach the ditch at an angle and accelerate the vehicle enough to keep it rolling as it goes up the other side.

c. Negotiate through gullies and ravines.

(1) Repeat steps 13b(1)-(3)

(2) Ease the front wheels over the edge and into the ravine.

(3) Steer a straight course so that both front wheels strike the bottom at the same time.

(4) Accelerate enough so that the vehicle can climb up the opposite bank.

d. Negotiate through wooded terrain.

(1) Repeat steps 13b(1)-(3)

(2) Maneuver around obstructions watching for stumps and other obstructions.

e. Negotiate rocky terrain.

(1) Repeat steps 13b(1)-(3)

(2) Drive slowly choosing route while advancing.

(3) Once clear of terrain stop, check and remove rocks wedged between duals.

f. Negotiate through streams (fording).

(1) Repeat steps 13b(1)-(3).

(2) Drive through the water at a steady speed. Do not attempt to shift gears (manual trans).

(3) Dry the brakes by applying slight pressure over a straight, level stretch of road until normal braking occurs.

g. Negotiate through sandy areas.

(1) If equipped with CTIS, select proper mode for terrain, monitor panel lights to verify system settings to inflate or deflate tires, and adhere to vehicle speed restrictions.

(2) If using manual transmission, do not attempt to shift gears in deep sand.

(3) Maintain momentum until back on hard or packed surface.

16. As directed, move the vehicle into the assembly area.

a. Follow the ground guide into the assembly area (if guide is available).

b. Follow the lead vehicle into the assembly area (as directed if the guide is not available).

17. Move vehicle into position for off-loading cargo. Shutdown engine (unless needed for off-loading), and chock wheels.

a. Remove canvas and bows (if installed).

b. Prepare MHE for operation. Ensure there are no overhead clearance restrictions.

c. Remove tiedown materials from cargo being cautious of load shifting.

18. Unload cargo as directed.

a. Ensure load documentation is completed and given to appropriate authority for transfer of custody.

b. Recover all tiedown materials and stow in appropriate location, raise and secure tailgate or trailer/semitrailer ramps as applicable.

19. Shutdown the vehicle at the destination (unless told otherwise).

20. Once convoy has closed on destination (and/or RP), perform after-operation preventive maintenance checks.

a. Maintain situational awareness.

b. Refer to the vehicle TM for proper procedures.

c. Follow additional guidance from the supervisor or serial/march unit commander.

21. Turn in vehicle dispatch, maintenance worksheets, and load documentation as required to the supervisor or convoy chain of command (as directed).

Evaluation Preparation:

None

Performance Measures

1 Loaded cargo onto trailer/semitrailer.

GO **NO GO**

2 Secured cargo onto trailer/semitrailer.

	GO	NO GO
Performance Measures		
3 Moved the vehicle into position in according to the convoy order of march.	_____	_____
4 Conducted final pre-departure checks.	_____	_____
5 Started the vehicle on signal or order from the serial/march unit or convoy commander.	_____	_____
6 Signalled by convoy commander set the vehicle in motion slowly without placing undue strain on the vehicle.	_____	_____
7 Maintained convoy speed and vehicle interval during movement.	_____	_____
8 Maintained a high state of situational awareness during movement.	_____	_____
9 Acknowledged hand and arm signals by adjusting vehicle speed, interval and position.	_____	_____
10 Positioned the vehicle as directed during halt.	_____	_____
11 Shutdown the vehicle during halt.	_____	_____
12 Performed all during-operation maintenance checks on the vehicle and trailer during halt.	_____	_____
13 Negotiated off-road driving terrain without becoming mired, damaging vehicle or load.	_____	_____
14 Checked security and condition of load during halt (if loaded).	_____	_____
15 Resumed convoy movement on signal or order from the convoy commander.	_____	_____
16 Moved the vehicle as directed into the assembly area.	_____	_____
17 Moved the vehicle into position for off-loading cargo.	_____	_____
18 Unloaded cargo and placed on solid surface.	_____	_____
19 Shutdown the vehicle at the destination (unless told otherwise).	_____	_____
20 Performed after-operation maintenance checks.	_____	_____
21 Turned in the vehicle dispatch, maintenance worksheets, and load documentation as required to the supervisor or convoy chain of command.	_____	_____

Evaluation Guidance: None

References

Required
ATP 4-11 ARMY MOTOR TRANSPORT

Primary

Required
OPERATIONS

Primary

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-272-10 OPERATORS MANUAL FOR
TRUCK, 5-TON, 6X6, M939, M939A1, AND
M939A2 SERIES TRUCKS (DIESEL), TRUCK,
CARGO: 5-TON, 6X6 DROPSIDE, M923 (2320-
01-0505-2084) (EIC: BR Y);M923A1 (2320-01-206-
4087) EIC: BSS);M923A

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC:
BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: BR2)

TM 9-2320-392-10-1 OPERATORS MANUAL
FOR THE M1083A1SERIES 5 TON, 6X6
MEDIUM TACTICAL VEHICLES (MTV)
VOLUME NO. 1 OF 2 MODEL TRK., CAR.,
M1083A1 W/WN (2320-01-447-3884) (EIC
BUL);W/O WN (2320-01-447-3890) (EIC
BUL);W/O WN

TM 9-2320-392-10-2 OPERATORS MANUAL
FOR THE M1083A1 SERIES 5 TON, 6X6
MEDIUM TACTICAL VEHICLE (MTV)
VOLUME NO. 2 OF 2. MODEL TRK, CAR.,
MTV, M1083A1 W/WN (NSN 2320-01-447-3884)
(EIC BUL);W/O WN (2320-01-447-3890) (EIC
BT9

551-88M-1650
Operate Vehicle using the Driver's Vision Enhancer

DANGER

Adhere to all DANGER statements in the DVE and vehicle Technical manuals.

WARNING

Adhere to all WARNING statements in the DVE and Vehicle technical manuals.

CAUTION

Adhere to all CAUTION statements in the DVE and Vehicle technical manuals.

Conditions: In an operational environment, given a tactical wheeled vehicle equipped with the driver's vision enhancer already mounted and connected, route to maneuver, and conditions of limited visibility or darkness.

Standards: Operate the Driver Vision Enhancer (DVE), then safely operate the vehicle through a pre-designated route with limited visibility while relying on the use of the driver's vision enhancer to negotiate terrain. All maneuvers are to be completed with 100% accuracy, and without personnel injury, damage to equipment or surroundings.

Special Condition: Training institution must ensure adequate transition from illumination to darkness is accomplished to maximize the Soldiers' ability to use the night vision devices.

Special Standards: None

Special Equipment: None

Cue: Inclement Weather.

Note: Each Soldier is to alternately operate the vehicle while using either the Driver's Vision Enhancer (screen down without wearing NVGs) and the Night Vision Goggles (without the DVE, screen up).

Performance Steps

1. Perform Before-operation preventive maintenance checks.
 - a. Refer to TM 11-5855-306-10, PMCS table 2-2, page 2-9 for Before-operation preventive maintenance checks.
 - b. Record any uncorrectable faults on maintenance inspect worksheet or faults that render item Not Mission Capable.
2. Start the vehicle. Refer to the applicable vehicle TM for proper starting procedures.
3. Perform initial setup procedures for the DVE. (DO NOT attempt to operate vehicle using both the NVGs and the DVE. Remove NVGs FIRST.

NOTE: Before powering up the unit, ensure that the following control positions are as indicated in the following steps.

WARNING

WARNINGS:

Before operating the vehicle, ensure that the dve azimuth and elevation controls are in the locked positions. This will ensure that the dve is looking straight ahead when operating the vehicle. Manually verify forward and lock position prior to operating the vehicle. Helmets must always be worn when driving with the dve installed. The dve display should be removed from its mount when not in use for extended driving operations to minimize the risk of head strike injuries.

- a. Rotate Sensor Assembly azimuth and elevation to straight ahead and level 00 detent positions.
 - b. Set DVE POWER switch to OFF (down position).
 - c. Set VIDEO switch to SENSOR (up position).
 - d. Set POLARITY switch to WHT-HOT (up position).
 - e. With DISPLAY BRIGHTNESS control turned fully Counterclockwise (ccw), rotate knob approximately ¼ turn Clockwise (cw).
 - f. Set SENSOR LEVEL and SENSOR GAIN controls to full ccw (AUTO) detent position.
4. Place DVE into operation.
- a. Set POWER to ON position (up). Allow 5 minutes for system electronics to stabilize for maximum image clarity.
 - b. Leave the VIDEO switch in the SENSOR (up position) for sensing input from the Sensor Assembly to the display. For external input to display, set switch to EXT (down position).
 - c. Adjust the seat height and/or Display module to place the display at eye level.

NOTE: If the display becomes degraded while driving the vehicle, such as the presence of dead pixels and/or video noise that prevents the driver from performing his/her mission, then immediately bring the vehicle to a safe stop to avoid a collision. If the problem cannot be fixed, report the situation to higher level of maintenance.

- d. Adjust the DISPLAY BRIGHTNESS control until the scene brightness is suitable for operator viewing.
- e. Select either the AUTO LEVEL or the MANUAL LEVEL position.

WARNING

WARNINGS:

The auto level and auto gain modes do not react instantly to rapidly changing scenery (shade to sun, sun to shade). The auto level and auto gain modes require one or two seconds to compensate. The automatic gain and level features will adjust faster than manual adjustments. If necessary, slow vehicle.

There are two short periods each day called crossover periods or diurnal cycle when most natural objects are about the same temperature. This is when they have cooled down at night and as they are heating up in the early morning. Since objects are near the same temperature, there is not much temperature difference for the dve to use, degrading the image display quality. This is also what happens when a heavy rain makes all natural objects close to the same temperature.

- f. Adjust the SENSOR GAIN control to automatic or manual position. The AUTO GAIN mode should normally be used while driving the vehicle.
 - g. Set scene POLARITY switch to either WHT-HOT (up position) or BLK-HOT (down position).
 - h. Set azimuth position by rotating Pan/Tilt Mechanism (PTM) to desired setting. Lock azimuth-locking mechanism.
 - i. Set elevation position to desired position. Lock elevation-locking mechanism.
5. Maneuver vehicle while relying on DVE for terrain negotiation.
- a. Operate the vehicle while monitoring the DVE screen.
 - b. Adjust vehicle speed as necessary while DVE is making auto adjustments to conditions.
 - c. Exercise increased caution when operating vehicle, using DVE for navigation.
6. Shutdown DVE.
- a. Press FORWARD POSITION switch.
 - b. Visually verify sensor is in the straight ahead and level position.
 - c. Set SENSOR LEVEL and GAIN controls to full ccw (AUTO) detent position.
 - d. With the DISPLAY BRIGHTNESS control turned fully ccw, rotate the knob approximately ¼ turn cw.
 - e. Set POLARITY switch to WHT-HOT (up) position.
 - f. Set VIDEO switch to SENSOR (up) position.
 - g. Set POWER switch to OFF position (down).
 - h. Swing the DVE viewer screen up and out of view.
7. Shutdown vehicle. Refer to vehicle TM for proper shutdown procedures.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Performed PMCS.	_____	_____
2 Started vehicle.	_____	_____

Performance Measures	GO	NO GO
3 Performed initial set up of DVE.	_____	_____
4 Placed DVE into operation.	_____	_____
5 Operated vehicle while relying on DVE for terrain negotiation.	_____	_____
6 Shutdown DVE.	_____	_____
7 Shutdown vehicle.	_____	_____

Evaluation Guidance: None

References

Required

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 11-5855-306-10 OPERATORS MANUAL FOR MONOCULAR NIGHT VISION DEVICE (MNVD) AN/PVS-14 (NSN 5855-01-432-0524) (EIC: N/A) {TM 10271A-10/1A}

TM 11-5855-311-12&P-2 Operator's and Unit Maintenance Manual for Driver's Vision Enhancer

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

551-88M-1656

Conduct Refueling Operations using Tactical Refueling Vehicles

Conditions: In an operational environment, given an M1088 Tractor with M967 tank semitrailer with full or partial load of fuel, basic issue items (BII), grounding and bonding materials, protective clothing and equipment, fire extinguishers, spill containers, appropriate gauging equipment, dispensing log, assistance from another person, vehicle(s) to refuel, level ground, and instructions on amount of fuel to dispense.

Special Conditions: Must have hazardous materials endorsement on operator's license. Possess a fuel handler's card. Refueling operations requires two persons.

Standards: Emplace your refueling vehicle, perform all pre-operation safety checks, ground and bond the vehicle properly, refuel designated vehicle(s) or storage area, contain and recover any spillage, and properly prepare for movement to subsequent locations without violating any safety measures, causing injury to personnel, damage to equipment, or contaminating the environment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is assigned to provide refueling capability to units moving along a designated route of movement in theater.

Note: The performance of this task is usually the responsibility of the tank refueler operator of a Medium Truck Company POL.

Performance Steps

1. Apply risk management procedures.

a. Refer to FM 5-19 and local SOP for guidelines applicable to this procedure. Ensure all aspects of these operations are assessed for the risk involved.

b. Fill out the risk assessment worksheet (DA Form 7566). Notify chain-of-command if assessment determines requirement for approval from higher authority.

WARNING

WARNING:

Frequent inspection of equipment, safety devices, and working areas must be performed to ensure personal and operational safety and to correct potential or actual hazards. The semitrailer must not be operated if any of the following conditions exist.

2. Perform before-operation preparations.

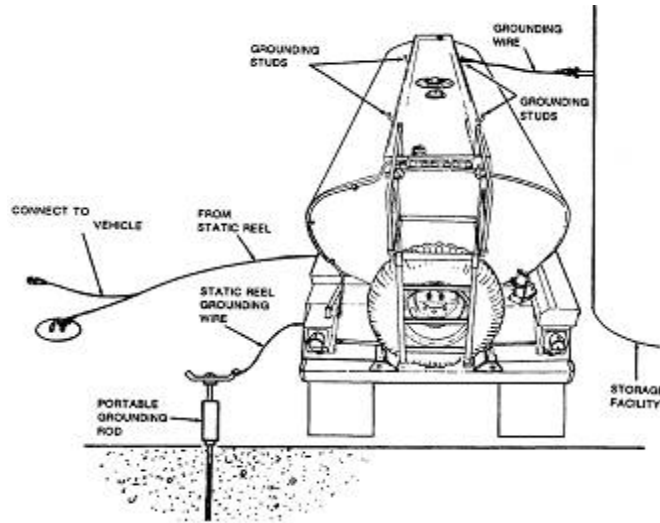


Figure 3-32.

Typical Grounding Connections

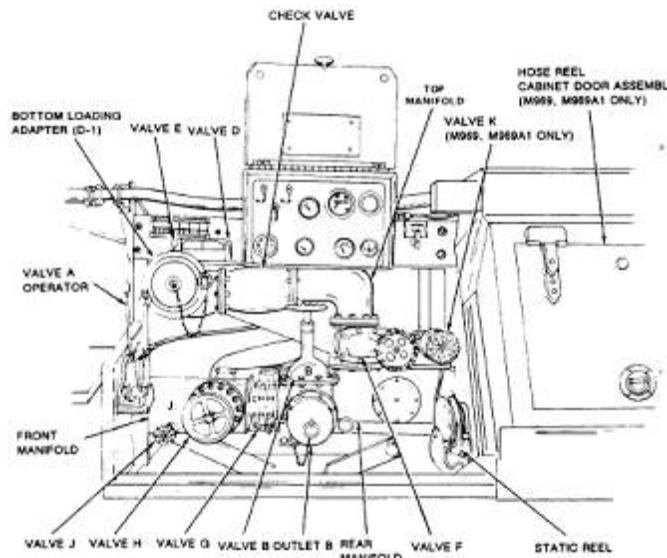


Figure 3-33.

Engine and Pump Assembly

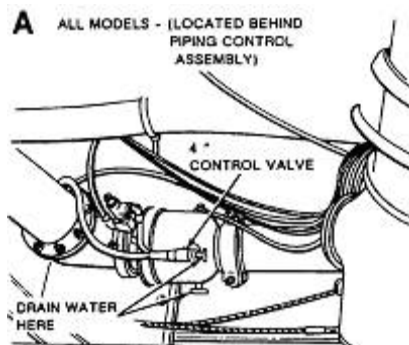


Figure 3-34a.

Pilot Line Water Drains-1

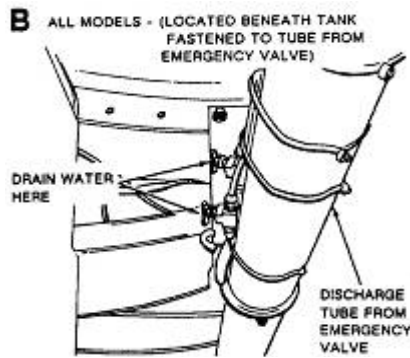


Figure 3-34b.

Pilot Lines Water Drains-2

- a. Fuel leaks.
- b. Damage to lighting fixtures, wiring or electrical conduits, or lights inoperative.
- c. Damage to towing vehicle or semitrailer.
- d. Primary or parking brake systems inoperative.
- e. Vents plugged, inoperative, or removed.

NOTE: Pressure, vacuum, and fusible vents are installed to meet code requirements and to protect the semitrailer from damage. A plugged or inoperative vent can cause extensive shell damage if design pressure or vacuum is exceeded. The fusible vents are designed to operate at high temperatures. If these vents are coated with paint, dirt, or other foreign material, the temperature when relief occurs may be greatly increased.

WARNING:

ENSURE THAT GROUNDING CONNECTIONS ARE MADE PROPERLY AND FIRMLY BEFORE ANY FUELING OPERATIONS BEGIN. THIS WILL ENSURE THAT GROUNDING CONNECTIONS WILL NOT RELEASE, THUS ELIMINATING THE POSSIBILITY OF SPARKS CAUSED BY STATIC ELECTICITY, WHICH WILL IGNITE FUEL.

WARNING

WARNING:

Before and after fuel servicing operations, all valves are to be in the closed position. Failure to follow this warning could result in excessive spillage and create a fire hazard.

- f. Prior to starting engine perform the following steps.

(1) Ensure all manually operated valves are closed. This is a must before either starting or ending any fuel servicing operations.

(2) To prevent collapse of tank when filling or emptying tank, ensure that the top vent is working properly.

- (3) Ground and bond vehicle.
- (4) Remove fire extinguishers and bring them to the point of operation.
- (5) Ensure engine fuel tank has enough fuel for operation.
- (6) Remove engine dipstick and check oil level. Refill as needed.

WARNING

WARNING:

Carbon monoxide can be deadly. Do not operate engine in an enclosed area unless it is adequately ventilated.

- (7) Check air cleaner restriction indicator. Clean or replace filter element as needed.

g. Starting the engine.

- (1) Rotate engine switch to RUN. When engine is warm or restarted after short periods of time, preheating is usually not necessary. In temperatures below 30 degrees F, a longer preheating period is needed.
- (2) Rotate pre-heater switch to ON for about one minute. Ensure indicator light has illuminated.
- (3) After one minute, continue to hold pre-heater switch and rotate starter switch to START.
- (4) Release both starter and pre-heater switches after engine starts.
- (5) Check the gauges for correct indication. Stop the engine if a system malfunction is indicated.

CAUTION

CAUTION:

Throttle engine to fast idle (1,200 rpm) for about 5 minutes before stopping to allow for gradual cooling of engine.

h. Stopping engine (if not used for refueling operations).

- (1) Release throttle to low idle.
- (2) Rotate engine switch to STOP.

i. Engine operation - High temperature.

(1) See that nothing obstructs the air flow to and from the engine oil cooler and the cylinder cooling fins.

- (2) See that shrouds are properly installed and in good condition.

j. Engine operation - Low temperature.

NOTE: If operating in cold weather, cover (dust boot) of fuel stop solenoid must be cut off. Cover stiffens in cold temperatures and stops flow of fuel to engine.

- (1) Ensure that engine has the proper oil and fuel for the existing temperatures.
- (2) Keep batteries fully charged.

NOTE: Entire cold weather starting procedures may not be required. The colder the temperature, the more pre-heating and cranking will be required.

- (3) When temperatures are below 30 degrees F, perform the following:
 - (a) Pull throttle about half way out.

- (b) Engage pre-heater switch and leave turned on until engine has started, approximately five minutes at coldest temperature.

- (c) After 1 3/4 minutes, move engine switch to RUN position. Wait 15 seconds, then engage starter switch to START position and crank engine for 15 seconds. Disengage starter switch.

- (4) Wait one minute and engage starter switch. Crank for one minute or until running. Engine should be firing. Disengage starter switch.

- (5) If engine still has not started, engage starter switch and crank for 1 minute. Engine should be firing. Disengage starter switch when engine is increasing speed.

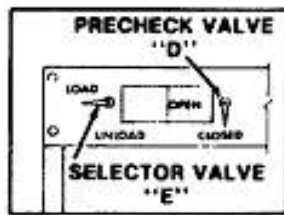
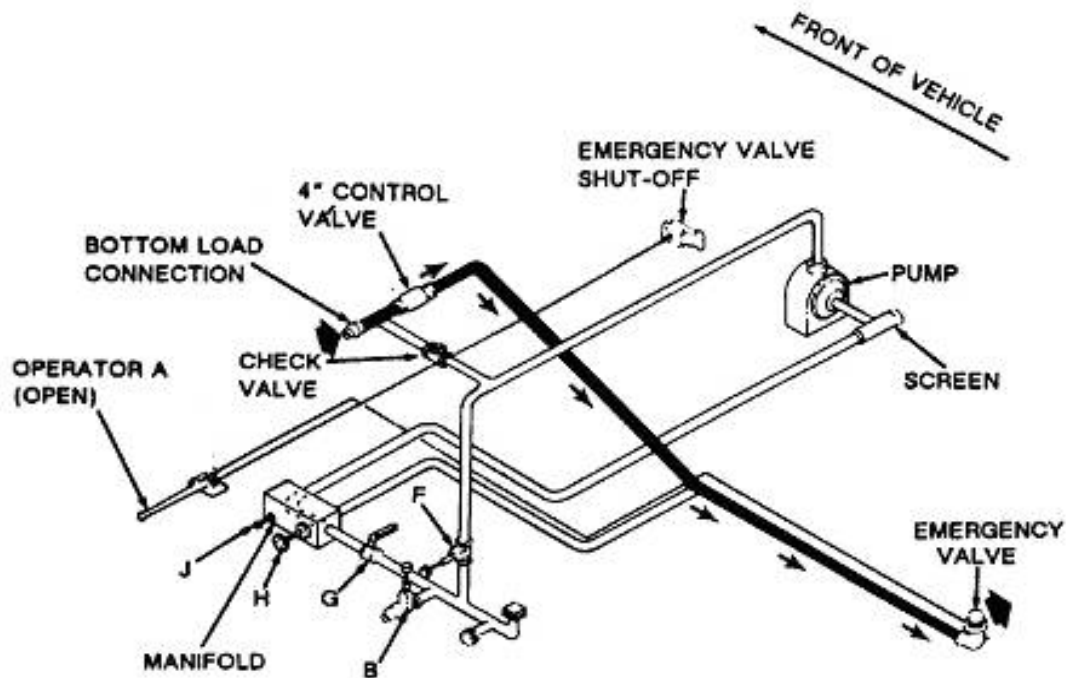
- (6) Turn off pre-heater switch.

WARNING

WARNING:

Top loading should only be done when bottom loading is not possible. Bottom loading minimizes the level of static electricity buildup. When top loading through fill cover, there is no automatic shutdown. Man the loading hose to avoid fuel spillage. Use capacity indicator gauge and dipstick gauge to determine amount of fuel loaded. Failure to follow this warning may result in uncontrolled fuel spillage and a fire or explosion hazard. Ladder has narrow tread, be careful when climbing.

3. Conduct basic haul and fuel services (operation NOT involving engine and pump).



NOTE:
OPERATION BEGINS
AND ENDS WITH
ALL VALVES CLOSED.

Figure 3-35.

Self-Load Flow Diagram

- a. Top Loading (the product is not filtered or metered by the vehicle).
 - (1) Ensure all valves are closed.
 - (2) Ground and bond the semitrailer before opening the fill cover.
 - (3) Place fire extinguishers at point of operation.
 - (4) Slowly open fill cover. Insert hose far enough to keep the end of the hose in contact with the bottom of the tank.
 - (5) Slowly begin the flow and fill the tank no further than to the bottom of the capacity indicator (one person at storage tank valve or other fuel source and other holding fill tube into semitrailer).
 - (6) Remove fill hose. Close and secure the manhole cover.

(7) Drain accumulated water. Close all valves. Put the container under the manifold drain in the piping control cabinet. Open the emergency operator valve. Slowly open the system drain valves.

(8) Remove the grounding wires and store fire extinguishers.

b. Bottom loading (the product is not filtered or metered by the vehicle).

(1) Ensure all valves are closed.

(2) Ground and bond the vehicle.

(3) Remove cover from the bottom loading connection and connect the bottom loading hose to the bottom loading connection.

(4) Remove the fire extinguishers and bring to point of operation.

(5) On the M967, put the selector valve in the LOAD position.

(6) Open the emergency valve operator.

WARNING

WARNING:

When filling the tanks by means of bottom loading, a test of the pre-check valve is mandatory. If this system is not functioning, stop all operations. Determine the problem and have it corrected by a qualified technician. Failure of automatic shut-off to function may result in uncontrolled fuel spillage and danger of fire and explosion.

(7) Begin the flow from the outside source.

(8) After the flow has begun, open the pre-check valve to pre-check the shutoff float. Flow should stop after about 20 to 25 seconds to indicate that the float is functional. If it is not working, stop all operations and notify higher maintenance.

(9) Close the pre-check valve. The flow will resume in about 20 seconds. Be prepared to stop the fuel supply at the loading facility in event of shut-off float malfunction, if leaks are apparent, or other unusual condition are seen.

(10) When tank is full, the flow should stop automatically. Close all valves, replace all covers, and disconnect the hoses.

(11) Drain the accumulated water in the same manner as stated in 1a(8) above for top loading.

(12) Remove the grounding wires.

(13) Stow fire extinguishers.

c. Self-loading using vehicle engine and pump (see Figure 3-32). Product is not filtered.

(1) Ensure all valves are closed.

(2) Ground and bond the vehicle.

- (3) Remove fire extinguishers and bring to point of operation.
- (4) Start the engine and pump (see item 1 as necessary).
- (5) Adjust idle speed on pump to 1,000 to 1,200 rpm.
- (6) Remove the 4-inch bulk fuel hose from the hose trough. Do this by disconnecting the spring pins and turning the hose trough bars out of the way.
- (7) Remove dust cap from the fuel outlets. Connect one end of the bulk fuel hose to the outlet and the other end to the storage facility.
- (8) Place the selector valve in the LOAD position.
- (9) Open the operator valve, fuel outlet valve, and the manifold outlet valve.
- (10) Shortly after the flow has started, open the pre-check valve to pre-check the shutoff float. After about 20 to 25 seconds, the flow should stop to let you know the float is working properly. If it is not working, stop all operations and notify higher maintenance.
- (11) Close the pre-check valve. Flow will resume in about 20 seconds.

WARNING

WARNING:

In an emergency, close the operator's valve or pull the emergency valve shutoff on the opposite side of the semitrailer.

- (12) When tank is full, the flow should stop automatically.
 - (13) At the end of operation, idle down the engine.
 - (14) Close all valves (see Figures 3-33a, 3-33b, and 3-34).
 - (15) Disconnect the 4-inch bulk fuel hose and put in the hose trough. Secure the hose trough latches.
 - (16) Stop the engine.
 - (17) Drain accumulated water in the same manner as with top loading.
 - (18) Remove the ground wires.
 - (19) Recover and stow fire extinguishers.
4. Gauge petroleum tank vehicles.
 - a. Position tank vehicle.
 - b. Position fire extinguishers within 5 to 10 feet of operation.

- c. Review shipping document to verify the type of fuel in the tank vehicle.
- d. Ground and bond the vehicle.
- e. Ground self from static electricity.
- f. Open the manhole cover with the wind at your back to avoid breathing fuel vapor.
- g. Insert thermometer as soon as each hatch is opened to measure the temperature.
- h. Gauge the compartment using the tank vehicle gauge stick provided with the tank vehicle.
- i. Repeat gauging procedure until two readings that are the same are obtained to ensure gauge is accurate and record on the gauge worksheet.
- j. Remove the thermometer after the required time and record the temperature on the gauge worksheet.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Applied risk management procedures.	_____	_____
2 Performed before-operation preparations.	_____	_____
3 Conducted basic haul and fuel services (operation NOT involving engine and pump).	_____	_____
4 Gauged petroleum tank vehicles.	_____	_____

Evaluation Guidance: None

References

Required

FM 10-67-1 CONCEPTS AND EQUIPMENT OF PETROLEUM OPERATIONS

Primary

FM 5-19 COMPOSITE RISK MANAGEMENT

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,

Required

M1083 W/WN (2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: BR2)

Primary

TM 9-2330-356-14 OPERATORS, UNIT, DIRECT
SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL FOR
SEMITRAILER, TANK: 5000 GALLON, BULK
HAUL, SELF-LOAD/ UNLOAD M967 (NSN
2330-01-050-5632) M967A1 (2330-01-155-0046)
SEMITRAILER

551-88M-1410
Read Strip Maps

DANGER

There are no DANGER precautions applicable to this task.

WARNING

There are no WARNING precautions applicable to this task.

CAUTION

There are no CAUTIONS applicable to this task.

Conditions: In an operational environment, your unit is moving to another tactical location and your supervisor wants everyone to carry a strip map and be familiar with the route prior to movement. You are given a prepared strip map, protractor, route instructions, and mission information.

Standards: Read and interpret the strip map and identify all plotted critical information including start point, check/critical points, release point, primary and alternate route designations applicable to the mission.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is conducting a resupply mission. The convoy commander has issued strip maps in case of vehicle separation of convoy.

Note: None

Performance Steps

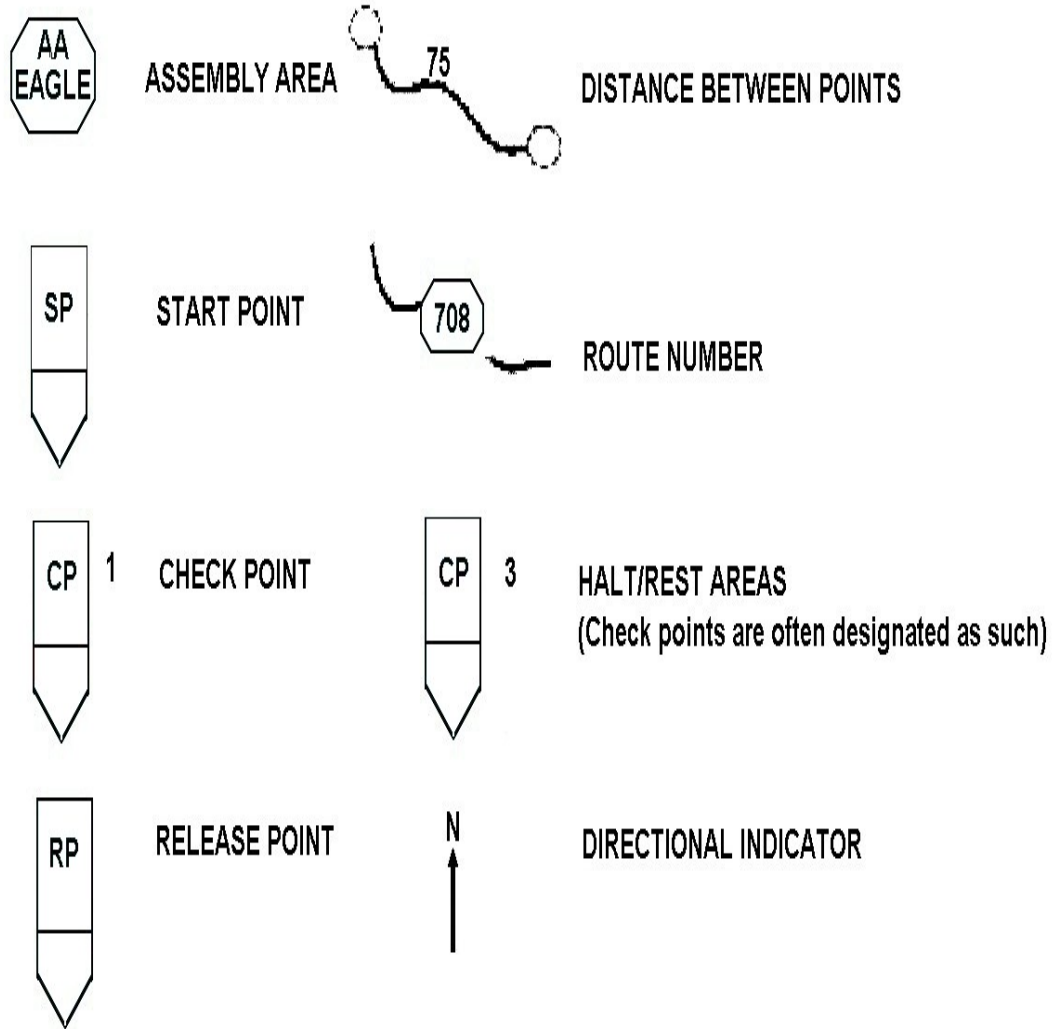


Figure 3-36a

Strip Map Symbols (2)

1. Identify strip map symbols.

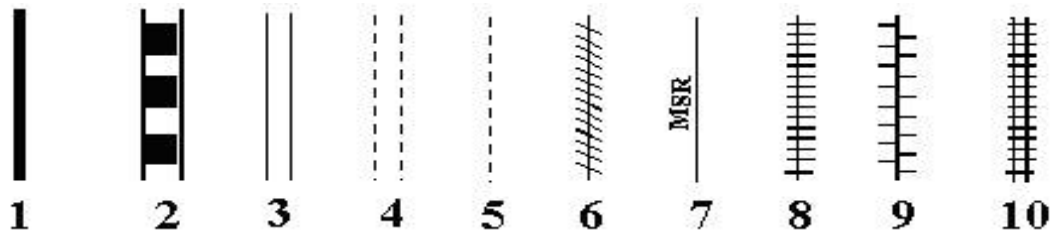


Figure 3-36b.

Strip Map Symbols (1)

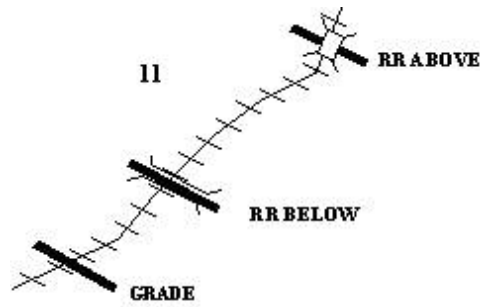


Figure 3-37.

Crossings

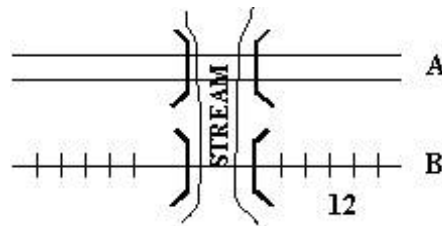


Figure 3-38.

Bridges

- a. Primary road(s).
- b. Secondary road(s).
- c. Other surfaced road(s).
- d. Dirt road(s).
- e. Trail(s).
- f. Impassable section of road(s).
- g. Main supply road(s).
- h. Single-track railroad, broad gauge.
- i. Single-track railroad, narrow gauge.
- j. Double-track railroad, standard gauge.
- k. Crossings.
- l. Bridges.
 - (1) Highway.
 - (2) Railroad.
- 2. Identify mission information.

- a. Start Point (SP). This is the point established as the beginning of the convoy's timeline tracking. May be the start of the convoy from origin or a point along the designated route in which convoy elements are to merge for the mission.
- b. Release Point (RP). This point is designated as "release of convoy responsibility of all or part of the convoy elements." May or may not be convoy destination.
- c. Check point or critical point (CP). This is a point along the convoy route that may serve as a navigational aid, point of possible enemy ambush (critical point) or designated as a halt point. This designation may apply to points along route identifying narrow roadways, or other conditions that warrant special concern by convoy vehicle drivers.
- d. Mileage between routes. Distance (Kilometers/Miles) between check points or critical points along the convoy route, a navigational aid.
- e. Routes and route numbers. Usually normal road or highway numbers that are used to delineate the route plotted for convoy travel.
- f. Major cities and towns. Usually indicated on route to ensure awareness, navigation checking or, if a specific location within the city or town is shown, may be a checkpoint along the convoy route.
- g. Rest and service areas (halt areas). Usually designated as one of the checkpoints or may be an additional point along the route due to availability of space to accommodate vehicles.
- h. Primary and alternate routes. Both should be indicated on map and strip map. Usually colored differently or have a specific name assigned.
- i. Unit designations (as applicable). Indicates a unit(s) that are located along route or could be one of the destinations for convoy.
- j. Legend information. Definitive information regarding the strip map in regards to the mission or unit.

NOTE: If there are any additional unit-specific symbols or information applicable to the mission, it should be identified on the strip map and defined in the legend.

Evaluation Preparation:

Setup: Provide the Soldier with a strip map with mission situational information.

Brief Soldier: You are to read the strip map to define key symbols and information that will guide you to your destination without a military grid reference map.

Performance Measures

	GO	NO GO
1 Identified strip map symbols.	_____	_____
2 Identified mission information.	_____	_____

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

References

Required

FM 1-02 Operational Terms and Graphics {MCRP 5-12A} (This item is included on EM 0205)

FM 3-25.26 MAP READING AND LAND NAVIGATION

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

Subject Area 8: Hazardous Cargo Transportation
551-88M-1659
Transport Hazardous/Sensitive Cargo

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNINGS applicable to both the vehicle, trailer/ semitrailer and the associated cargo.

CAUTION

Adhere to all CAUTIONS applicable to both the vehicle, trailer/semitailer and the associated cargo.

Conditions: In an operational environment, as a vehicle operator assigned a mission to transport hazardous/sensitive cargo. As part of a vehicle convoy you are to conceal the load from casual observation throughout the movement. Provided a mission-ready cargo vehicle with or without trailer or tractor-semitrailer combination, hazardous/sensitive cargo, tiedown materials, tarpaulin, blocking and bracing materials (as needed), completed DD Form 626 (Motor Vehicle Inspection (Transporting Hazardous Materials) and DD Form 836 (Dangerous Goods Shipping Paper/Declaration and Emergency Response Information of Hazardous Materials Transported by Government Vehicles/Containers/Vessels), and Soldiers to assist in loading and ground guiding as needed. A security force will accompany convoy.

Standards: The hazardous/sensitive cargo is to be loaded, secured, concealed, and transported to its destination. At no time during movement is the safety and security of the load to be compromised by loss of custody, casual observation, improper loading, or vehicle operation. Cargo is to be off-loaded at destination without injury to personnel or damage to equipment and transfer of custody affected with appropriate documentation.

Special Condition: Special Conditions: A mission-ready vehicle is defined as a vehicle with before-operation PMCS completed without any fault or deficiency that would render the vehicle Not-Mission-Capable, with all BII and AAL loaded (as applicable), all maintenance worksheets, accident forms, and active dispatch present in the equipment records folder located in the vehicle cab. Operator possesses a valid operator's permit with required endorsements to transport hazardous materials and an ammunition handler's card (as required).

Hazardous Cargo Defined - A material or substance capable of posing an unreasonable risk to health, safety, and property when transported. Hazardous cargo compatibility issues are not-applicable to this task Composite Risk Assessment - This CRM, when completed by the Soldier's supervisor, should be made available to inform Soldier of identified control measures in place to mitigate risk for this task.

Special Standards: None

Special Equipment:

Cue:Your unit has a mission to transport hazardous/sensitive cargo.

Note:None

Performance Steps

1. Prepare vehicle to transport hazardous/sensitive cargo.

a. For shipping hazardous materials, ensure additional vehicle inspections by shipper (DD Form 626) have been performed and deficiencies corrected (as applicable).

b. Position vehicle near cargo to be loaded and shutdown engine, unless needed to operate onboard MHE. Set vehicle parking brakes and chock vehicle.

c. Clean out cargo bed to allow room for cargo to be loaded.

d. Ensure tiedown materials are on hand to secure load to vehicle.

e. Ensure cargo canvas and bow assembly and any required tarpaulins are available to conceal and protect the cargo during transport. If canvas is installed, remove it for loading

f. If load is containerized, check to see that semitrailer hold down devices function properly and are placed in proper configuration to receive container.

g. Ensure applicable placarding materials are on hand that match the load characteristics and hazards.

h. If necessary, ensure all blocking and bracing materials are on hand to secure load.

i. Enforce no smoking within 50 feet and no open flame within 100 feet of load.

j. Ensure there are two 10-BC fire extinguishers are present and one is mounted on outside of cab on driver's side and the other is mounted inside cab.

k. Ensure any load-specific response equipment is available such as breathing apparatus in case of hazardous chemical loads.

1. Prepare vehicle-mounted Material Handling Equipment for operation.

2. Prepare hazardous/sensitive cargo for movement.

a. Ensure shipper completes DD Form 836 and provides copy to accompany cargo.

CAUTION

CAUTION:

Classified material will be prepared for shipment, packaged, and sealed in ways that minimize the risk of accidental exposure or undetected deliberate compromise.

b. Ensure the load is configured as applicable PRIOR to movement (courier duties if shipping classified items).

(1) If the classified material is an inaccessible component of a packageable item of equipment, the outer shell or body can be considered as the inner enclosure provided it does not reveal classified information.

(2) If the classified material is an inaccessible internal component of a bulky item of equipment, the outside or body of the item can be considered to be sufficient enclosure provided it does not reveal classified information.

(3) If the classified material is an item or piece of equipment that is not easily packageable and the shell of body is classified, it will be concealed with an opaque covering that will hide all classified features.

(4) Specialized shipping containers including closed cargo transporters, can be considered the outer wrapping or cover when used.

(5) NATO-restricted materials do not have to be double-wrapped when it is transmitted within the United States. The marking "NATO CLASSIFIED" will not appear on the outermost wrapper.

c. Cover the classified/sensitive cargo to prevent accidental exposure or undetected deliberate compromise.

d. Secure load to prevent access to unauthorized personnel throughout custody.

NOTE: If cargo is classified SECRET or TOP SECRET, the cargo must have an attached receipt form to be completed by the recipient and returned to the originator.

e. Ensure custody receipt is attached to the load.

f. Establish radio communications link with security team.

g. Ensure adequate armed security is available and ready for movement.

h. If cargo is sensitive and considered dangerous, ensure proper placarding is displayed on load-carrying vehicle.

3. Load cargo onto vehicle/semitrailer.

a. If necessary, manipulate MHE into position, lift and place cargo onto vehicle/trailer/semitrailer with heavier items on bottom.

b. Secure all cargo items with tiedown devices ensuring no damage to containers.

c. Cover the dangerous/sensitive cargo to prevent unauthorized deliberate compromise or casual observation.

NOTE: If cargo is classified SECRET or TOP SECRET, the cargo must have an attached receipt form to be completed by the recipient and returned to the originator.

d. Ensure custody receipt is attached to the load.

e. Establish radio communications link with security team (as applicable).

4. Conduct movement with classified/sensitive cargo.
 - a. Notify security personnel of start of movement.
 - b. Follow designated route to destination.
 - c. Notify chain-of-command as each route checkpoint is passed.
 - d. Maintain positive control of classified/sensitive cargo throughout movement.
 - e. Allow no unauthorized person(s) visual or physical access to cargo during movement.
 - f. Upon reaching destination, relinquish custody of classified/sensitive cargo to authorized personnel with proper identification.
 - g. Obtain authorized signature from recipient on custody receipt (if cargo is classified as SECRET or TOP SECRET).
 - h. Upon return to origin, ensure custody receipt is given to originator (if cargo is classified as SECRET or TOP SECRET).
 - i. Transfer DD Form 836 to recipient of cargo (as applicable).

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Prepared vehicle to transport hazardous/sensitive cargo.	_____	_____
2 Prepared hazardous/sensitive cargo for shipment.	_____	_____
3 Loaded cargo onto vehicle/trailer/semitrailer for movement.	_____	_____
4 Conducted movement with hazardous/sensitive cargo.	_____	_____

Evaluation Guidance: None

References

Required

AR 190-11 Physical Security of Arms, Ammunition and Explosives (*RAR 001, 06/28/2011)

Primary

AR 380-5 DEPARTMENT OF THE ARMY
INFORMATION SECURITY PROGRAM

DD FORM 626 MOTOR VEHICLE INSPECTION
(TRANSPORTING HAZARDOUS MATERIALS)

DD FORM 836 DANGEROUS GOODS SHIPPING
PAPER/DECLARATION AND EMERGENCY
RESPONSE INFORMATION OF HAZARDOUS

Required**Primary**

MATERIALS TRANSPORTED BY GOVERNMENT
VEHICLES/ CONTAINERS/VESSELS

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

PAM 385-64 Ammunition and Explosives Safety
Standards

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-303-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, LINE HAUL: 52,000 GVWR, 6
X 4, M915A4 (NSN 2520-01-458-1207)

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6, MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O
WN (2320-01-354-3386) (EIC: BR2)

TM 9-2330-359-14&P OPERATORS,
ORGANIZATIONAL, DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL
TOOLS LISTS) FOR SEMITRAILER, FLATBED:
BREAKBULK/CONTAINER TRANSPORTER, 34
TON M872

Subject Area 9: HEMTT-LHS/PLS Operations
551-88M-1505
Conduct Load/Unload Operations using CHU

DANGER

There are inherent dangers related to operating this equipment to perform loading/unloading procedures. Every precaution must be taken to prevent accidents by strictly following established procedures and adhering to all DANGER/WARNING/CAUTION statements in the reference TM/TBs.

WARNING

Adhere to all WARNING statements in the applicable TM or other reference publication.

CAUTION

Adhere to all CAUTION statements in the applicable TM or other reference publication.

Conditions: In an operational environment, given a Palletized Load System (PLS) (M1075 model only) or Heavy Expanded Mobility Tactical Truck-Load Handling System (HEMTT-LHS) truck tractor equipped with the CHU (also known as Front Lift Adapter), or the Enhanced Container Handling Unit (ECHU) and configured in the container mode, a container to be loaded (any container that is 82, 72, 64, 51, or 48 inches tall), hearing protection, and ground guide (spotter) as needed. CHU is to be on the ground and configured for appropriate container.

Standards: Load and unload (with the aid of a ground guide (spotter), an International Standard Organization (ISO) container using the PLS or HEMTT-LHS truck tractor using the CHU (Front Lift Adapter), or ECHU without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has received an order to transport numerous containers from the port of entry to a forward operating base.

Note: The Soldier will perform this task using either the PLS or HEMTT-LHS systems. The reference publication will be consulted for proper operational steps. Use of the technical manual is not required during execution of this task. However, all steps MUST be adhered to as well as compliance with all listed safety related precautions. Assistance is only allowed by a ground guide to position vehicle.

Performance Steps

1. Prepare PLS truck tractor (M1075 only) and HEMTT-LHS truck tractor for container mode.

NOTE: This task is abbreviated and all performance steps and performance measures required are referred to in the applicable reference publication. Due to the considerable length of this operation, all actions to be performed and evaluated are to be taken directly from the reference publication sited in each

step. Operator must make the necessary adjustments to equipment to accommodate the differing heights of containers used. All WARNING and CAUTION statements listed in the TM MUST be adhered to.

a. Refer to TM 9-2320-364-10, paragraph 2-32 for performance steps for the PLS truck (M1075 only).

b. Refer to TM 9-2320-304-14&P, paragraph 2-10.1 for the M1120A2 HEMTT-LHS truck.

c. Adhere to all WARNING and CAUTION statements listed in the reference publication while performing this operation.

2. Load container 48 inches tall or taller onto a PLS truck tractor using the CHU.

a. For container 48 inches tall or taller, refer to and comply with TM 9-2320-364-10, paragraph 2-36, subparagraph a, pages 2-532 to 2-555.

b. Adhere to all WARNINGS and CAUTIONS in the TM applicable to this procedure.

3. Unload a container 48 inches tall or taller from a PLS truck tractor using the CHU.

a. For container 48 inches tall or taller, refer to and comply with TM 9-2320-364-10, paragraph 2-36, subparagraph b, pages 2-556 to 2-569.

b. Adhere to all WARNINGS and CAUTIONS in the TM applicable to this procedure.

4. Load container 48 inches tall or taller onto HEMTT-LHS truck tractor using the CHU.

a. For container 48 inches tall or taller, refer to and comply with TM 9-2320-304-14&P, paragraph 2-10.5, subparagraph a, pages 2-82.96 to 2-82.112.

b. Adhere to all WARNINGS and CAUTIONS in the TM applicable to this procedure.

5. Unload container 48 inches tall or taller from the HEMTT-LHS truck tractor using the CHU.

a. For container 48 inches tall or taller, refer to and comply with TM 9-2320-304-14&P, paragraph 2-10.5, subparagraph b, pages 2-82.113 to 2-82.123.

b. Adhere to all WARNINGS and CAUTIONS in the TM applicable to this procedure.

6. Load container 46 inches tall or taller onto the HEMTT-LHS/PLS truck using the ECHU.

a. Refer to and comply with steps in TB 9-3950-253-13&P, WP0008, Page 0008-8 to 0008-15 for loading and securing container using the ECHU.

b. Adhere to all WARNINGS and CAUTIONS in the TB applicable to this procedure.

7. Unload container 48 inches tall or taller from the HEMTT-LHS/PLS Truck using the ECHU.

a. Refer to and comply with TB 9-3950-253-13&P, WP 0008, Pages 0008-16 to 0008-25. Steps include releasing transport twistlocks and unloading container.

b. Adhere to all WARNING and CAUTION statements in the TB applicable to this procedure.

Evaluation Preparation:

SETUP: Provide for the Soldier a HEMTT-LHS or PLS truck tractor, CHU, flatrack or CROP, hearing protection, work gloves and assistance from assistant operator serving as spotter/ground guide, and area to conduct operations.

Performance Measures	GO	NO GO
1 Prepared PLS truck tractor (M1075 only) or HEMTT-LHS truck tractor for container mode.	_____	_____
2 Loaded container onto a PLS truck using the CHU.	_____	_____
3 Unloaded a container from a PLS truck using the CHU.	_____	_____
4 Loaded container onto HEMTT-LHS truck tractor using the CHU.	_____	_____
5 Unloaded container from the HEMTT-LHS truck tractor using the CHU.	_____	_____
6 Loaded container onto HEMTT-LHS/PLS Truck using the ECHU.	_____	_____
7 Unloaded a container from the HEMTT-LHS/PLS truck using the ECHU.	_____	_____

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

**References
Required**

Primary

TC 21-305-10 TRAINING PROGRAM FOR THE
PALLETIZED LOAD SYSTEM

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-304-14&P OPERATORS,
ORGANIZATIONAL, AND DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL (INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LIST) FOR LOAD HANDLING
SYSTEM, HEAVY EXPANDED MOBILITY
TACTICAL TRUCKS

TM 9-2320-364-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-
01-304-2277) (2320-01-304-2278)

551-88M-1504**Conduct Load/Unload Operations in Manual Mode**

Conditions: In an operational environment, your unit is required to provide supplies for an upcoming mission. Given a Palletized Load System (PLS) or Heavy Expanded Mobility Tactical Truck-Load Handling System (HEMTT-LHS) truck tractor, flatrack or CROP, hearing protection, work gloves, and assistance from ground guide(s).

Standards: Load and unload a flatrack or Container Roll-in/Roll-out Platform (CROP) using either a PLS (M1075) or HEMTT-LHS (M1120A4) truck tractor using the manual mode method without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is given a supply mission.

Note: None

Performance Steps**CAUTION****CAUTIONS:**

To avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.

Manual mode is used mainly in event of a failure of control electrical system. Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur or damage to equipment may result.

1. Position truck tractor for loading/unloading operations (PLS Only).
 - a. Change truck weight indicator to reflect load weight to be uploaded.
 - b. Adjust driver seat and controls as necessary.
 - c. Ensure vehicle fuel level is sufficient for mission. Refuel as needed.
 - d. Operate lights according to tactical situation.
 - e. Start vehicle. Normal starting procedures (see TM 9-2320-364-10 for details if necessary).
 - f. Check vehicle gauges and warning buzzers for proper indication.
 - g. Operate service brakes and hand brakes as necessary.
 - (1) Ensure brake air pressure gauge reads 100 psi for proper operation of brake system.
 - (2) Operate trailer brakes as necessary.

- h. Select proper gear range using transmission range selector.
- i. Position vehicle for uploading operations.
 - (1) If available, always use a ground guide (one or more) to maneuver vehicle into position.
 - (2) Chock vehicle wheels.
 - (3) Set parking brake as required.
 - (4) Prepare Load Handling System (LHS) for uploading.

2. Load flatrack or CROP onto truck tractor (PLS only).

a. Set the transmission range selector to Reverse (R) and back truck up to the flatrack. Stop approximately 5 feet (1.5 meters) from hook-bar. Check for overhead obstructions and firmness of ground.

CAUTION

CAUTIONS:

To avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.

Manual mode is used mainly in event of a failure of control electrical system. Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur or damage to equipment may result.

- b. Apply the service brake pedal and set transmission range selector to Neutral (N).

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of 17 feet, 2 inches (5.22 meters) with ISO container, serious injury or death could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle. all personnel should stay clear of lhs and flatrack or serious injury or death could result..

- c. Turn the hydraulic selector switch to MAN H.A.
- d. Move joystick to UNLOAD and hold until hook arm cylinders are fully extended.

CAUTION

CAUTION:

Engine speed must be at idle before using hydraulic selector switch or damage to equipment may result. To avoid equipment damage, ensure that mainframe cylinders do not complete full extension while operating at engine speeds above idle. Manual mode is used mainly in event of a failure of control electrical system. Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur or damage to equipment may result. If LHS had previously been used in Manual Mode and not completely stowed in Auto Mode, the hook arm cylinders must be completely extended or the LHS must be completely stowed using Auto Mode before the flatrack can be loaded. Failure to comply may result in damage to the truck and flatrack.

- e. Release joystick.
- f. Turn hydraulic selector switch to MAN M.F.
- g. Move joystick to UNLOAD and hold until lift-hook has moved below level of flatrack hook-bar.
- h. Apply service brake pedal and set transmission range selector to Reverse (R) and back truck up to flatrack, aligning truck and flatrack as straight as possible with lift-hook to the middle of hook-bar.
- i. Stop truck when lift-hook touches flatrack.
- j. Leave truck in reverse gear with engine at idle.

NOTE: Ensure parking brake is not applied during unload sequence or damage to equipment may result. Do not use Reverse (R) to back up truck while hook arm is attached to flatrack or damage to LHS will occur.

- k. Move joystick to LOAD to engage lift-hook and hook-bar.

- l. If lift-hook fails to engage hook-bar:

- (1) Release joystick.
- (2) Set transmission range selector to Drive (D), release service brake pedal and move truck forward just clear of flatrack.
- (3) Move joystick to UNLOAD until lift-hook is below level of hook-bar.
- (4) Repeat steps j and k.

NOTE: When loading or unloading flatracks on uneven ground (side slope or downgrades up to 10 degrees) it may be necessary to apply truck service brakes to prevent truck roll away or severe injury or death could result. Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

- m. Set transmission range selector to Neutral (N) and release service brake pedal.

NOTE: If LHS overload lamp illuminates but loading operation continues, operator is cautioned that LHS is nearing maximum capacity. In this situation, operator should determine if payload is evenly distributed on flatrack or if flatrack load exceeds 16.5 tons (14,969 kg). If any of these conditions exist, operator

must redistribute or reduce payload or damage to equipment may result. Ensure that parking brake is not applied before starting load sequence or damage to equipment may result.

CAUTION

CAUTION:

Ensure that flatrack runners contact LHS rear rollers correctly. Failure to contact flatrack runners correctly could result in serious injury or death to personnel and damage to equipment

- n. Move joystick to LOAD, allowing truck to be pulled under flatrack.
- o. Before flatrack contacts rear rollers, reduce engine speed and apply service brake pedal.
- p. Release the joystick. Set hydraulic selector switch to MAN H.A.
- q. Move the joystick to LOAD until flatrack is approximately 2 feet (0.61 m) off the ground. Release joystick.
- r. Set the hydraulic selector switch to MAN M.F. operations.
- s. After flatrack contacts rear rollers, increase engine speed to approximately 1,500 rpm until main frame cylinders have nearly completed full retraction.
- t. Reduce engine speed to idle and continue loading until main frame cylinders are fully retracted.
- u. Release the joystick.
- v. Turn the hydraulic selector switch to MAN H.A.
- w. Move the joystick to LOAD position and increase engine speed until flatrack is nearly loaded, then reduce speed to idle.
- x. Continue to load until LHS and flatrack is in transit position. LHS NO TRANS light will extinguish.
- y. Release joystick.
- z. Apply parking brakes.

CAUTION

CAUTION:

Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 feet, two inches (5.22 m) with ISO container. Serious injury or death could result from contact with electrical power lines. Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

a. Inspect that load locks have engaged and flatrack is fully down on truck. Turn the hydraulic selector switch to MAN TRANS.

3. Offload flatrack or CROP from truck tractor (PLS only).

a. Check for sufficient operating room at front and rear of truck. Check overhead clearance and ground conditions.

b. Apply the service brake pedal and set transmission range selector to Neutral (N).

c. Turn the hydraulic selector switch to MAN H.A.

d. Move the joystick to UNLOAD until hook arm cylinders have fully extended. Maintain engine speed at idle for approximately the first 18 inches (46 cm) and last 6 inches (15 cm) of movement.

e. Release the joystick.

f. Turn the hydraulic selector switch to MAN M.F.

g. Move the joystick to UNLOAD.

h. When back edge of flatrack touches ground, release service brake pedal allowing truck to be pushed straight from under flatrack.

i. Continue off-loading until front of flatrack is within 8 inches (203.2 cm) off ground, decrease engine speed to idle and apply service brake pedal.

j. Continue off-loading until flatrack is on ground and rear suspension is unloaded.

k. Release joystick.

l. Set transmission range selector to Drive (D) and release service brake pedal.

m. Move the joystick to LOAD momentarily and then to UNLOAD to let lift-hook disengage from hook-bar. Repeat step until lift-hook disengages.

n. Move the truck forward approximately 5 feet (1.5 meters).

o. Stop the truck and set the transmission range selector to Neutral (N).

p. Move the joystick to LOAD and hold in this position until mainframe cylinders are fully retracted.

q. Turn the hydraulic selector switch to MAN H.A.

r. Hold the joystick in LOAD position until the hook arm cylinders are fully retracted.

s. Release joystick.

4. Load a flatrack or CROP onto truck tractor (HEMTT-LHS only).

a. Set transmission range selector to Reverse (R) and back truck up to the flatrack. Stop approximately 5 feet (1.5 m) from hook bar. Check for overhead obstructions and firmness of ground.

CAUTION

CAUTION:

Avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle. Manual mode is used mainly in event of a failure of automatic control electrical system and when loading FRS. Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur or damage to equipment may result.

b. Apply service brake pedal and set transmission range selector to Neutral (N).

c. Set HYD ENABLE switch in ON position. Make sure MAIN HYD ENABLE indicator light comes on.

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of 17 feet, 2 inches (5.23 m) with ISO container, serious injury or death to personnel could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

NOTES:

LHS OVER LOAD indicator will come on when hook arm cylinders are fully extended and joystick is activated.

Loading and unloading times are controlled by engine speed. Engine speed can be increased to 1,500 to maximum rpm to reduce loading and unloading times.

d. Turn hydraulic selector switch to MAN H.A. position.

WARNING

Prior to and during any load or unload cycle, all personnel should stay clear of LHS, flatrack, front lift adapter, and container. Failure to comply may result in injury or death to personnel.

Check ground conditions for firmness and extreme sideways inclination prior to picking up or off-loading a flatrack or container. Any ground instability beneath road wheels may result in injury or death to personnel.

Check for overhead power lines or other obstructions prior to attempting LHS operation. LHS reaches a height of 22 ft. 2 in. (6.7 m). Failure to comply may result in injury or death to personnel.

- e. Move joystick to UNLOAD position and hold.

NOTE: LHS OVER LOAD indicator will come on when hook arm cylinders are fully extended and joystick is activated. Loading and unloading times are controlled by engine speed. Engine speed can be increased to 1,500 to maximum rpm to reduce loading and unloading times.

CAUTION

CAUTIONS:

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

To avoid equipment damage, ensure that main frame cylinders do not complete full extension while operating at engine speeds above idle.

Manual mode is used mainly in event of a failure of automatic control electrical system. Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur or damage to equipment may result.

If LHS had previously been used in manual mode and not completely stowed in AUTO mode, the hook arm cylinders must be completely extended or the LHS must be completely stowed using AUTO mode before the flatrack can be loaded. Failure to comply may result in damage to the truck and flatrack.

- f. Release joystick.

CAUTION

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

- To avoid equipment damage, ensure that main frame cylinders do not complete full extension while operating at engine speeds above idle.

- Manual mode is used mainly in event of a failure of automatic control electrical system.

Greater care must be exercised during operation of MANUAL mode for correct cycle of events to occur, or damage to equipment may result.

- If LHS had previously been used in manual mode and not completely stowed in AUTO mode, the hook arm cylinders must be completely

extended or the LHS must be completely stowed using AUTO mode before the flatrack can be loaded. Failure to comply may result in

damage to equipment.

- g. Turn hydraulic selector switch to MAN M.F. position.

h. Move joystick to UNLOAD position and hold until lift hook has moved below level of flatrack hook bar.

i. Apply service brake pedal and set transmission range selector to Reverse (R). Back up truck to flatrack/FRS, aligning truck and flatrack/FRS as straight as possible with lift hook to middle of hook bar.

- j. Stop truck when lift hook touches flatrack/FRS.

- k. Set transmission range selector to Neutral (N).

CAUTION

- Ensure PARKING BRAKE control is pushed in (released) during load sequence, or damage to equipment may result.
- Do not use R (reverse) to back up vehicle while hook arm is attached to flatrack, or damage to LHS will occur.

l. Move joystick to LOAD position to engage lift hook and hook bar.

NOTE: No additional equipment can be stowed on or in FRS during loading/unloading. Additional equipment could OVERLOAD LHS due to weight of FRS.

m. If lift hook fails to engage hook bar:

(1) Release joystick.

(2) Set transmission range selector to Drive (D), release service brake pedal (3), and move truck forward just clear of flatrack.

(3) Move joystick to UNLOAD position until lift hook is below level of hook bar.

(4) Repeat steps i through l.

n. Move joystick to LOAD position, allowing truck to be pulled under flatrack.

WARNING

Ensure trailer air system is pressurized prior to beginning transfer or flatrack locks may not properly engage/disengage. Failure to comply may result in injury or death to personnel.

CAUTION

Reduce engine speed to idle before flatrack main rails contact rear rollers. Damage to flatrack may result.

o. Before flatrack contacts rear rollers, reduce engine speed and apply service brake pedal.

NOTE: As load is lifted, vehicle will be pulled under the flatrack. Some steering adjustment may have to be made to ensure that flatrack runners will contact rear rollers.

p. Release joystick. Set hydraulic selector switch to MAN H.A. position.

q. Move joystick to LOAD position until flatrack/FRS is approximately 2 feet (0.61 m) off the ground.

r. Release joystick.

CAUTION

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

s. Turn hydraulic selector switch to MAN M.F. position.

- t. Move joystick to LOAD position after flatrack contacts rear rollers, increase engine speed from 1,500 to maximum rpm until main frame cylinders have nearly completed full retraction.
- u. Reduce engine speed to idle and continue loading until main frame cylinders are fully retracted.
- v. Release joystick.

NOTE: LHS OVER LOAD indicator will illuminate when main frame cylinders are fully retracted and joystick is activated.

CAUTION

- Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.
- Main frame cylinders must be completely retracted prior to loading the hook arm.

- w. Turn hydraulic selector switch to MAN H.A. position.
- x. Move joystick to LOAD position and increase engine speed until flatrack is nearly loaded, then reduce speed to idle.
- y. Continue to load until LHS and flatrack are in transit position. LHS NO TRANSIT indicator will go off.
- z. Release joystick.
- a. Pull out PARKING BRAKE control.
- b. Make sure that load locks have engaged and flatrack/FRS is fully down on truck.
- c. Turn hydraulic selector switch to MAN TRANS position.
- d. Put HYD ENABLE switch in OFF position. Make sure MAIN HYD ENABLE indicator light goes off.

WARNING

Do not reduce tire pressure when loaded with FRS or container. Highway tire pressure, 60 psi (414 kPa) front and 83 psi (572 kPa) rear, is required at all times when loaded with FRS or container. Failure to comply may result in injury or death to personnel and damage to equipment. Maximum side slope when loaded with an FRS or container is 30%. Failure to comply may result in injury or death to personnel and damage to equipment. When loaded with FRS or container, the center of gravity is moved up and toward rear of vehicle. Use extreme care when turning and ascending or descending on a grade. Failure to comply may result in injury or death to personnel.

- 5. Unload a flatrack or CROP from truck tractor (HEMTT-LHS only).
 - a. Check for sufficient operating room at front and rear of truck. Check overhead clearance and ground conditions.

CAUTION

CAUTION:

Manual mode is used mainly in event of a failure of automatic control electrical system and when unloading an FRS. Greater care must be exercised during operation of manual mode for correct cycle of events to occur or damage to equipment may result.

b. Apply service brake pedal and set transmission range selector to Neutral (N).

c. Put HYD ENABLE switch in ON position. Make sure MAIN HYD ENABLE indicator light comes on.

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of 17 feet, 2 inches (5.23 m) with ISO container, serious injury or death to personnel could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

CAUTIONS:

Reduce speed to idle for approximately the first 18 inches (46 cm) of travel and again when flatrack is 2 feet (61 cm) above ground to prevent damage to cylinder.

To avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.

Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.

NOTES:

LHS OVERLOAD indicator may come on when engine is at idle speed.

When unloading an FRS, engine speed must be at 1,500 rpm.

CAUTION

Reduce speed to idle for approximately the first 18 inches (46 cm) of travel and again when flatrack is 2 feet (61 cm) above ground to prevent damage to cylinder.

To avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.

Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.

d. Turn hydraulic selector switch to MAN H.A. position.

NOTE: LHS OVER LOAD indicator may come on when engine is at idle speed.
When unloading an FRS, engine speed must be at 1,500 rpm.

WARNING

Prior to and during any load or unload cycle, all personnel should stay clear of LHS, flatrack, front lift adapter, and container. Failure to comply may result in injury or death to personnel. Check ground conditions for firmness and extreme sideways inclination prior to picking up or off-loading a flatrack or container. Any ground instability beneath road wheels may result in injury or death to personnel.

Check for overhead power lines or other obstructions prior to attempting LHS operation. LHS reaches a height of 22 ft. 2 in. (6.7 m). Failure to comply may result in injury or death to personnel.

CAUTION

- Reduce speed to idle for approximately the first 18 in. (46 cm) of travel and again when flatrack is 2 ft. (61 cm) above ground to prevent damage to cylinder.
- To avoid equipment damage, insure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.
- Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.

e. Move joystick to UNLOAD position until hook arm cylinders have fully extended.

Maintain engine speed at idle for approximately the first 18 inches (46 cm) and last 6 inches (15 cm) of movement.

NOTE: • LHS OVERLOAD indicator may come on when engine is at idle speed.

- When unloading an FRS, engine speed must be at 1500 RPM.

f. Release joystick.

g. Turn hydraulic selector switch to MAN M.F. position.

WARNING

WARNING:

WHEN LOADING OR UNLOADING FLATRACKS/FRS ON UNEVEN GROUND (SIDE SLOPE OR DOWN GRADES UP TO 5 DEGREES), IT MAY BE NECESSARY TO APPLY TRUCK SERVICE BRAKES TO PREVENT TRUCK ROLLAWAY OR SEVERE INJURY OR DEATH TO PERSONNEL COULD RESULT.

h. Move joystick to UNLOAD position.

WARNING

WARNING:

When loading or unloading flatracks/FRS on uneven ground (side slope or downgrades up to 5 degrees), it may be necessary to apply vehicle service brakes to prevent vehicle rollaway. Failure to comply may result in injury or death to personnel.

i. When back edge of flatrack touches ground, release service brake pedal, allowing truck to be pushed straight from under flatrack.

NOTE: If flatrack is extremely light or empty, it may be necessary to set transmission range selector to D (driver) to allow vehicle to move out from under flatrack.

j. Continue off-loading until front of flatrack is within 8 inches of ground, decrease engine speed to idle and apply service brake pedal.

CAUTION

Once suspension has been relieved of flatrack load, do not continue in UNLOAD position or rear of vehicle could jack up with hook arm and equipment damage may result.

k. Continue off-loading until flatrack is on ground and rear suspension is unloaded.

l. Release joystick.

m. Set transmission range selector to D (drive) and release service brake pedal. Set transmission range selector to N(neutral).

n. Move joystick to LOAD position momentarily and then to UNLOAD position to let lift hook disengage from hook bar. Repeat step until lift hook disengages.

o. Move truck forward approximately 5 feet (1.5 m).

p. Stop truck and set transmission range selector to Neutral (N).

CAUTION

- To avoid equipment damage, visually check that main frame cylinders have completed full retraction.
- Reduce speed to idle in last 1 ft. (31 cm) of travel to prevent damage to cylinders.

q. Move joystick to LOAD position and hold in this position until main frame cylinders are fully retracted.

r. Turn hydraulic selector switch to MAN H.A. position.

s. Hold joystick in LOAD position until the hook arm cylinders are fully retracted.

WARNING

WARNING:

Never drive with LHS NO TRANSIT indicator illuminated. An illuminated indicator means LHS is not fully stowed. The load could break loose causing serious injury or death to personnel.

t. Release joystick.

WARNING

Never drive with LHS NO TRANSIT indicator illuminated. An illuminated indicator means LHS is not fully stowed. Failure to comply may result in injury or death to personnel.

CAUTION

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

u. Turn hydraulic selector switch to MAN TRANS.

v. Put HYD ENABLE switch in OFF position. Make sure MAIN HYD ENABLE indicator light goes off.

Evaluation Preparation:

None

Performance Measures

GO **NO GO**

1	Positioned PLS truck for loading/unloading operations.	_____	_____
2	Loaded flatrack (or CROP) onto PLS truck.	_____	_____
3	Unloaded flatrack (or CROP) from PLS truck.	_____	_____
4	Loaded flatrack (or CROP) onto truck tractor (HEMTT-LHS).	_____	_____
5	Unloaded flatrack (or CROP) from truck tractor (HEMTT-LHS).	_____	_____
6	Shutdown engine.	_____	_____

Evaluation Guidance: None

References

Required

Primary

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

551-88M-1507

Conduct Container Roll-in/Roll-out (CROP) Load/Unload Operations

DANGER

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

WARNING

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

CAUTION

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

Conditions: In an operational environment, given a HEMTT-LHS/PLS Truck, ISO Container(s), and CROP(s), hearing protection, and ground guide (spotter), and firm ground for the operations

Special Conditions: Operator should have a valid driver's license or be accompanied by a licensed driver or perform operation in a controlled driving range under direct supervision of a licensed driver/instructor. During insertion procedure, at least one ground guide (spotter) is required.

Standards: Operate the HEMTT-LHS/PLS truck to load an ISO container with one or more CROP(s). Load then unload one or more to a maximum of 6 CROPs in a stack into/from the ISO container. ISO container doors must be able to be closed and secured. All CROP stacking, and ISO loading/unloading must be completed using the spotter and must not incur injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been tasked to provide cargo transportation support.

Note: None

Performance Steps

1. Load CROP(s) into an ISO container using the PLS truck tractor.

a. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure. Apply warning and caution statements above to all steps in this task.

WARNING

WARNINGS:

Crop weighs 3,800 lbs (1,724 kg). Six crops weigh 22,800 lbs (10,342 kg). Make sure all personnel stand clear of crop when crop is being moved. Failure to comply may result in severe injury or death to personnel.

Always lift stack of crops by connecting lifting device to bottom crop. Failure to comply may result in damage to equipment or severe injury or death to personnel.

CAUTIONS:

Attempting to load/unload stack of CROPS or loaded CROP in ISO container requires extreme care to prevent damage to equipment. Clearance between ceiling of ISO container and top of load and inside walls of ISO container and each side of CROP is designed to be close, requiring at least one ground guide to assist during difficult insertion/removal procedure.

Make sure web straps securing stack of CROPS are removed prior to insertion into ISO container. Failure to comply may result in damage to web straps during insertion procedure.

NOTE: Stack of six CROPS is maximum that can be loaded into ISO container.

b. Refer to TM 9-3990-260-14&P, paragraph 2-16, subparagraph a, steps (1) through (23), pages 2-31 to 2-38 for applicable procedures in loading ISO container. Refer to subsequent paragraphs if directed, as needed in the TM.

2. Unload CROP(s) from an ISO container using the PLS truck tractor.

a. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.

b. Refer to TM 9-3990-260-14&P, paragraph 2-16, subparagraph b, steps (1) through (11), pages 2-39 to 2-41 for applicable procedures in unloading ISO container. Refer to subsequent paragraphs if directed, as needed in the TM.

3. Load CROP(s) into an ISO container using the HEMTT-LHS truck tractor.

a. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.

b. Refer and comply with procedures in TM 9-2320-304-14&P, paragraph 2-10.9, subparagraph a, starting on page 2-82.136.

4. Unload CROP(s) from an ISO container using the HEMTT-LHS truck tractor.

a. Adhere to all WARNING and CAUTION statements in the TM regarding this procedure.

b. Refer to and comply with procedures in TM 9-2320-304-14&P, paragraph 2-10.9, subparagraph b, starting on page 2-82.141.

Evaluation Preparation:

Provide the Soldier with all items of equipment identified in the conditions statement. Ensure Soldier understands that this operation requires the use of two personnel. A knowledgeable ground guide (spotter) is provided.

Performance Measures	GO	NO GO
1 Loaded ISO container with CROP(s) using the PLS truck tractor.	_____	_____
2 Unloaded ISO container with CROP(s) using the PLS truck tractor.	_____	_____
3 Loaded ISO container with CROP(s) using the HEMTT-LHS truck tractor.	_____	_____
4 Unloaded ISO container with CROP(s) using the HEMTT-LHS truck tractor.	_____	_____

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

References

Required

Primary

TC 21-305-10 TRAINING PROGRAM FOR THE PALLETIZED LOAD SYSTEM

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977

TM 9-2320-304-14&P OPERATORS, ORGANIZATIONAL, AND DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR LOAD HANDLING SYSTEM, HEAVY EXPANDED MOBILITY TACTICAL TRUCKS

TM 9-3990-260-14&P OPERATORS, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR CONTAINER ROLL-IN/ OUT PLATFORM (CROP) MODEL M3 (NSN 399-01-442-2751)

551-88M-1503**Transfer Flatrack To/From PLS Trailer using LHS****WARNING**

WARNING: When loading or unloading flatracks on uneven ground (side slope or downgrades up to 10 degrees) it may be necessary to apply truck service brakes to prevent truck roll away or severe injury or death could result.

Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 ft two in. (5.22 m) with ISO container. Serious injury or death could result from contact with electrical power lines.

Trailer wheels must be chocked during transfer operations or serious injury or death could result.

CAUTION

CAUTION: There must be sufficient pressure in trailer air system to retract locks or damage to flatrack can occur while attempting to load flatrack or trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack, use manual flatrack lock retract procedures (TM 9-2330-385-10).

Ensure both flatrack locks are fully retracted or damage to equipment may result.

Engine speed must be at idle before using hydraulic selector switch or damage to equipment may result.

CAUTION: Load must be evenly distributed on flatrack. Uneven load distribution may cause LHS overload indicator to give false signals and cause LHS to operate incorrectly.

Instructors must ensure that operators of tactical wheeled vehicles are trained IAW AR 600-55, AR 385-10 Chapter 11, vehicle training circulars (TC), and TC 21-305-20. When training on a specific vehicle the instruction will include all safety hazards and risks of operating or working with the vehicle.

Conditions: In an operational environment, your unit is given a supply mission. Given a mission-ready Palletized Loading System (PLS) or HEMTT-LHS truck tractor with flatrack or Container Roll-In/Roll-Out Platform (CROP), empty PLS Trailer (PLST), hearing protection, work gloves, and an area to maneuver vehicle with trailer and ground guide assistance.

Standards: Transfer a flatrack or CROP from the PLS or HEMTT-LHS truck tractor to the PLS trailer (PLST) and then reload the flatrack or CROP from the PLST onto the truck without injury to personnel or damage to equipment.

Special Condition: Special Conditions: If the PLS truck tractor is used, performance steps (and measures) 1 and 5 are applicable. If the HEMTT-LHS (M1120A2) is used, performance steps (and measures) 1, 6, and 9 are applicable.

Special Standards: None

Special Equipment: None

Cue: Your unit is given a supply mission.

Note: Operation of this vehicle system requires two persons. One primary person as the operator and the other as a spotter/guide.

Performance Steps

1. Position truck and trailer for loading/unloading operation (either model).

NOTE: Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

- Trailer wheels must be chocked during transfer operations or serious injury or death could result.
- Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.
- Ensure air lines and cables are properly stowed to prevent damage to equipment (TM 9-2320-364-14&P).
- Both of the trailer bumper points must be under the truck bumper stop flange and at least one of the bumper points must contact the bumper stop. The trailer bumper point not contacting the truck bumper stop cannot exceed 0.5 inches (12.7 mm) or flatrack will miss main rail guides and equipment damage may result.

- a. Back up truck so that trailer bumper is under flange and contacts truck bumper stop.

WARNING

WARNING:

When operating PLS truck with PLS trailer, the heaviest loaded flatrack must always be placed on the truck, otherwise adverse handling and/or braking may result, causing serious injury or death to personnel.

NOTE: There must be sufficient air pressure in trailer air system to retract flatrack locks or damage to flatrack locks can occur while attempting to load flatrack on trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack locks, use manual flatrack lock retract procedure (TM 9-2320-364-14&P).

- b. Apply parking brakes and set transmission range selector to Neutral (N).

CAUTION

Engine speed must be at idle before using hydraulic selector switch or damage to equipment may result.

NOTE: Do not move truck forward more than three inches (76.2 mm) to prevent flatrack from pulling away from stops.

WARNING

WARNING:

Never drive with any type of transit light illumination. An illuminated light means LHS is not fully stowed. The load could break loose causing serious injury or death to personnel..

CAUTION:

Engine speed must be at idle before using hydraulic selector switch or damage to equipment may result.

NOTE: Hook arm does not need to be fully stowed if more transfer operations are going to be made.

2. Load flatrack (or CROP) onto PLS trailer (automatic mode) (PLS only) from truck.

- a. Push in on knob and retract flatrack locks on trailer.
- b. Inspect that both flatrack locks are fully retracted.
- c. Turn hydraulic selector switch to AUTO.

NOTE: When loading or unloading flatracks on uneven ground (side slope or downgrades up to 10 degrees) it may be necessary to apply truck service brakes to prevent truck roll away or severe injury or death could result.

- Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of 17 feet, 2 inches (5.22 m) with ISO container, serious injury or death could result from contact with electrical power lines.
 - Trailer wheels must be chocked during transfer operations or serious injury or death could result.
 - Load must be evenly distributed on flatrack. Uneven load distribution may cause LHS overload indicator to give false signals and cause LHS to operate incorrectly.
 - Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.
- d. Move joystick to UNLOAD until flatrack rollers contact trailer.

e. Release the joystick.

f. Inspect and verify trailer guides are lined up between flatrack main rails.

g. If not aligned:

(1) Move joystick to LOAD.

(2) When flatrack is fully reloaded, release joystick.

h. Move the joystick to UNLOAD until flatrack is seated on trailer.

i. Release the joystick.

j. Turn the hydraulic selector switch to MAN H.A.

k. Move the joystick to LOAD until front of flatrack is raised approximately 12 to 18 inches (30 to 46 cm) above trailer deck height.

l. Turn the hydraulic selector switch to MAN M.F.

m. Move the joystick to UNLOAD until flatrack rollers contact rear trailer stops and front of flatrack guides are seated on trailer.

n. Release the joystick.

o. Inspect that rear rollers on flatrack have contacted rear trailer stops.

- p. Apply the service brake pedal.
- q. Release truck parking brakes.
- r. Move the joystick to LOAD to allow top of lift-hook to clear hook-bar.
- s. Place transmission range selector in Drive (D). Release service brake pedal and move truck forward approximately 3 inches (76.2 mm). Apply service brake pedal.
- t. Move the joystick to UNLOAD to disengage lift-hook from hook-bar.
- u. Set transmission range selector to Neutral and apply truck parking brakes.
- v. Inspect that rear flatrack rollers have contacted trailer stops.
- w. Pull knob and engage flatrack locks.
- x. Inspect that flatrack locks are engaged.
- y. Release the parking brake.
- z. Set the transmission range selector to Drive (D).
- a. Move the truck forward approximately 5 feet (1.5 m).
- b. Apply the truck parking brakes and set transmission range selector to Neutral (N).
- c. Turn the hydraulic selector switch to AUTO.
- d. Move the joystick to LOAD and retract LHS until LHS NO TRANS light is extinguished.
- e. Turn hydraulic selector switch to OFF.

CAUTION

CAUTION:

Load must be evenly distributed on flatrack pallet. Uneven load distribution may cause LHS overload indicator to give false signals and cause LHS to operate incorrectly. Damage to equipment may result.

- 3. Unload flatrack (or CROP) from trailer (automatic mode) to truck (PLS only).
 - a. Back up the truck in line with trailer and stop approximately 5 feet (1.5 m) from trailer.
 - b. Apply parking brake and place transmission range selector in Neutral (N).

NOTE: There must be sufficient air pressure in trailer air system to retract flatrack locks or damage to flatrack lock can occur while attempting to remove flatrack from trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack locks, use manual flatrack lock retract procedure (TM 9-2320-364-14&P).

CAUTIONS:

Ensure air lines and cables are properly stowed to prevent damage to equipment (TM 9-2320-364-14&P). Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

- c. Push the knob on trailer to retract flatrack locks.

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting lhs operation. If lhs reaches a height of 17 feet, 2 inches (5.22 m) with iso container, serious injury or death could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death could result to personnel. Trailer wheels must be chocked during transfer operations or serious injury or death could result.

CAUTIONS:

Engine speed must be at idle before using hydraulic selector switch or damage to equipment may result.

Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.

- d. Inspect that both flatrack locks are fully retracted.
- e. Turn the hydraulic selector switch to AUTO.
- f. Move the joystick to UNLOAD until lift-hook has moved just below level of flatrack hook-bar.
- g. Apply service brake pedal and release parking brake.
- h. Set transmission range selector to Reverse (R), release service brake pedal, and back truck up until lift-hook contacts hook-bar.
- i. Set the transmission range selector to Neutral (N) and apply truck parking brake.
- j. Move joystick to LOAD and engage lift-hook into hook-bar.
- k. Continue loading flatrack onto truck until the LHS NO TRANS light is extinguished indicating LHS is in transportation position.
- l. Apply parking brake and set the transmission range selector to Neutral (N).
- m. Inspect that the load locks are engaged and flatrack is completely down on truck.

- n. Turn hydraulic selector switch to OFF.

WARNING

WARNING:

Trailer wheels must be chocked during transfer operations.

CAUTION:

Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

- 4. Load flatrack (or CROP) onto trailer (manual mode) from truck (PLS only).

- a. Back up the truck so that trailer bumper is under flange and contacts truck bumper stop.
- b. Set the parking brake and place transmission range selector switch in Neutral (N).

NOTE: Ensure trailer air system is pressurized before beginning transfer or flatrack locks may not properly engage. Serious injury or death could result to personnel and damage to equipment may result.

- c. Push in knob and retract flatrack locks.

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 feet, 2 inches (5.22 m) with ISO container, serious injury or death could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. any ground instability beneath road wheels could cause serious injury or death to personnel

Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death could result to personnel.

Ensure rail transport locking pins are disengaged before unloading flatrack. rail transport locking pins are used for rail transport only. failure to comply may result in damage to equipment.

- d. Turn the hydraulic selector switch to MAN H.A.
- e. Move the joystick to UNLOAD until flatrack rollers contact trailer.
- f. Release the joystick.
- g. Inspect and verify that trailer guides are between flatrack main rails.
- h. If not aligned:
 - (1) Move joystick to LOAD.

(2) When flatrack is completely reloaded onto truck, release joystick.

CAUTION

CAUTIONS:

To avoid equipment damage, visually check that hook arm cylinders have fully extended.

To avoid equipment damage, ensure that hook arm cylinders do not complete full extension while operating at engine speeds above idle.

NOTE: Overload warning light will come on when hook arm cylinders are fully extended and joystick is activated.

(3) Repeat steps (g) and (h).

- i. Move the joystick to UNLOAD and hold until hook arm cylinders are fully extended.
- j. Release the joystick.
- k. Turn the hydraulic selector switch to MAN M.F.
- l. Move the joystick to UNLOAD until front of flatrack is completely seated on trailer.

CAUTION

CAUTION:

Do not use Reverse (R) to back up truck while hook arm is attached to flatrack or damage to LHS will occur.

- m. Release the joystick.
- n. Turn the hydraulic selector switch to MAN H.A.
- o. Move joystick to LOAD until front of flatrack is raised approximately 12 to 18 inches (30 to 46 cm) above trailer deck height.

WARNING

WARNING:

Never drive with no trans light illuminated. An illuminated lights means lhs is not fully stowed. The load could break loose causing serious injury or death to personnel.

- p. Apply the truck parking brakes and set the transmission range selector to Neutral (N).
- q. Move the joystick to LOAD and hold in this position until main frame cylinders are fully retracted.
- r. Turn the hydraulic selector switch to MAN H.A.

- s. Hold the joystick in LOAD position until the hook arm cylinders are fully retracted.
- t. Turn the hydraulic selector switch to MAN TRANS.
- u. Inspect that flatrack is completely seated and load locks are engaged.
- v. Turn the hydraulic selector switch to MAN M.F.
- w. Move the joystick to UNLOAD until flatrack rollers contact trailer stops and front of flatrack guides are seated on trailer.
- x. Release the joystick.
- y. Inspect that rear flatrack rollers on flatrack have contacted trailer stops.
- z. Apply the service brake pedal.
- a. Release truck parking brakes.
- b. Move the joystick to LOAD to allow top of lift-hook to clear hook-bar.
- c. Release the service brake pedal and place transmission range selector in Drive (D) and move truck forward approximately 3 inches (76.2 mm). Apply service brake pedal.
- d. Move the joystick to UNLOAD to disengage lift-hook from hook-bar.
- e. Set the transmission range selector to Neutral (N) and apply the parking brakes.
- f. Inspect that rear flatrack rollers have contacted trailer stops.
- g. Pull knob and engage flatrack locks.
- h. Inspect that flatrack locks are engaged.
- i. Release the parking brake.
- j. Set the transmission range selector to Drive (D).
- k. Move the truck forward approximately 5 feet (1.5 m).

CAUTION

CAUTION:

There must be sufficient pressure in trailer air system to retract locks or damage to flatrack can occur while attempting to load flatrack or trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack, use manual flatrack lock retract procedures.

- 5. Unload flatrack (or CROP) from PLS trailer onto truck (manual mode) (PLS only).
 - a. Ensure that air lines and cables are properly stowed to prevent damage to equipment.

b. Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

WARNING

WARNING:

Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of caution, there must be sufficient pressure in trailer air system to retract locks or damage to flatrack can occur while attempting to load flatrack or trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack, use manual flatrack lock retract procedures.

c. Ensure both flatrack locks are fully retracted or damage.

d. Ensure that air lines and cables are properly stowed to prevent damage to equipment.

e. Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

WARNING

WARNING:

Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 feet, two inches (5.22 m) with ISO container, serious injury or death could result from contact with electrical power lines.

f. Ensure both flatrack locks are fully retracted or damage.

g. Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

h. Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

WARNING

WARNING:

_ Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

_ Trailer wheels must be chocked during transfer operations or serious injury or death to personnel could result.

CAUTIONS:

Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

Ensure air lines and cables are properly stowed to prevent damage to equipment (TM 9-2320-364-14&P).

Both trailer bumper points must be under the truck bumper stop flange and at least one of the bumper points must contact the bumper stop. The trailer bumper point not contacting the truck bumper stop cannot exceed 0.5 in. (12.7 mm) or flatrack will miss main rail guides and equipment damage may result.

6. Load flatrack (or CROP) onto the truck (HEMTT-LHS only) (automatic mode) from PLST.
 - a. Back up truck so that trailer bumper (1) is under flange and contacts truck bumper stop (2).

WARNING

WARNING:

- _ When operating M1120 truck with M1076 trailer, the heaviest loaded flatrack must always be placed on the truck, otherwise adverse handling and/or braking may result, causing injury or death to personnel.
- _ Ensure trailer air system is pressurized before beginning transfer, or flatrack locks may not properly engage/disengage. Serious injury or death to personnel could result.

CAUTION:

There must be sufficient air pressure in trailer air system to retract flatrack locks or damage to flatrack locks can occur while attempting to load flatrack on trailer. If not, use truck to charge trailer air system using trailer air charging hose. If air system cannot retract flatrack locks, use manual flatrack lock retract procedure (TM 9-2320-364-14&P).

- b. Pull out PARKING BRAKE control (3) and set transmission range selector (4) to Neutral (N).
- c. Push knob in and retract flatrack locks on trailer.
- d. Inspect that both flatrack locks are fully retracted.
- e. Put PTO ENGAGE switch in ON position. Make sure indicator light comes on.
- f. Turn hydraulic selector switch to AUTO position.
- g. Move joystick to UNLOAD position until flatrack rollers contact trailer.
- h. Release joystick.
- i. Inspect and verify trailer guides are lined up between flatrack main rails.
- j. If not alined:
 - (1) Move joystick to LOAD position
 - (2) When flatrack is fully reloaded, release joystick.
 - (3) Repeat steps (f) through (h).
- k. Move joystick to UNLOAD position until hook arm cylinders have fully extended and main frame cylinders have extended 6 to 12 inches (35 to 30 cm).

- l. Release joystick.
- m. Turn hydraulic selector switch to MAN H.A. position.
- n. Move joystick to LOAD until flatrack rear rollers are centered between trailer stacking brackets.
- o. Release joystick.
- p. Pull out PARKING BRAKE control and set transmission range selector to Neutral (N).
- q. Turn hydraulic selector switch to AUTO position.
- r. Move joystick to LOAD position and retract LHS until LHS NO TRANSIT indicator (21) is extinguished.
- s. Turn hydraulic selector switch to OFF position.
- t. Put PTO ENGAGE switch in OFF position. Make sure indicator light goes off.
- u. Turn hydraulic selector switch to MAN M.F. position.
- v. Release joystick.
- w. Inspect that rear rollers on flatrack have contacted rear trailer stops.
- x. Apply service brake pedal.
- y. Push in truck PARKING BRAKE control.
- z. Turn hydraulic selector switch to MAN H.A.
- a. Move joystick to UNLOAD position until flatrack is fully seated on trailer.
- b. Move joystick to LOAD position to allow top of lift hook to clear hook bar.
- c. Place transmission range selector (4) in Drive (D). Release service brake pedal and move truck forward approximately 3 inches (76.2 mm). Apply service brake pedal (18).
- d. Move the joystick to UNLOAD position to disengage lift hook from hook bar.
- e. Set transmission range selector to Neutral (N) and pull out PARKING BRAKE control.
- f. Inspect that rear flatrack rollers have contacted trailer stops.
- g. Pull knob and engage flatrack locks.
- h. Push in PARKING BRAKE control.
- i. Set transmission range selector to Drive (D).
- j. Move truck forward approximately 5 feet (1.5 m).

7. Unload flatrack (or CROP) from the truck (HEMTT-LHS only) (automatic mode).
 - a. Back up the truck in line with trailer and stop approximately 5 feet (1.5 m) from trailer.
 - b. Pull out PARKING BRAKE control (1) and place transmission range selector (2) in Neutral (N).
 - c. Push knob (3) on trailer to retract flatrack locks (4).
 - d. Inspect that both flatrack locks (4) are fully retracted.
 - e. Put PTO ENGAGE switch (5) in ON position. Make sure indicator light (6) comes on.
 - f. Turn hydraulic selector switch (7) to AUTO position.
 - g. Move joystick (8) to UNLOAD position until lift hook (9) has moved just below level of flatrack hook bar (10).
 - h. Apply service brake pedal (11) and push in PARKING BRAKE control (1).
 - i. Set transmission range selector (12) to Reverse (R), release service brake pedal (11), and back truck up until lift hook (9) contacts hook bar (10).
 - j. Set transmission range selector (12) to Neutral (N) and apply service brake pedal (11).
 - k. Move joystick (8) to LOAD position and engage lift hook (9) into hook bar (10).
 - l. Pull out PARKING BRAKE control (1) and check that trailer bumper (13) is under flange and within 3.5 inches (89 mm) from truck bumper stop (14).
 - m. Push in PARKING BRAKE control (1) and continue loading flatrack onto truck until the LHS NO TRANSIT indicator (15) goes off indicating LHS is in transport position.
 - n. Pull out PARKING BRAKE control (1) and set the transmission range selector (12) to Neutral (N).
 - o. Inspect that the load locks (16) are engaged and flatrack is completely down on truck.
 - p. Turn hydraulic selector switch (7) to OFF position.
 - q. Put PTO ENGAGE switch (5) in OFF position. Make sure indicator light (6) goes off.

WARNING

WARNING:

Trailer wheels must be chocked during transfer operations or serious injury or death to personnel could result.

CAUTIONS:

Ensure that trailer drawbar is down against the ground during transfer operations or damage to equipment may result.

Ensure air lines and cables are properly stowed to prevent damage to equipment (TM 9-2320-364-14&P).

Both of the trailer bumper points must be under the truck bumper stop flange and at least one of the bumper points must contact the bumper stop. The trailer bumper point not contacting the truck bumper stop cannot exceed 0.5 inches (12.7 mm) or flatrack will miss main rail guides and equipment damage may result.

8. Transfer flatrack (or CROP) onto trailer (manual mode) from truck (HEMTT-LHS only).

a. Back up the truck so that trailer bumper is under flange and contacts truck bumper stop.

WARNING

WARNING:

Ensure trailer air system is pressurized before beginning transfer or flatrack locks may not properly disengage. Serious injury or death could result to personnel and damage to equipment may result.

b. Pull out PARKING BRAKE control and place transmission range selector in Neutral (N).

c. Push in knob and retract flatrack locks.

d. Put PTO ENGAGE switch in ON position. Make sure indicator light comes on.

e. Turn the hydraulic selector switch to MAN H.A. position.

f. Move the joystick to UNLOAD position until flatrack rollers contact trailer.

g. Release the joystick.

h. Inspect and verify that trailer guides are between flatrack main rails.

i. If not alined:

(1) Move joystick to LOAD position.

(2) When flatrack is completely reloaded onto truck, release joystick.

(3) Repeat steps (d) through (g).

j. Move the joystick to UNLOAD position and hold until hook arm cylinders are fully extended.

k. Release the joystick.

l. Turn the hydraulic selector switch to MAN M.F. position.

m. Move the joystick to UNLOAD position until front of flatrack is completely seated on trailer.

n. Release the joystick.

- o. Turn the hydraulic selector switch to MAN H.A. position.
- p. Move the truck forward approximately 5 feet (1.5 m).

WARNING

WARNING:

Never drive with LHS NO TRANSIT indicator illuminated. An illuminated indicator means LHS is not fully stowed. The load could break loose causing serious injury or death to personnel.

- q. Pull out PARKING BRAKE control and set the transmission range selector to Neutral (N).
- r. Move the joystick to LOAD position and hold in this position until main frame cylinders are fully retracted.
- s. Turn the hydraulic selector switch to MAN H.A. position.
- t. Hold the joystick in LOAD position until the hook arm cylinders are fully retracted.
- u. Turn the hydraulic selector switch to MAN TRANS position.
- v. Put PTO ENGAGE switch in OFF position. Make sure indicator light goes off.
- w. Inspect that flatrack is completely seated and load locks are engaged.
- x. Turn the hydraulic selector switch to MAN M.F. position.
- y. Move the joystick to UNLOAD position until flatrack rollers contact trailer stops and front of flatrack guides are seated on trailer.
- z. Release the joystick.
- a. Inspect that rear flatrack rollers on flatrack have contacted trailer stops.
- b. Apply the service brake pedal.
- c. Push in truck PARKING BRAKE control.
- d. Move the joystick to UNLOAD position to allow top of lift hook to clear hook bar.
- e. Release the service brake pedal and place transmission range selector in Drive (D) and move truck forward approximately 3 inches (76.2 mm). Apply service brake pedal.
- f. Move the joystick to UNLOAD position to disengage lift hook from hook bar.
- g. Set the transmission range selector to Neutral (N) and pull out PARKING BRAKE control.
- h. Inspect that rear flatrack rollers have contacted trailer stops.
- i. Pull knob and engage flatrack locks.

- j. Inspect that flatrack locks are engaged.
 - k. Push in PARKING BRAKE control.
 - l. Set the transmission range selector to Drive (D).
9. Unload flatrack (or CROP) from truck (manual mode) to trailer (HEMTT-LHS only).
- a. Push the knob on trailer to retract flatrack locks.

WARNING

WARNINGS:

- _ Check for overhead power lines or other obstructions before attempting LHS operation. If LHS reaches a height of 17 feet, 2 inches (5.23 m) with ISO container, serious injury or death to personnel could result from contact with electrical power lines.
- _ Check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.
- _ Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

- b. Inspect that both flatrack locks are fully retracted.
- c. Put PTO ENGAGE switch in ON position. Make sure indicator light goes on.
- d. Turn the hydraulic selector switch to MAN H.A. position.
- e. Move the joystick to UNLOAD position and hold until hook arm cylinders are fully extended.
- f. Release the joystick and turn hydraulic selector switch to MAN M.F. position.
- g. Hold joystick in UNLOAD position until lift hook has moved below level at flatrack hook bar.
- h. Set transmission range selector to Reverse (R) and release service brake pedal. Back up truck until lift hook contacts hook bar.
- i. Pull out PARKING BRAKE control.
- j. Check that trailer bumper is under flange of truck bumper stop.
- k. Push in PARKING BRAKE control and move joystick to LOAD position and engage hook bar.
- l. Continue to load in MAN M.F. mode until the main frame cylinders are fully retracted.

WARNING

WARNING:

Never drive with LHS NO TRANSIT indicator illuminated. An illuminated indicator means LHS is not fully stowed. The load could break looks causing serious injury or death to personnel.

- m. Turn the hydraulic selector switch to MAN H.A. position.
- n. Hold the joystick in LOAD position until hook arm cylinders are fully retracted.
- o. Turn hydraulic selector switch to MAN TRANS position.
- p. Put PTO ENGAGE switch in OFF position. Make sure indicator light goes off.
- q. Inspect that load locks are engaged and flatrack is fully loaded on truck.

Evaluation Preparation:

Setup: Provide for the Soldier a HEMTT-LHS/PLS truck and flatrack or CROP, and PLS trailer.

Brief Soldier: You are to transfer a flatrack or CROP from the truck to the PLS trailer and back.

Performance Measures	GO	NO GO
1. Positioned truck and trailer for loading/unloading operation.	_____	_____
2. Loaded flatrack (or CROP) onto PLS trailer (automatic mode).	_____	_____
3. Unloaded flatrack (or CROP) from trailer (automatic mode).	_____	_____
4. Loaded flatrack (or CROP) onto trailer (manual mode).	_____	_____
5. Unloaded flatrack (or CROP) from PLS trailer (manual mode).	_____	_____
6. Loaded flatrack (or CROP) onto the truck (HEMTT-LHS only) (automatic mode) from PLST.	_____	_____
7. Unload flatrack (or CROP) from the truck (HEMTT-LHS only) (automatic mode).	_____	_____
8. Loaded flatrack (or CROP) onto trailer (HEMTT-LHS only) (manual mode) from truck.	_____	_____
9. Unloaded flatrack (or CROP) from truck (HEMTT-LHS only) (manual mode) to trailer.	_____	_____

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

References

Required

TC 21-305-10 TRAINING PROGRAM FOR THE PALLETIZED LOAD SYSTEM

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-304-14&P OPERATORS,

Primary

Required

ORGANIZATIONAL, AND DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
MANUAL (INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LIST) FOR LOAD HANDLING
SYSTEM, HEAVY EXPANDED MOBILITY
TACTICAL TRUCKS

TM 9-2320-364-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-
01-304-2277) (2320-01-304-2278)

Primary

551-88M-1501

Perform Load/Unload Operations in Automatic Mode

Conditions: In an operational environment, your unit is given a supply mission. Given an M1120A4 HEMTT-LHS or an M1075 PLS Truck Tractor with before-operation performed, BII, loaded flatrack, hearing protection, and work gloves.

Standards: Perform Load/unloading operations with a flatrack or CROP using the HEMTT-LHS or PLS Truck Tractor in automatic mode, without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is given a supply mission.

Note: There are two model variations that may be used in the execution of this tasks. One is an M1120A4, HEMTT-LHS and the other an M1075 PLS truck (without the MHC). Each are capable of being used to perform this task. Either the M1 or the M1077 Flatrack or the M3 or M3A1 CROP may also be used.

Performance Steps

WARNING

WARNING:

Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 feet two inches (5.22 M) with ISO container. Serious injury or death could result from contact with electrical power lines.

1. Position vehicle for loading operation (either model).

a. Check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. Any ground instability beneath wheels could cause serious injury or death to personnel.

CAUTION

CAUTION:

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

b. Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

CAUTION

CAUTION:

Do not use Reverse (R) to back up truck while hook arm is attached to flatrack or damage to

LHS will occur.

WARNING

WARNING:

When loading or unloading flatracks on uneven ground (side slope or downgrades up to 10 degrees), it may be necessary to apply truck service brakes to prevent truck roll away or severe injury or death.

CAUTION:

If LHS overload lamp illuminates but loading operation continues, operator is cautioned that LHS is nearing maximum capacity. In this situation operator should determine if payload is evenly distributed on flatrack or if flatrack load exceeds 16.5 tons (14,983 kg). If any of these conditions exist, operator must redistribute or reduce the payload or damage to equipment may occur.

2. Load flatrack onto truck tractor (PLS only).

a. Load must be evenly distributed on the pallet. Uneven load distribution may cause LHS Overload indicator to give false signals and cause LHS to operate incorrectly. Damage to equipment may result.

b. If LHS overload lamp illuminates and normal operation has stopped, return load to original position and redistribute or reduce payload weight or equipment damage may occur.

WARNING

WARNING:

Ensure that flatrack runners contact LHS rear rollers correctly. Failure to contact flatrack runners correctly could result in serious injury to personnel and damage to equipment. Overload warning light may illuminate when lifting flatrack from unusual conditions.

CAUTION:

Reduce engine speed to idle before flatrack main rails contact rear rollers or damage to flatrack may result. Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result. Hydraulic selector switch must be in OFF position before driving or hydraulic system could overheat.

c. Ensure that parking brake is not applied before starting load sequence or damage to equipment may occur.

CAUTION

CAUTIONS:

Engine idle speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

Ensure parking brake is not applied during unload sequence or damage to equipment may result.

WARNING:

When loading or unloading flatracks on uneven ground (side slope or down grades up to 10 degrees), it may be necessary to apply truck service brakes to prevent truck roll away or severe injury or death could result.

3. Off-load flatrack from truck tractor (PLS only).

a. Check for overhead power lines or other obstructions before attempting LHS operation. LHS reaches a height of 17 feet, two inches (5.22 m) with ISO container. Serious injury or death could result from contact with electrical power lines.

b. Check ground conditions for firmness and extreme sideways inclination before picking-up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

CAUTION

Check ground conditions where flatrack will be placed. Ensure it can support the flatrack weight or damage to flatrack or LHS may result.

c. Prior to and during any load or unload cycle, all personnel should stay clear of LHS and flatrack or serious injury or death could result to personnel.

CAUTION

CAUTIONS:

Once the truck's rear suspension has been relieved of a flatrack load, do not continue in UNLOAD position as possibility of jacking up rear end with hook arm may occur and damage to equipment may result. If flatrack is extremely light or empty, it may be necessary to place transmission range selector to Drive (D) to allow truck to move out from under flatrack.

Never drive with NO TRANS light illuminated.

d. Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment. Loading and unloading times are controlled by engine speed. Engine speed can be increased to approximately 1500 rpm to reduce loading and unloading times.

CAUTION

CAUTION:

If Load Handling System (LHS) had previously been used in Manual mode and not completely stowed in Auto mode, the hook arm cylinders must be completely extended or the LHS must be completely stowed using Auto Mode before the flatrack can be loaded. Failure to comply may result in damage to the truck and flatrack.

NOTES:

_ Continued repetitive cycles, approximately nine at rated 26,000 lbs (11 793 kg) payload, of the LHS could cause overheating and system will fail to pick up the load. Allow the hydraulic system to cool. Wait approximately 1 ½ hours or until the hydraulic reservoir is cool. The hydraulic reservoir is cool when you can hold your hand on the reservoir for more than 10

seconds.

Continued repetitive cycles, approximately nine at rated 24,000 lbs (10 886 kg) payload, of the load handling system with container handling unit (CHU) could cause overheating and system will fail to pick up the load. Allow the hydraulic system to cool. Wait approximately 1 1/2 hours or until the hydraulic reservoir is cool. The hydraulic reservoir is cool when you can hold your hand on the reservoir for more than 10 seconds.

NOTES:

- _ The amount of time to load and unload is controlled by engine speed. Engine speed can be increased to 1,500 to maximum rpm to reduce loading and unloading times.
- _ LHS will only operate when transmission range selector is in Neutral (N).

4. Load flatrack onto truck tractor (HEMTT-LHS only).

a. Set transmission range selector to Reverse (R) and back truck up to flatrack. Stop at approximately 5 feet (1.3 m) from hook bar. Check for overhead obstructions and firmness of the ground.

b. Apply service brake pedal and set transmission range selector to Neutral (N).

WARNING

WARNINGS:

Check for overhead power lines or other obstructions before attempting lhs operation. LHS reaches a height of 17 feet, 2 inches (5.23 m) with ISO container. Serious injury or death to personnel could result from contact with electrical power lines.

Check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. any ground instability beneath road wheels could cause serious injury or death to personnel.

Prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

CAUTION:

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

c. Put HYD ENABLE switch in ON position. Make sure indicator light comes on.

d. Turn hydraulic selector switch to AUTO position.

e. Move joystick to UNLOAD position. Lift hook will raise and begin to move rearwards. LHS NO TRANSIT indicator will illuminate to indicate hook arm is up and load lock has been cleared.

NOTE:

To fully view lift hook relation to hook bar, it may be necessary to observe position from outside the cab. LHS will only operate when transmission range selector is in Neutral (N).

f. Continue to unload until lift hook has moved to below level of flatrack hook bar.

g. Release joystick.

h. Set the transmission range selector to Reverse (R) and back truck up to flatrack, aligning truck and flatrack as straight as possible with lift hook to middle of hook bar until lift hook contacts hook bar. Be sure lift hook tip is positioned below bottom of flatrack hook bar.

NOTE: LHS will only operate when transmission range selector is in Neutral (N). Set the transmission range selector to Neutral (N).

CAUTION:

Do not use Reverse (R) to back up truck while hook arm is attached to flatrack or damage to LHS will occur.

- i. Move the joystick to LOAD position to raise lift hook and engage hook bar.

NOTE: LHS will only operate when transmission range selector is in Neutral (N).

- j. If lift hook fails to engage the flatrack hook bar:

- (1) Release the joystick.

- (2) Set the transmission range selector to Drive (D), release service brake pedal and move truck forward to clear flatrack. Set transmission range selector to N (neutral).

- (3) Move the joystick to UNLOAD position until lift hook is below level of hook bar.

WARNING

WARNING:

When loading or unloading flatracks on uneven ground (side slope or downgrades up to 5 degrees), it may be necessary to apply truck service brakes to prevent truck rollaway or severe injury or death to personnel could result.

CAUTIONS:

If LHS OVER LOAD indicator illuminates but loading operation continues, operator is cautioned that LHS is nearing maximum capacity. In this situation operator should determine if payload is evenly distributed on flatrack or if flatrack load exceeds 25,000 lbs (11,340 kg) for LHS or 24,000 lbs (10,886 kg) for LHS with CHU kit. If any of these conditions exist, operator must redistribute or reduce the payload or damage to equipment may occur.

Load must be evenly distributed on the pallet. Uneven load distribution may cause LHS OVER LOAD indicator to give false signals and cause LHS to operate incorrectly. Damage to equipment may result.

If LHS OVER LOAD indicator illuminates and normal operation has stopped, return load to original position and redistribute or reduce payload weight or equipment damage may occur.

Ensure that parking brake is not applied before starting load sequence or damage to equipment may occur.

- k. When correctly engaged, set the transmission range selector to Neutral (N) and release service brake pedal.

WARNING**WARNING:**

Ensure that flatrack runners contact lhs rear rollers correctly. Failure to contact flatrack runners correctly could result in serious injury or death to personnel and damage to Equipment.

- l. Move joystick to LOAD position, allowing truck to be pulled under flatrack.

CAUTION**CAUTION:**

Reduce engine speed to idle before flatrack main rails contact rear rollers or damage to flatrack may result.

m. As load is lifted, truck will be pulled under flatrack. Some steering wheel adjustment may have to be made to ensure that flatrack runners will contact rear rollers.

- n. Before flatrack contacts rear rollers, reduce engine speed.

- o. Apply service brake pedal after flatrack main rails contact rear rollers.

- (1) Release joystick. Set hydraulic selector switch to MAN H.A. position.

- (2) Move joystick to LOAD position until flatrack is approximately 2 feet (0.61 m) off the ground. Release joystick.

- (3) Set hydraulic selector switch to AUTO position. Resume normal AUTO operations.

NOTE: Engine speed will require increasing and decreasing in the following steps to facilitate performance.

p. After flatrack contacts rear rollers, increase engine speed to 1,500 to maximum rpm until flatrack is nearly loaded. Reduce engine speed to idle.

- q. Continue loading until engaged flatrack is fully loaded and LHS NO TRANSIT indicator goes off.

- r. Release joystick.

- s. Pull out PARKING BRAKE control.

NOTE: If flatrack is not engaged in load locks, raise flatrack slightly and lower again. Flatrack should set completely and engage load locks.

CAUTION**CAUTION:**

Engine speed must be at idle before using hydraulic selector switch, or damage to equipment may result.

- t. Inspect that both load locks have engaged and flatrack is completely down on truck.

- u. Put PTO ENGAGE switch in OFF position. Make sure indicator light goes off.

WARNING

WARNINGS:

- _ when loaded with frs, or container, the center of gravity is moved up and toward rear of truck. Extreme caution must be taken when turning and ascending or descending on a grade. Failure to use extreme caution could result in severe injury or death to personnel.
- _ maximum side slope when loaded with a frs or container is 30 percent. Failure to comply may result in equipment damage or severe injury or death to personnel.
- _ do not reduce tire pressure when loaded with frs or container. Highway tire pressure, 60 psi (414 kpa) front and 83 psi (572 kpa) rear, is required at all times when loaded with frs or container. Failure to comply could result in damage to equipment and severe injury or death to personnel.

v. Turn hydraulic selector switch to OFF position.

5. Unload flatrack from truck tractor (HEMTT-LHS only).

NOTE:

Continued repetitive cycles, approximately nine at rated 26,000 lbs payload, of the Load Handling System (LHS) could cause overheating and system will fail to pick up the load. Allow the hydraulic system to cool. Wait approximately 1 1/2 hours or until the hydraulic reservoir is cool. The hydraulic reservoir is cool when you can hold your hand on the reservoir for more than 10 seconds.

a. Check area for sufficient operating room at front and rear of truck. Check overhead clearance and ground conditions.

CAUTION

CAUTION:

Ensure parking brake is not applied during unload sequence or damage to equipment may result.

b. Apply service brake pedal and set transmission range selector to Neutral (N).

c. Put HYD ENABLE switch in ON position. Make sure MAIN HYD ENABLE indicator light illuminates.

WARNING

WARNINGS:

- _ when loading or unloading flatracks on uneven ground (side slope or downgrades up to 5 degrees), it may be necessary to apply truck service brakes to prevent truck rollaway or severe

injury or death to personnel could result.

_ check for overhead power lines or other obstructions before attempting lhs operation. Lhs reaches a height of 17 feet, 2 inches (5.23 m) with iso container. Serious injury or death to personnel could result from contact with electrical power lines.

_ check ground conditions for firmness and extreme sideways inclination before picking up or off-loading a flatrack. Any ground instability beneath road wheels could cause serious injury or death to personnel.

_ prior to and during any load or unload cycle, all personnel should stay clear of lhs and flatrack or serious injury or death to personnel could result.

CAUTION

CAUTIONS: Check that ground conditions where flatrack will be placed can support the flatrack weight or damage to flatrack or LHS may result.

Ensure rail transport locking pins are disengaged before unloading flatrack. Rail transport locking pins are used for rail transport only. Failure to comply may result in damage to equipment.

d. Set hydraulic selector switch to AUTO position.

NOTE: LHS OVER LOAD indicator may come on when engine is at idle speed.

e. Move joystick to UNLOAD position. Flatrack will start to move rearwards. LHS NO TRANSIT indicator will illuminate. Maintain engine speed at idle until front of flatrack raises approximately 1 feet (30.5 cm).

f. Continue to unload until rear suspension starts to lift and back edge of flatrack touches ground.

g. Release service brake pedal and allow grounded flatrack to push the truck straight forward from under flatrack and clear.

CAUTION

CAUTION:

Once trucks rear suspension has been relieved of flatrack load, do not continue in UNLOAD position as possibility of jacking up rear of truck with hook arm may occur and damage to equipment may result.

NOTE: If flatrack is extremely light or empty, it may be necessary to place transmission range selector to Drive (D) to allow truck to move out from under flatrack.

h. As front of flatrack approaches within approximately 8 inches (20.32 cm) of ground, decrease engine speed to idle and apply service brake pedal.

i. Continue off-loading until flatrack runners are on ground and rear suspension is unloaded.

j. Release joystick when flatrack runners are resting on ground.

k. Set transmission range selector to Drive (D) and release service brake pedal.

- l. Set transmission range selector to Neutral (N).
- m. Move joystick to LOAD position momentarily and then to UNLOAD position to let lift hook disengage from hook bar. Repeat step until hook disengages.
- n. Set transmission range selector to Drive (D) and move truck forward approximately 5 feet (1.5 m).

CAUTION

CAUTION:

Never drive with LHS NO TRANSIT indicator illuminated. An illuminated indicator means load locks are not engaged and LHS is not fully stowed.

NOTE: Hook arm does not need to be fully stowed if more transfer operations are going to be made.

- o. Stop truck and set transmission range selector to Neutral (N).
- p. Move joystick to LOAD position until LHS is in transit position. LHS NO TRANSIT indicator will go out indicating LHS is in transport position.
- q. Release joystick.
- r. Turn hydraulic selector switch to OFF position.
- s. Put HYD ENABLE switch in OFF position. Make sure MAIN HYD ENABLE indicator light goes off.

Evaluation Preparation:

Setup: Provide for the Soldier a HEMTT-LHS/PLS truck with flatrack or CROP and an assistant driver (acting as spotter/guide).

Brief Soldier: You are required to position the vehicle and load then unload either a flatrack or a CROP from you vehicle. Use ground guide for proper positioning and loading/unloading operations.

Performance Measures	GO	NO GO
1 Positioned PLS/HEMTT-LHS truck tractor for loading operation.	_____	_____
2 Loaded flatrack (or CROP) onto truck tractor (PLS only).	_____	_____
3 Unloaded flatrack (or CROP) from truck tractor (PLS only).	_____	_____
4 Loaded flatrack (or CROP) from truck tractor (HEMTT-LHS only).	_____	_____
5 Unloaded flatrack (or CROP) from truck tractor (HEMTT-LHS only).	_____	_____

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

**References
Required**

Primary

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-364-10 OPERATORS MANUAL
FOR TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN
2320-01-304-2277) (2320-01-304-2278)

TM 9-3990-206-10 OPERATORS MANUAL FOR
PALLETIZED LOAD SYSTEM (PLS)
FLATRACK M1077/M1077A1 (NSN 3990-01-
307-7676) ISO COMPATIBLE PALLETIZED
FLATRACK(IPF) M1 (3990-01-406-1340)

551-88M-1500
Operate the PLS/HEMTT-LHS Truck

WARNING

Speed limits posted on curves reflect speeds that are considered safe for automobiles. Heavy vehicles with a high center of gravity can roll over at these speed limits. Use care and reduce your speed below the posted limit prior to entering a curve. Failure to comply may result in injury or death to personnel.

CAUTION

Before starting over-the-road operation, make sure that the Hydraulic Selector Switch (WP 0021) is set to OFF and HYD ENABLE Switch (WP 0020) is set to off position. If AUTO circuits have failed, and manual load operation was used, set Hydraulic Selector Switch to MAN TRANS (WP 0021) position.

- Do not move TRANSFER CASE shift lever when vehicle is moving or when transmission is in gear. Severe damage to drive line will result.

Never let engine exceed maximum no-load governed engine speed (approximately 2170 rpm) or maximum governed engine speed under load (approximately 2150 rpm). If engine is allowed to go over governed engine speeds, serious engine damage may result.

Conditions: In an operational environment, given a mission-ready dispatched Palletized Load System (PLS) or Heavy Expanded Mobility Tactical Truck Load Handling System (HEMTT-LHS) truck, assistant operator, designated route to operate, hearing protection, technical manual (TM), and all basic issue items (BII).

Standards: Prepare the vehicle for operation by making all necessary driver adjustments; perform all starting procedures; and operate the vehicle within its capabilities and limitations over normal terrain, steep grades, and off-road. You are to adhere to all WARNING and CAUTION statements in the applicable TM. In addition, you should comply with all local traffic regulations and cause no injury to personnel or damage to vehicle during operation.

Special Condition: Task is to be executed using either the PLS M1075 without material handling crane, or the HEMTT-LHS M1120A4 Truck tractor. Whichever is available for training use the applicable performance steps and measures to evaluate the task. Ensure appropriate references are used for specific applicable steps.

Special Standards: None

Special Equipment: None

Cue: Your unit is moving to another tactical location.

Note: This task is applicable to vehicle operations with either the Palletized Load System Truck (M1075) or the HEMTT-LHS Truck (M1120A4).

Performance Steps

1. Prepare vehicle for movement (both models).
 - a. Remove and stow wheel chocks.

- b. Ensure hydraulic selector valve is in correct position for mission (HEMTT-LHS).
 - c. Ensure LHS is secured in stowed position and cargo is secured (HEMTT-LHS).
 - d. Ensure air suspension dump valve control is pinned in "service" position (HEMTT-LHS).
 - e. Ensure all four suspension ball valves are open (HEMTT-LHS).
 - f. Ensure tire carrier is secure in the raised position (HEMTT-LHS).
 - g. Change vehicle weight indicator as needed.
 - h. Install or stow foot rest.
 - i. Adjust driver seat.
 - j. Operate seat belt.
 - k. Adjust rearview mirrors as required.
2. Operate vehicle on-road (PLS). Refer to TM 9-2320-364-10, WP0039.

NOTE: Comply with all WARNING and CAUTION statements in the TM regarding these procedures.

- a. Drive vehicle on improved roads.
- b. Drive vehicle in Reverse (backing the vehicle).

NOTE: Note - Ensure that any backing operation includes the use of a dismounted ground guide. Operations with any HEMTT include a minimum of 2 persons.

- c. Drive vehicle under Slippery Conditions.
- d. Comply with all WARNING and CAUTION statements in the TM regarding these procedures.

3. Operate vehicle off-road. (Refer to TM 9-2320-364-10, WP 0040).

- a. Place transfer case in proper range (WP0037).

WARNING

CTIS ON/OFF switch should be in ON position at all times. Overspeed protection will not operate if switch is in OFF position and tire pressures may not match driving speeds. Failure to follow these instructions may result in unsafe driving conditions or tire failure. Failure to comply may result in injury or death to personnel.

- b. Push CTIS ON/OFF switch to ON position.

NOTE: If it becomes necessary to disable the CTIS, the tires will have to be manually inflated or deflated.

CTIS may not engage properly if CTIS START button is pressed too quickly. Allow time for CTIS adjustments.

- c. Set CTIS rotary selector switch to desired position. Press and hold for approximately 1 second.

- d. Check all gauges and indicators to ensure vehicle is operating in proper ranges.
- e. Apply service brake and select appropriate operating range.
- f. Pull out parking brake control to release brakes.
- g. If a trailer is attached, push in trailer air supply control.

CAUTION

Do not hold steering wheel at full left or full right for longer than 10 seconds. Oil overheating and pump damage can result. The CTIS increases tire inflation pressure when vehicle speed exceeds the allowable speed for each setting. When an increase in speed is required, maintain the lower speed until the tires are reinflated to the correct pressure to prevent damage to tire.

- h. Release service brake pedal and slowly press down on throttle until vehicle reaches desired speed.

NOTE: Check vehicle indicators often during vehicle operations.

- i. Accelerate, brake, and steer as required.

CAUTION

DO NOT SHIFT light will illuminate when there is a problem with the transmission that can cause serious damage and possible failure of the transmission.

- j. Check gauges and indicators.
4. Operate vehicle on steep grades (TM 9-2320-364-10, WP0041).
- a. Drive up moderate to steep grades.
 - b. Adhere to all WARNING and CAUTION statements in the reference TM.

WARNING

Speed limits posted on curves reflect speeds that are considered safe for automobiles. Heavy vehicles with a high center of gravity can roll over at these speed limits. Use care and reduce your speed below the posted limit prior to entering a curve. Failure to comply may result in injury or death to personnel.

CAUTION

Before starting over-the-road operation, make sure that the Hydraulic Selector Switch (WP 0021) is set to OFF and HYD ENABLE Switch (WP 0020) is set to off position. If AUTO circuits have failed, and manual load operation was used, set Hydraulic Selector Switch to MAN TRANS (WP 0021) position.

- Do not move TRANSFER CASE shift lever when vehicle is moving or when transmission is in gear. Severe damage to drive line will result.

5. Operate Vehicle On Road (HEMTT-LHS). (TM 9-2320-345-10, WP 0048).
 - a. Set TRANSFER CASE shift lever to HI.
 - b. Set transmission range selector to D (drive).
 - c. Push in PARKING BRAKE control.

CAUTION

Never let engine exceed maximum no-load governed engine speed (approximately 2170 rpm) or maximum governed engine speed under load (approximately 2150 rpm). If engine is allowed to go over governed engine speeds, serious engine damage may result.

- d. Slowly depress throttle pedal until vehicle reaches desired speed. Tachometer should read 1650-2100 rpm.
- e. Accelerate, brake, and steer as required.
- f. Check that fuel gauge shows enough fuel to complete mission.
- g. Check that engine oil pressure gauge reads 40 to 88 psi between 1200-2100 rpm.
- h. Check that transmission temperature gauge reads 160* to 220*F.
 - i. If transmission temperature indicator illuminates (red), this indicates that the transmission temperature is above 250°F (121°C), or torque converter temperature is above 350° (177°C); park vehicle (WP 0052) and allow transmission to cool. Notify field level maintenance upon completion of mission.
 - j. If check transmission indicator illuminates (amber), there is a potential problem with the transmission and/or the transmission may need to be serviced. Check for correct oil level and/or high transmission oil temperature. If indicators are normal, continue mission and notify field level maintenance as soon as possible.
- k. Check that engine coolant temperature gauge reads 180 to 200°F (82 to 93°C).
 - l. If engine coolant temperature gauge reads over 219°F (104°C), idle engine until water temperature cools. If coolant does not cool, shut off engine (WP 0053) and notify field level maintenance.
 - m. If high engine coolant temperature indicator illuminates (red), this indicates the engine monitoring system has logged a high engine coolant fault code and will cause the check engine indicator to illuminate (amber). Check engine coolant temperature gauge and allow engine to cool as necessary. Notify field level maintenance as soon as possible.
 - n. If check engine indicator illuminates (amber), engine must be serviced by field level maintenance as soon as possible.
- o. Check that battery voltage readout reads 24 to 28 volts.
- p. Check that front air pressure gauge and rear air pressure gauge both read 100 to 130 psi.

q. If low air indicator illuminates (red), perform immediate action for loss of air supply system pressure emergency procedures. (WP 0093)

6. Operate Vehicle Off Road (HEMTT-LHS). Refer to TM 9-2320-345-10, WP0049.

- a. Set ABS disable switch to on position, ABS disabled indicator will illuminate.
- b. Set transfer case to L (LO).
- c. Move range selector to 2, or 1 depending on ground conditions.
- d. Push in parking brake control.

CAUTION

Never let engine exceed maximum no-load governed engine speed (approximately 2250 rpm) or maximum governed engine speed under load (approximately 2100 rpm). If engine is allowed to go over governed engine speeds, serious engine damage may result.

- e. Slowly depress throttle until vehicle reaches desired speed.
- f. Accelerate, brake, and steer as desired.
- g. Set ABS disable switch to off position. ABS disabled indicator will go out.

WARNING

Do not press service brake treadle hard three or four times in a row. Air supply will be used up and service brakes will not work until air is built up again. Failure to comply may result in injury or death to personnel.

CAUTION

Do not allow speed to go above 2100 RPM when driving downhill, or damage to engine can result.

- Engine brake operates best when engine speed is between 1650 and 2100 RPM. Transmission torque converter lockup valve may disengage below 1650 RPM resulting in loss of engine power.

7. Operate Vehicle on Steep Grades (HEMTT-LHS). Refer to TM 9-2320-428-10, WP0054.

- a. (Up a steep grade) Depress and hold throttle as vehicle climbs up the grade. Transmission will downshift automatically as needed.
- b. Set transmission range selector to lower range as needed to keep engine speed on tachometer between 1650 and 2100 RPM.
- c. (Down a steep grade) Move range selector to low range as needed to keep engine speed on tachometer between 1,650 and 2,100 rpm.
- d. Use service brake as needed to control speed.

e. Use engine brake as needed.

CAUTION

Do not allow speed to go above 2100 RPM when driving downhill, or damage to engine can result.

8. Drive vehicle in slippery conditions (HEMTT-LHS)(TM 9-2320-345-10, WP 0051)

NOTE: After TRACTION CONTROL lever is shifted, let vehicle creep forward several feet to allow shift collars to fully engage.

a. If TRANSFER CASE shift lever is set to LO, 8X8 DRIVE is automatically engaged and indicator light will illuminate. Set TRACTION CONTROL lever to INTER-AXLE DIFF. LOCK. Indicator light will illuminate.

CAUTION

Do not shift TRACTION CONTROL lever while vehicle is moving. Damage to drive line may result.

b. If TRANSFER CASE shift lever is set to HI, set TRACTION CONTROL lever to 8X8 DRIVE. Indicator light will illuminate.

NOTE: After TRACTION CONTROL lever is set to OFF position, let vehicle creep forward several feet to allow shift collars to fully disengage.

c. When vehicle gets good traction again, stop vehicle and set TRACTION CONTROL lever to OFF. Indicator light will go out.

Evaluation Preparation:

None

Performance Measures

Performance Measures	GO	NO GO
1 Prepared vehicle for movement.	_____	_____
2 Operated vehicle on-road.	_____	_____
3 Operated vehicle off-road.	_____	_____
4 Operated vehicle on steep grades.	_____	_____
5 Operated the HEMTT-LHS truck on-road.	_____	_____
6 Operated the HEMTT-LHS truck off-road.	_____	_____
7 Operated vehicle on steep grades (HEMTT-LHS).	_____	_____

Evaluation Guidance: None

References

Required

TC 21-305-20 Manual for the Wheeled Vehicle
Operator {AFMAN 24-306(I)}

TM 9-2320-345-10 OPERATORS MANUAL FOR
TRUCK, LOAD HANDLING SYSTEM (LHS), W
AND W/O WINCH, 8X8 M1120A4 (NSN 2320-01-
534-1872)(EIC BG7) (THIS ITEM IS INCLUDED
ON EM 0288)

TM 9-2320-364-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, M1074 AND M1075
PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-
01-304-2277) (2320-01-304-2278)

Primary

Skill Level SL2
Subject Area 10: Motor Transport Supervision
551-88M-2334

Supervise Preventive Maintenance Checks and Services

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given Soldier(s) to supervise, either DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet), black ink pen, applicable -10 series technical manual (TM), hearing protection, vehicles, trailers or equipment to perform the maintenance on, local maintenance standing operating procedure (SOP), and any other tools (organizational vehicle maintenance [OVM], basic issue items [BII], additional authorization list [AAL]) or cleaning items needed.

Standards: Perform preventive maintenance according to the applicable TM and with 100% accuracy by detecting all faults on the equipment, immediately fixing correctable detected faults, annotating uncorrectable faults on available forms (DA Form 2404 or DA Form 5988-E), and notifying their supervisor as required. The operators should perform all applicable maintenance checks without injury to personnel or damage to tools, equipment or vehicles.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is preparing to move to a new location and all vehicles must receive a maintenance inspection prior to movement.

Note: None

Performance Steps

1. Ensure that Soldier(s) are prepared to begin preventive maintenance inspection.

a. All forms (DA Form 2404 or DA Form 5987-E) are available and filled out properly in accordance with DA Pamphlet 750-8.

b. The applicable and current TM or extracts are being used.

c. All equipment or vehicle-issued tools and/or equipment needed for inspection are present and in serviceable condition.

d. Ensure that no jewelry is worn during maintenance that may pose a safety hazard to personnel. Refer to vehicle or equipment TM as needed.

e. Ensure that hearing protection or any other applicable safety equipment/clothing is available and used as needed/required.

f. Ensure that vehicle or equipment is properly grounded, as applicable.

2. Ensure the operator(s) are complying with established standards in the vehicle or equipment TM while performing before-operation checks.

a. Ensure that operator(s) refer to applicable maintenance tables for the before-operation inspection.

b. Solicit feedback on deficiencies found during inspection.

c. Assist the Soldier(s) as needed, in determining replacement part availability.

d. Ensure maintenance support availability as needed.

e. Ensure that maintenance element is informed of any changes in vehicle operational status as a result of the inspection.

f. Ensure operator(s) immediately correct noted faults or properly annotate the uncorrectable fault on the maintenance worksheet.

g. Ensure the operator(s) make the required entries on the maintenance worksheet that reflects the completion of before-operation checks. Operator signed and dated in appropriate block if deficiencies are found.

h. Ensures that operator adheres to all safety WARNINGS and CAUTIONS applicable to the maintenance procedures being performed.

3. Ensure the operator(s) are complying with established standards in the vehicle or equipment TM while performing during-operation inspection.

a. Monitor and spot-check the operation of the vehicle(s) or equipment being operated under your supervision by soliciting feedback from operators.

b. Ensure that organizational maintenance is informed of any changes in vehicle or equipment operational status as a result of during-operation inspection.

c. Prohibit any operator from operating any vehicle or equipment if the operation or inspection of this equipment is determined to be unsafe and/or non-mission capable (NMC).

d. Ensure the operator(s) make the required entries on the maintenance worksheet that reflect the completion of during-operation checks. Operator signed and dated in appropriate block if deficiencies are found.

e. Ensures that operator adheres to all safety WARNINGS and CAUTIONS applicable to the maintenance procedures being performed.

4. Ensure the operator(s) are complying with established standards in the vehicle or equipment TM while performing after-operation inspection.

a. Monitor and spot-check the operation of the vehicle(s) or equipment being operated under your supervision by observation and soliciting feedback from operators.

b. Ensure that organizational maintenance is informed of any changes in vehicle or equipment operational status as a result of after-operation inspection.

c. Prohibit any operator from operating any vehicle or equipment if the operation or inspection of this equipment is determined to be unsafe and/or determined to be non-mission capable (NMC).

d. Ensure the operator(s) make the required entries on the maintenance worksheet that reflects the completion of after-operation checks.

(1) Operator signed and dated in appropriate block if deficiencies are found.

(2) Turns in worksheet to supervisor or maintenance personnel according to local SOP.

(3) Today's date entered in appropriate block if no deficiencies are found.

(4) Retains for further use until uncorrectable faults are noted.

e. Ensures that operator adheres to all safety WARNINGS and CAUTIONS applicable to the maintenance procedures being performed.

5. Ensure that all inspection worksheets are turned in to organizational maintenance in accordance with local maintenance SOP.

a. Makes final check of entries made by operator of all maintenance worksheets.

b. As supervisor, signs inspection worksheet as necessary.

c. Instructs driver to turn in maintenance worksheets as applicable.

6. Ensure that all vehicles and equipment are secured upon completion of maintenance.

a. Secure all OVM boxes.

b. Stow all tools properly in stowage trays/brackets.

c. Secure all access covers and engine compartment hoods.

d. If moving vehicle, remove chocks and ensure ground guides are available to assist.

e. Ensure that all tools and maintenance related materials are secured before movement.

- f. If vehicle is to remain parked, replace drip pans and chocks in accordance with local SOP.
- g. Ensure operator(s) recover grounding device(s) prior to movement, as applicable.

Evaluation Preparation:

Setup: Provide for the Soldier (a Supervisor) a group of Soldiers with which to supervise the performance of PMCS. This group of Soldiers must have the vehicles and all requirement, forms, replacement parts, and POL as required to perform their PMCS inspections.

Brief the Soldier: You are to supervise the performance of PMCS as done by these designated Soldiers. They have all the required items to conduct the PMCS, and you are to ensure that the process is completed properly and that all parts (as applicable) are replaced within their level of maintenance, forms are completed, and the disposition of these forms is handled properly.

Performance Measures	GO	NO GO
1 Ensured that Soldier(s) were prepared to begin preventive maintenance inspection.	_____	_____
2 Ensured the operator(s) were complying with established standards in the vehicle or equipment TM while performing before-operation checks.	_____	_____
3 Ensured the operator(s) were complying with established standards in the vehicle or equipment TM while performing during-operation inspection.	_____	_____
4 Ensured the operator(s) were complying with established standards in the vehicle or equipment TM while performing after-operation inspection.	_____	_____
5 Ensured that all inspection worksheets were turned in to organizational maintenance in accordance with local maintenance SOP.	_____	_____
6 Ensured that all vehicles and equipment were secured upon completion of maintenance.	_____	_____

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

References

Required

DA FORM 2404 EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

Primary

DA FORM 2408-14 UNCORRECTED FAULT RECORD

DA FORM 5987-E MOTOR EQUIPMENT DISPATCH (EGA)

DA FORM 5988-E Equipment Inspection Maintenance Worksheet

Required

Primary

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

DA PAM 750-8 The Army Maintenance
Management System (TAMMS) Users Manual.

Subject Area 11: Convoy Execution/Defense

551-88M-2348

Perform Duties as a Serial/March Unit Commander

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given the responsibility as serial/march unit commander, a briefing by the convoy commander, enough vehicles to warrant a serial/march unit, maps, material to be transported and personnel as vehicle drivers.

Standards: Ensure that all pre-departure checks are successfully completed for your vehicles, enforce all safe-driving measures during movement, ensure that your vehicle operators conduct all at-halt checks/duties, and that all drivers complete the required checks/duties at convoy destination prior to release with 100% accuracy. All procedures are to be performed without injury to personnel or damage to vehicles or equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to conduct a convoy movement.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.

-
- d. Implement controls.
 - e. Supervise.
 - f. Evaluate.
2. Perform pre-departure checks/duties.
 - a. Ensure that before-operations checks have been performed. Check the following:
 - (1) Air hose couplings for proper connection and leakage.
 - (2) Oil and lubrication levels.
 - (3) Cooling systems for proper coolant level and leakage.
 - (4) Brakes.
 - (5) Tires for cuts and general condition.
 - (6) Check batteries for obvious defect (such as cracked case, burnt, broken, or loose battery terminals).
 - b. Check the lineup of vehicles to ensure that march column, regardless of size, have three parts.
 - (1) The head is the first task vehicle of the column in the order of march.
 - (2) The main body of the column follows immediately after the first task vehicle.
 - (3) The trail is the last element of the march column.
 - c. Check to see that vehicles are properly marked as follows:
 - (1) A blue flag on the front of the first task vehicle.
 - (2) A green flag on the rear vehicle.
 - (3) A black and white flag on the convoy commander or serial commander vehicle.
 - (4) A "convoy follows" sign on the front of the first task vehicle.
 - (5) A "convoy ahead" sign on the rear of the last vehicle.
 - (6) A "convoy commander" sign on the front and rear of the convoy commander's vehicle.
 - d. Select the pacesetter.
 - (1) This is normally an officer or senior noncommissioned officer (SNCO) at the head to ensure that the column is following the proper route.
 - (2) The pacesetter rides in the first vehicle and sets the pace necessary to meet the travel schedule.
 - (3) This officer or SNCO also checks at scheduled points and receives orders or changes in orders.

e. Check weapons on the vehicles to make sure they are operational.

(1) Correct existing minor deficiencies on the spot.

(2) If major deficiencies exist, have the weapon and vehicle returned to the parent unit and request an operational replacement.

f. Check to ensure that the sandbags are installed correctly on the floor of the troop-carrying vehicles and on the cab floors of all vehicles.

(1) Cover the floors of troop-carrying vehicles with at least a double interlocking layer of sandbags.

(2) Cover the cab floors of all vehicles with a double layer of sandbags under the driver's seat.

g. Check the cargo to ensure that it is secured and covered correctly.

(1) Cover the cargo to protect it from being damaged by prevailing weather conditions.

(2) Cover the cargo, if necessary, to deny intelligence information while providing protection from the elements.

h. Brief the drivers on the rules of the road, traffic laws and regulations, speed limits, time and distance gaps, routing plans, review schedules, and march discipline.

i. Give the signal/order to start the engine.

j. Give the signal/order to move out.

3. Enforce the correct driving procedures while the convoy is underway.

4. Instruct drivers at halt checks/duties.

a. Inform the drivers of the details at halts. Review the following:

(1) Time, duration, and purpose of convoy operations.

(2) The location of the convoy.

(3) The duties of personnel during the convoy.

b. Control activities of the drivers. Tell the drivers -

(1) To inspect their vehicles and loads.

(2) To perform at-halt maintenance.

c. Check to see that the drivers are performing during-operation checks. Tell the drivers-

(1) To perform necessary during-operation checks using the appropriate -10 series technical manual (TM).

- (2) To check for and have items repaired, fill fluid levels, or adjust drive belts or other items.
- d. Check the security of the loads.
- e. Check to see that the area is policed before moving out.
- f. Give the signal/order to re-form and start engines.
- g. Give the signal/order to move out.
- 5. Perform all required checks/duties at the release point.
 - a. Update the drivers on additional orders/instructions from the convoy commander.
 - (1) Instruct the drivers to comply with the standing operating procedure (SOP) in dispersing their vehicles.
 - (2) Inform the drivers of the time and place to assemble for the return trip.
 - b. Check to see that after-operation checks are performed. Tell the drivers-
 - (1) To perform necessary after-operation checks using the appropriate -10 series TM.
 - (2) To check for and have repaired all discrepancies found, fill fluid levels, or adjust drive belts or other items.
 - c. Recommend disciplinary action for those drivers who violated driving rules during the convoy operation.
 - d. Dismiss drivers.

Evaluation Preparation:

None

Performance Measures	GO	NO GO
1 Performed a Risk Assessment.	_____	_____
2 Performed pre-departure checks/duties.	_____	_____
3 Enforced the correct driving procedures while the convoy was underway.	_____	_____
4 Instructed drivers at halt checks/duties.	_____	_____
5 Performed all required checks/duties at the release point.	_____	_____

Evaluation Guidance: None

**References
Required**

Primary

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

Required

Primary

FM 21-10 FIELD HYGIENE AND SANITATION

FM 21-60 Visual Signals

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977; Truck, Cargo

TM 9-2320-280-10 OPERATORS MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD);M998A1 (2320-01-371-9577) (EIC:BBN);TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4

TM 9-2320-366-10-1OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386)

TM 9-2320-366-10-2OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

551-88M-2408

Implement Defensive Procedures When Under Attack/Ambush in a Truck Convoy**DANGER**

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

Conditions:

In an operational environment, as a vehicle operator within a convoy, given a vehicle with before-operation maintenance performed individually assigned weapon, ICH/IBA, hearing and eye protection, BII, and guidance from convoy commander.

Standards: Employ passive and active defensive measures to counter enemy air attack, sniper fire, and ambush and or IED by following established convoy hand and arm signals, reporting actions to higher authority, and reacting to incoming enemy fires with 100% accuracy. As a result, higher authorities are notified, your vehicle remains operational, there are no injuries to personnel and damage to equipment is minimal.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is involved in enemy contact while conducting a tactical vehicle convoy.

Note: None

Performance Steps

1. Implement procedures to counter sniper fire.
 - a. Wear IBA/ICH as required.
 - b. Increase speed.
 - c. Use pre-designated signal to warn of sniper attack.

- d. Notify higher authority of sniper attack.
- e. Take further action as ordered by the convoy commander.
2. Implement procedures to react to ambush - maintain movement.
 - a. Wear ICH/IBA as required.
 - b. Maintain proper vehicle interval.
 - c. Increase speed to transit the kill zone; do not stop.
 - d. Use prearranged signals to warn the convoy of an ambush.
 - e. If forced to stop, do not block the road. Initiate battle drill "React to ambush - forced to stop."
 - f. On order, move to the nearest rally point.
3. Implement procedures to react to ambush - forced to stop.
 - a. In the kill zone.
 - (1) Clear the kill zone if possible.
 - (2) Do not dismount unless your vehicle is no longer capable of providing cover.
 - (3) If forced to dismount, dismount on the non-contact side of the vehicle.
 - (4) Take cover.
 - (5) Return maximum volume of fire on enemy position(s).
 - b. Outside the kill zone.
 - (1) Do not stop in the kill zone.
 - (2) Halt and take a defensive position as directed.
 - (3) Return fire if you have a target.
 - c. Take further actions as ordered by the convoy commander.
4. Implement procedures to react to unexploded IED.
 - a. React as if to an ambush.
 - b. If in the potential kill zone, accelerate and drive by suspected IED using opposite lane.
 - c. Mark location of suspected IED as you drive by using method prescribed by unit SOP.
 - d. If short of the suspected IED, stop vehicle a minimum of 300 meters from suspected IED.

- e. Assume a defensive position.
 - f. Look for secondary and tertiary IEDs.
 - g. Take further actions as ordered by the convoy commander.
5. Implement procedures to react to exploded IED.
- a. React as if to a normal ambush.
 - b. Do not stop unless disabled or the road is blocked.
 - c. If in the kill zone, accelerate and clear the area.
 - d. If a vehicle is disabled or the road is blocked, initiate battle drill "React to ambush - forced to stop."
 - e. Look for secondary and tertiary IEDs.
 - f. Take further action as ordered by convoy commander.

Evaluation Preparation:

Setup: Provide for the Soldier a situation that must involve participation in a convoy movement that has been attacked by an enemy force. Provide trucks to constitute a convoy, vehicle operators, designated route, mission information, supervisory guidance, and organic assigned weapons.

Brief Soldier: You are to participate in defending a convoy during movement. You must operate your assigned weapon and engage targets consistent with active or passive defense measures. You are to react to supervisory instructions or target engagement and actions to take in case of enemy attack on convoy.

Performance Measures

	GO	NO GO
1 Implemented procedures to counter sniper fire.	_____	_____
2 Implemented procedures to react to ambush - maintain movement.	_____	_____
3 Implemented procedures to react to ambush - forced to stop.	_____	_____
4 Implemented procedures to react to unexploded IED.	_____	_____
5 Implemented procedures to react to exploded IED.	_____	_____

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

**References
Required**

Primary

Subject Area 12: Heavy Equipment Transport (HET) Operations

551-88M-2300

Operate the M1070/M1000 Semitrailer Combination with Disabled Bogie

Conditions: Given an M1000 HET semitrailer with simulated or actual disabled bogie and the mission to use the semitrailer for transport, semitrailer basic issue items (BII) to include the axle isolation chain assembly, necessary tools to cage the brakes of the effected bogie, assistance from other crewmen as necessary, and a level area to park the semitrailer to perform operation.

Standards: Properly cage the brakes of the disabled bogie, lower the platform, and prepare the disabled bogie to allow semitrailer movement without damaging equipment or injuring personnel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You must move your disabled M1000 Semitrailer to a safe location where repairs can be made.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls and make risk decisions.
 - d. Implement controls.
 - e. Supervise and evaluate.

CAUTION

CAUTION:

The tractor/semitrailer combination loaded or unloaded, is limited to operating with only one disabled bogie. The following procedure specifically identifies how to prepare the semitrailer for transport. If this procedure is not strictly followed, severe damage to equipment may result.

2. Perform all steps required to cage the brakes of the affected bogie.
 - a. Refer to TM 9-2330-381-13.
 - b. Adhere to all listed WARNINGS and CAUTIONS in the TM for this operation.
3. Lower semitrailer platform until suspension (bogie) is completely compressed. Refer to TM 9-2330-381-13.
4. Prepare disabled bogie to allow semitrailer movement.

- a. Refer to TM 9-2330-381-13.
- b. Adhere to all WARNINGS and CAUTIONS in the TM for this operation.

Evaluation Preparation:

Setup: Provide for the Soldier a HETS that has a disabled bogie, level ground to operate.

Brief Soldier: You are to configure the HET combination in such a manner as to allow you to operate the system (coupled tractor-semitrailer) with a disabled bogie on the semitrailer. You are to make any adjustments according to the TM without damaging the equipment or injuring personnel.

Performance Measures	GO	NO GO
1 Performed all steps required to cage the brakes of the affected bogie.	_____	_____
2 Lowered semitrailer platform until suspension (bogie) is completely compressed.	_____	_____
3 Prepared disabled bogie to allow semitrailer 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 any performance measure is failed, tell the Soldier what was done wrong and how to do it correctly.

References

Required

Primary

TC 21-305-9 TRAINING PROGRAM FOR THE HEAVY EQUIPMENT TRANSPORTER SYSTEM

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

551-88M-2301

Operate the Gas Particulate Filter Unit (GPFU) on the M1070 Tractor

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: Given a M1070 Heavy Equipment Transporter (HET) tractor with functioning Gas Particulate Filter Unit (GPFU), full protective mission oriented protective posture (MOPP) gear to include either the M25A1 or M42 protective masks.

Standards: Operate the GPFU with 100% accuracy on the M1070 Tractor (after assuming MOPP level 4 posture) without injuring personnel or damaging any equipment or surroundings.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is required to operate in a suspected chemically contaminated area.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.
 - e. Supervise.

- f. Evaluate.
- 2. Assume a MOPP level 4 status.
 - a. Refer to FM 3-11.4.
 - b. Refer to TM 3-4240-280-10 for wear of the M24 protective mask.
 - c. Refer to TM 3-4240-300-10-2 for the M42 protective mask.
- 3. Perform all operational steps to operate the GPFU.
 - a. Refer to TM 9-2320-360-10, paragraph 2-20, subparagraph c, to perform steps (1) through (7), on pages 2-173 through 2-175.
 - b. Adhere to all WARNINGS and notes in the vehicle TM for this operation.
- 4. Remove the gas particulate filter hose.
 - a. Upon receiving the "all clear" signal, or when required to exit the vehicle, perform unmasking procedures.
 - b. Refer to TM 9-2320-360-10, paragraph 2-20, subparagraph d, to perform steps (1) through (5), on pages 2-176 and 2-177.

Evaluation Preparation:

Provide the Soldier with a mission-ready M1070 HET Truck Tractor with a functional GPFU, Complete J-suit, and M42 or M25 protective mask.

Performance Measures

	GO	NO GO
1. Assumed a MOPP level 4 status.	_____	_____
2. Performed all operational steps to operate the GPFU.	_____	_____
3. Removed the gas particulate filter hose.	_____	_____

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

References

Required

FM 3-11.4 Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection

Primary

TM 3-4240-280-10 (Rescinded for active Army)
 OPERATORS MANUAL FOR MASK,
 CHEMICAL-BIOLOGICAL: AIRCRAFT, ABC-
 M24 AND ACCESSORIES AND
 MASKCHEMICAL-BIOLOGICAL, TANK,

Required

M25A1 AND ACCESSORIES (REPRINTED
W/BASIC INCL C1-2)

TM 3-4240-300-10-2 OPERATORS MANUAL FOR
CHEMICAL-BIOLOGICAL MASK: COMBAT
VEHICLE, M42 (NSN 4240-01-258-0064) SMALL,
(4240-01-258-0065) MEDIUM, (4240-01-258-0066)
LARGE (REPRINTED W/BASIC INCL C1-3)

TM 9-2320-360-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, M1070, 8X8, HEAVY
EQUIPMENT TRANSPORTER (HET) (NSN 2320-
01-318-9902) (EIC: B5C) (REPRINTED W/BASIC
INCL C1-3)

Primary

551-88M-2302**Operate the APU on the M1000 Semitrailer**

Conditions: In an operational environment, given a Heavy Equipment Transporter (HET) semitrailer with functioning auxiliary power unit (APU), hearing protection, semitrailer basic issue items (BII), and level ground to operate.

Standards: Perform all required startup procedures without error for the APU without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are required to provide power to the M1000 semitrailer to support a recovery operation.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.
 - e. Supervise.
 - f. Evaluate.

CAUTION**CAUTION:**

The hydraulic tank oil valve must be open prior to starting the APU or serious damage to the hydraulic pump may result.

WARNING:

HEARING PROTECTION IS REQUIRED WITHIN 10 FEET (3M) OF THE APU WHEN THE APU IS RUNNING OR INJURY TO PERSONNEL MAY RESULT.

CAUTIONS:

- _ Oil pressure light must go out within 15 seconds. If oil pressure light stays lit, shut down the APU immediately or damage to equipment may result.
- _ If the APU fails to start within 15 seconds, release the switch from the START position to prevent overheating of the starter motor. Allow the starter motor to cool 1 to 2 minutes before

trying again. If the APU fails to start after four tries, notify unit maintenance.

- _ Do not rotate START switch to the START position while the starter motor is still turning from the previous try.
- _ After starting the APU, rotate switch to OFF position or damage to equipment may result.
- _ Do not subject the APU to any load until it has warmed up properly or premature failure may occur and life of the engine may be shortened.

2. Start the APU (normal conditions). Refer to TM 9-2330-381-13.
3. Start the APU (cold weather starting). Refer to TM 9-2330-381-13.

NOTE: The following procedures apply when ambient temperatures range from 40 degrees F to -25 degrees F (4 degrees C to -31 degrees C). When the temperature is below -25 degrees F (-31 degrees C), refer to Arctic APU Starting in paragraph 2-31 of the semitrailer TM.

4. Shutdown the APU. Refer to TM 9-2330-381-13.
5. Shutdown APU for extended storage (short and long term). Refer to TM 9-2330-381-13.

Evaluation Preparation:

Setup: Provide the Soldier with an M1000 Semitrailer either coupled to an M1070 HET Tractor or uncoupled, level ground to operate.

Performance Measures

	GO	NO GO
1 Started the APU (normal conditions).	_____	_____
2 Started the APU (cold weather starting).	_____	_____
3 Shutdown the APU.	_____	_____
4 Shutdown the APU for extended storage.	_____	_____

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

References

Required

FM 5-19 COMPOSITE RISK MANAGEMENT

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

Primary

FM 5-19 COMPOSITE RISK MANAGEMENT

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

551-88M-2303
Adjust the Gooseneck on the M1000 Semitrailer

DANGER

Soldiers must be aware of the inherent dangers working in and around tactical wheeled vehicles. Hot surfaces, sharp moving objects such as fan blades, slippery surfaces, and excessively loud noises are all potential dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given an M1000 semitrailer with basic issue items (BII) and functional auxiliary power unit (APU), hearing protection, and work gloves.

Standards: Raise or lower the gooseneck with 100% accuracy without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a mission to transport some heavy loads.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls and make risk decisions.
 - d. Implement controls.
 - e. Supervise.
 - f. Evaluate.

2. Start the APU.
 - a. Uncouple the semitrailer from the tractor if coupled.
 - b. Refer to TM 9-2330-381-13 for applicable steps.

WARNING

WARNING:

Wear hearing protection while apu is running. Ensure that tractor is uncoupled from semitrailer before beginning operation. Adhere to all warnings and caution statements in the tm. Prior to adjusting gooseneck height, ensure that both gooseneck isolation and suspension shut-off valve handles have been pulled outward to the adjust position or injury to personnel from unexpected movement or damage to equipment may result.

3. Operate gooseneck control valves as necessary to raise or lower gooseneck (refer to TM 9-2330-381-13 for applicable steps).
4. Shutdown APU (refer to TM 9-2330-381-13).

Evaluation Preparation:

Setup: Provide for the Soldier an M1000 HETS Semitrailer coupled to an M1070 HET Truck Tractor, level ground, and hearing protection

Performance Measures

	GO	NO GO
1 Performed a composite risk assessment.	_____	_____
2 Started the APU.	_____	_____
3 Operated gooseneck control valves as necessary to raise or lower gooseneck (refer to TM 9-2330-281-14, paragraph 2-18, subparagraph b, pages 2-52 and 2-53 for applicable steps).	_____	_____
4 Shutdown APU.	_____	_____

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

**References
Required**

Primary

551-88M-2304

Adjust the Platform Height on the M1000 Semitrailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given an M1000 semitrailer with basic issue items (BII) and operational auxiliary power unit (APU), hearing protection, and work gloves.

Special Conditions: If semitrailer is loaded, the semitrailer must be coupled to tractor to perform height adjustments. See semitrailer technical manual (TM) for details.

Standards: Adjust platform height to the height of the semitrailer with 100% accuracy and without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a requirement to transport heavy loads.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.

- e. Supervise.
- f. Evaluate.
- 2. Start the APU.
 - a. Refer to TM 9-2330-381-13.
 - b. Run APU at full throttle.
- 3. Prepare semitrailer for platform height adjustments. Refer to TM 9-2330-381-13.

NOTE: The brakes on the semitrailer should be released when making platform adjustments. If the parking brakes are not released, platform adjustments will be much slower and harder to accomplish.

- 4. Raise platform height. Refer to TM 9-2330-381-13.
- 5. Lower platform height. Refer to TM 9-2330-381-13.
- 6. Make other platform height adjustments as necessary. Refer to TM 9-2330-381-13.
- 7. Shutdown the APU. Refer to TM 9-2330-381-13.

Evaluation Preparation:

Setup: Provide for the Soldier an M1000 HET Semitrailer coupled to an M1070 HET Truck Tractor parked on solid level ground with no obstructions.

Performance Measures	GO	NO GO
1 Performed a composite risk assessment.	_____	_____
2 Started the APU.	_____	_____
3 Prepared semitrailer for platform height adjustments.	_____	_____
4 Raised platform height.	_____	_____
5 Lowered platform height.	_____	_____
6 Made other platform height adjustments as necessary.	_____	_____
7 Shutdown the APU.	_____	_____

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

**References
Required**

Primary

TM 9-2330-381-13 OPERATOR AND FIELD
MAINTENANCE MANUAL FOR
SEMITRAILER, TRANSPORTER, HEAVY

Required

EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU)

Primary

551-88M-2306
Manually Steer the M1000 Semitrailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given an M1000 semitrailer with basic issue items (BII) and operational auxiliary power unit (APU), hearing protection, work gloves, and assistance as needed.

Special Condition: All operations involving the M1070 and M1000 require two persons.

Standards: Manually steer the M1000 semitrailer into position for movement with 100% accuracy, without causing injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment:None

Cue: Your unit has a mission to move heavy equipment. Your HET tractor-Semitrailer combination is coupled at an angle which requires a manual movement of the trailer.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.

- e. Supervise.
 - f. Evaluate.
2. Start the APU. Refer to TM 9-2330-381-13.
 3. Prepare semitrailer for manual steering operation. Refer to TM 9-2330-381-13 for applicable steps.
 4. Steer bogie(s) manually in desired direction. Reference TM 9-2330-381-13 for applicable steps.
 5. Prepare semitrailer for travel. Refer to TM 9-2330-381-13 for applicable steps.
 6. Shutdown the APU. Refer to TM 9-2330-381-13.

Evaluation Preparation:

Setup: Provide for the Soldier a coupled M1070/M1000 HET System on solid level ground.

Performance Measures	GO	NO GO
1 Performed a composite risk assessment.	_____	_____
2 Started the APU.	_____	_____
3 Prepared semitrailer for manual steering operation.	_____	_____
4 Steered bogie(s) manually in desired direction.	_____	_____
5 Prepared semitrailer for travel.	_____	_____
6 Shutdown the APU.	_____	_____

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

References

- Required**
- TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902)
 - TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

Primary

551-88M-2375

Operate the Heavy Equipment Transporter on Improved Roads

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, on an improved roadway, given a mission-ready coupled M1070.M1000 HET Tractor-semitrailer combination, hearing protection, route to maneuver and assistant driver.

Standards: Operate the HET Tractor-semitrailer combination with 100% accuracy, on improved roadway adhering to all route limitations of weight, height, and width without causing injury to personnel or damage to equipment or roadway.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has received a mission to travel to another location to pick up several tanks for transport to a port of debarkation.

Note: None

Performance Steps

1. Conduct a risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.

- e. Supervise.
 - f. Evaluate.
2. Prepare HET with HETS for Operation.
- a. Adjust driver's seat.
 - b. Adjust mirrors as needed.
 - c. Ensure that load is secured properly to the semitrailer (if to be loaded).
 - d. Start vehicle engine (refer to TM 9-2320-360-10, paragraph 2-12a and b, page 2-126 through 2-133).
 - e. Monitor all gauges for proper reading and allow engine to warm up.
 - f. Ensure that all low pressure warning lights and buzzers go out as intended by TM.
 - g. Adhere to all WARNING and CAUTION statements in the TM applicable to these procedures.
3. Place HET system into motion.
- a. Refer to TM 9-2320-360-10, paragraph 2-9a, page 2-114 for proper operating procedures.
 - b. Adhere to all WARNING and CAUTION statements in the TM for these procedures.
4. Navigate HET system through normal traffic situations and road conditions.
- a. Use brake retarder (unless road conditions prohibit use).
 - b. Use alternate transfer gear range (as needed).
 - c. Adhere to all restricted speed ranges for the appropriate driving conditions/load.
 - d. Monitor vehicle indicator lights and gauges, during movement, for proper indications (part of during-operation maintenance).
 - e. Maintain vehicle awareness to include -
 - (1) Unusual engine noises or vibration.
 - (2) Unusual handling characteristics or erratic behavior.
 - (3) Vehicle position on the roadway.
 - (4) Upcoming obstacles that may hinder vehicle progress.
 - f. Negotiate tractor semitrailer combination through the following obstacles -
 - (1) Right and left turns.

- (2) Heavy traffic areas.
- (3) Over bridges.
- (4) Through underpasses (watch overhead restrictions in width and height).
- (5) Steep upgrades or downgrades.
- (6) Curves in the roadway.
- (7) Intersections (for stopping and not stopping).

5. Shutdown vehicle. Refer to TM 9-2320-360-10, paragraph 2-12g, pages 2-139 and 2-140.

Evaluation Preparation:

Setup: Provide for the Soldier a mission-ready, coupled HET System, and assistant driver, and a designated route.

Brief Soldier: Instruct the Soldier to mount the vehicle, make the necessary driver adjustments, and follow the designated route to destination. All vehicle operations must occur without injury to any personnel or damage to vehicle or surroundings.

Performance Measures	GO	NO GO
1 Performed a risk assessment and identified all hazards associated with the vehicle movement.	_____	_____
2 Prepared HET and HETS for operation.	_____	_____
3 Placed coupled HET into motion.	_____	_____
4 Navigated HET with HETS through normal traffic situations and road conditions.	_____	_____
5 Parked and shutdown vehicle.	_____	_____

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

**References
Required**

Primary

551-88M-2305

Operate the Loading Ramps on the M1000 Semitrailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given an M1000 semitrailer with basic issue items (BII), hearing protection, work gloves, and assistance as needed from other crew members.

Special Conditions: Position semitrailer on level ground when possible.

Standards: Operate the loading ramps on the M1000 semitrailer with 100% accuracy, without causing injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is required to transport some heavy loads and you must prepare for movement.

Note: See description.

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.
 - e. Supervise.

- f. Evaluate.
- 2. Adjust loading ramps. Refer to TM 9-2330-381-13 for applicable steps.
- 3. Lower ramps. Refer to TM 9-2330-381-13 for applicable steps.
- 4. Raise ramps. Refer to TM 9-2330-381-13 for applicable steps.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Performed a composite risk assessment.	_____	_____
2 Adjusted loading ramps.	_____	_____
3 Lowered ramps.	_____	_____
4 Raised ramps.	_____	_____

Evaluation Guidance: None

References

Required

Primary

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

551-88M-2376**Load/Unload a Tracked/Wheeled Vehicle onto a Heavy Equipment Transporter (HET)**

Conditions: Given a HET (M1070), a Heavy Equipment Transport Semitrailer (HETS) (M1000) already coupled, blocking and bracing materials, on vehicle equipment (OVE), hearing protection, a tracked vehicle to be loaded, assistance from other crew members, and directions from supervisor. Special Conditions: HETS (tractor and semitrailer combination) should be placed on solid level ground with room to maneuver as necessary. Operations with the HETS require two persons to perform. One person will be used as assistance.

Standards: You will provide assistance as directed in the loading of a tracked vehicle and assist in the proper tiedown of vehicle on semitrailer without injury to personnel or damage to HETS or tracked vehicle being loaded.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit is tasked with recovery of several disabled tanks after a tactical mission.

Note: None

Performance Steps

1. Perform a composite risk assessment.
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls and make risk decisions.
 - d. Implement controls.
 - e. Supervise and evaluate.
2. Assist in preparing the M1070/M1000 HETS for loading operation.
 - a. Start the vehicle. Refer to TM 9-2320-360-10, paragraph 2-12, subparagraph a, pages 2-126 to 2-130.
 - b. Ensure that the CTIS switch is set to the desired setting for the expected road conditions and allow tractor to sit until selected CTIS indicator remains lit.
3. Assist in aligning the semitrailer, using the tractor, as close as possible to payload.

WARNING**WARNING:**

Load semitrailer on as level ground as possible. In adverse conditions, loading can be done on

grades up to 10 percent with a maximum offset angle of 10 degrees between tractor and semitrailer. Avoid exceeding these limitations to prevent payload from rolling on semitrailer and causing serious injury to personnel and damage to equipment.

a. Payload should be approximately 15 feet (4.6m) on level ground when positioned.

b. Visually check tractor/semitrailer offset angle by having spotter check relationship between steering wedge bolt and weld circle at bottom rear of pickup plate. If inside edge of bolt aligns with outside edge of weld circle, offset angle is 10 degrees. Make any required adjustments.

WARNING

WARNING:

USING THE M1070 TRACTOR, SEMITRAILER WILL NOT BACK LIKE A NORMAL SEMITRAILER BECAUSE OF SEMITRAILER STEERING SYSTEM. THE OPERATOR MUST BACK TRACTOR/SEMITRAILER BY TURNING TRACTOR STEERING WHEEL IN THE OPPOSITE DIRECTION OF WHAT WOULD BE USED FOR BACKING WITH A NORMAL SEMITRAILER OR INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT MAY RESULT.

c. Apply tractor parking brakes.

4. Assist in the preparation of the semitrailer to receive payload.

a. Refer to TM 9-2330-381-13.

b. Adhere to all WARNING and CAUTION statements in the semitrailer TM applicable to this operation.

NOTE: Due to semitrailers being outfitted with various chains (1/2 inch and/or 3/4-inch link sizes), all chains must be inventoried in the platform storage compartment prior to placing chains on platform. Once chains are inventoried, read and familiarize yourself with the information in steps a(20) (a) thru (h) of the semitrailer TM to determine tiedown needed to properly secure the payload or injury to personnel and damage to equipment may result.

5. Assist in loading payload onto semitrailer.

a. Refer to TM 9-2330-381-13.

WARNING

WARNINGS:

Two spotters are required for loading and unloading operations. The payload operator must know the position of spotters at all times or injury to personnel may result.

Do not position a spotter or gooseneck if payload is to be backed onto semitrailer platform or injury to personnel may result.

Unnecessary personnel must stand well clear of the vehicles, especially behind the payload (engine/turbine exhaust) during loading operations. At no time during any loading operation

while the payload is moving should personnel be on the semitrailer platform. The payload operator must drive the payload slowly up the loading ramps and onto the platform or injury to personnel and damage to equipment may result.

Failure to set the payload parking brake could allow the payload to roll backward causing injury to personnel and damage to equipment.

b. Adhere to all cautions and warnings in the semitrailer TM applicable to this operation.

6. Assist in securing payload to semitrailer.

a. Refer to TM 9-2330-381-13.

CAUTION

The streetside angle rear payload tiedown chain must cross over the top of the curbside rear payload tiedown chain or the chains will interfere with each other and damage to equipment may result.

CAUTION: Beacon warning light must be raised or loading ramps adjusted or damage to equipment will occur.

b. Adhere to all cautions and warnings in the semitrailer TM applicable to this operation.

Evaluation Preparation:

Setup: Provide for the Soldier a HET with HETS, able or disabled payload vehicle, level ground to operate, assistance from another crew member.

Brief Soldier: You are to load an able/disabled tracked/wheeled vehicle onto the Heavy Equipment Transporter (HET). You are to use assistance as provided and will complete all required steps from the TMs without injury to personnel or damage to system or payload vehicle.

Performance Measures	GO	NO GO
1. Performed a composite risk assessment.	_____	_____
2. Assisted in preparing the M1070/M1000 HETS for loading operation.	_____	_____
3. Assisted in aligning the semitrailer, using the tractor, as close as possible to payload.	_____	_____
4. Assisted in the preparation of the semitrailer to receive payload.	_____	_____
5. Assisted in loading payload onto semitrailer.	_____	_____
6. Assisted in securing payload onto semitrailer.	_____	_____

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

References

Required

Primary

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

Subject Area 13: Motor Vehicle Operations
551-88M-2371
Perform Dispatcher Duties

DANGER

There are no inherent dangers associated with dispatcher duties.

WARNING

Not applicable

CAUTION

Not applicable

Conditions: In an operational environment, under the supervision of the truckmaster, given a request for a vehicle or equipment to be dispatched, DA Form 2401 (Organization Control Record for Equipment) or DA Form 5982-E (Dispatch Control Log), DD Form 1970 (Motor Equipment Utilization Record) or DA Form 5987-E (Motor Equipment Dispatch), pencil, Standard Army Maintenance System- Enhanced (SAMS-E) workstation (if unit is so equipped), a list of drivers and their qualifications, vehicle status board, and a copy of unit standing operating procedure (SOP).

Standards: Complete dispatcher entries on DA Form 2401, DD Form 1970, or DA Form 5982-E (SAMS-E), confirm driver qualifications and endorsements, and select driver(s) and vehicle(s) for mission based on guidance from platoon sergeants. Upon completion of mission, you must log all mileage, load, and time data for vehicles, drivers, and load moved as required locally with 100% accuracy. You must notify maintenance of any discrepancy of vehicle status and report discrepancies on vehicle trip reports to truckmaster.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has a requirement to conduct a tactical convoy and the unit has been alerted to prepare. As part of the preparations, all vehicles must be immediately dispatched for the mission.

Note: None

Performance Steps

1. Process transportation requests.

a. Acquire vehicle(s) and driver(s) availability information from platoon sergeant(s) to be used for mission. Complete initial dispatcher entries on forms.

b. Compile all appropriate forms in the equipment record folder. The following forms are required at a minimum.

(1) DD Form 1970, Complete dispatcher entries.

(2) DD Form 518.

(3) SF Form 91.

(4) DA Form 5987-E (SAMS-E), Complete dispatcher entries.

(5) DA Form 5823 (Equipment Identification Card). This form goes on outside of record folder. Dispatcher must verify vehicle status information before dispatch of vehicle.

2. Manually dispatch unit vehicle(s) for regular dispatch (units without SAMS-E).

a. For dispatch out:

(1) Verify driver's license and qualifications of driver with vehicle and load selected for dispatch.

(2) Make dispatcher entries on DD Form 1970.

(a) Date form is started.

(b) Serial number.

(c) Bumper number.

(d) Organization.

(e) Miles or Kilometers.

(f) Hours (as applicable).

(g) Dispatcher signature.

(h) Print "report to" name.

(i) Noun nomenclature of vehicle.

(j) Print name of operator(s).

(3) Ensure operator makes the following entries on DD Form 1970.

(a) Signature.

(b) Time.

(c) Miles and hours.

(4) Logs vehicle out on DA Form 2401.

b. Upon return of vehicle from dispatch (dispatch in), the dispatcher verifies the following entries on DD Form 1970.

(1) Miles and hours.

(2) Time in and total time.

-
- (3) "Release by" signature.
 - (4) Fuel and oil, if required locally.
 - c. Collect dispatch equipment record folder from operator.
 - d. Log vehicle in from dispatch on DA Form 2401.
 - e. Annotate type cargo and tons moved, as applicable.
 - f. Report change in vehicle status to maintenance personnel as applicable.
 - g. Report discrepancies in trip records to truckmaster.
 - h. File trip records in accordance with local directives.
3. Dispatch unit vehicle(s) for regular dispatch (units supported by SAMS-E).
- a. For dispatch out (departing on dispatch).
 - (1) Verify that operator is registered through SAMS-E as a licensed, qualified operator. If not registered in SAMS-E, check operator OF Form 346 (U.S. Government Motor Vehicle Operator's Identification Card).
 - (2) Issue dispatch equipment record folder to operator. Folder should contain:
 - (a) DA Form 5988-E (Equipment Inspection Maintenance Worksheet) (automated).
 - (b) DA Form 5987-E, dispatch printout.
 - (c) DD Form 518 (Accident-Identification Card) and SF Form 91 (Motor Vehicle Accident Report), vehicle accident forms.
 - (3) Ensure operator makes required entries and signs dispatch printout.
 - (4) Dispatcher and operator check for services due.
 - (5) Dispatcher verifies through operator that before-operational maintenance checks have been completed and vehicle is ready for dispatch.
 - b. For dispatch in (return from dispatch):
 - (1) Collect dispatch equipment record folder from operator.
 - (2) Verify the following entries on DA Form 5982-E within SAMS-E with the following information.
 - (a) Fuel and oil added.
 - (b) Date and time of return.
 - (c) "Released by" signature.

(d) Miles and hours.

c. Check remarks section of dispatch for operator entries requiring maintenance support. Report information to maintenance section.

d. Log vehicle in from dispatch through SAMS-E on DA Form 5982-E.

e. Report discrepancies in trip records to truckmaster.

f. Annotate type cargo and tons moved, as applicable.

g. File trip records in accordance with local directives.

Evaluation Preparation:

SETUP: Provide for the Soldier a SAMS-E computer in the Maintenance Shop office or as designated, specific driver-centric information/requirement.

Performance Measures

	GO	NO GO
1 Processed transportation requests.	_____	_____
2 Manually dispatched unit vehicle(s) for regular dispatch (units without SAMS-E).	_____	_____
3 Dispatched unit vehicle(s) for regular dispatch (units supported by SAMS-E).	_____	_____

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

References

Required

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Primary

DA FORM 2401 ORGANIZATION CONTROL RECORD FOR EQUIPMENT

DA FORM 5823 EQUIPMENT IDENTIFICATION CARD

DA FORM 5982-E DISPATCH CONTROL LOG (EGA)

DD FORM 1970 MOTOR EQUIPMENT UTILIZATION RECORD (AVAILABLE ON DOD WEB SITE)

OF FORM 346 US Government Motor Vehicle Operator's Identification Card.

Required

DA PAM 750-8 The Army Maintenance
Management System (TAMMS) Users Manual.

Primary

Subject Area 14: Adverse Terrain/Weather Operations
551-88M-2355
Operate Vehicle in Inclement Weather Conditions

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced technical manuals for the procedures identified for this task.

WARNING:

Wear hearing protection while operating vehicle.
Wear seat belts while operating vehicle.

WARNING:

Operation in sand and around sand dunes may cause front wheels to be violently jerked to one side or another. As a precaution vehicle operator should steer the vehicle by placing hands only on outside rim. Placing hands or fingers on a steering wheel spoke when the steering wheel is violently jerked to one side or the other may cause serious personal injury.

WARNING:

When operating vehicle over gullies, ravines or ditches, vehicle operator should grasp steering wheel only by the outside rim. Grasping by a spoke in steering wheel may cause personnel injury when front wheels encounter a large rock, rut, or other obstacle and spins steering wheel.

CAUTION

Adhere to all CAUTION statements in the referenced technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given adverse weather conditions such as extreme cold and hot temperatures, heavy rain, blowing sand (desert environment) or snow in which vehicle performance is considered to be under "unusual" conditions. Provided mission-ready tactical wheeled vehicle (that has a winterization kit installed if cold weather), goggles, face mask, seasonal uniform and mission requirement to travel under these conditions as part of a convoy movement, and assistant driver.

Standards: Operate the vehicle while complying with all extreme hot weather operating procedures/precautions. Maintain full control of the vehicle at all times following traffic regulations and rules of the road. If vehicle is so equipped, use the applicable CTIS setting to enable safe vehicle operations. All driving maneuvers must be made under these extreme conditions without becoming mired or succumbing to a conditionally-related mechanical failure.

Extreme cold weather (32 degrees F to -24 degrees F) and blowing snow: operate the vehicle using cold weather starting and operating procedures according to the appropriate vehicle TM. Operate the vehicle following traffic regulations and rules of the road.

Special Condition: NOTE: If conditions are under extreme cold-weather, installation of the vehicle radiator cover assembly is required.

Special Standards: None

Special Equipment: None

Cue: Your mission is requiring you to maneuver uneven terrain and must occur in any type of weather conditions.

Note: None

Performance Steps

CAUTION

CAUTION:

Road surfaces are especially slick just after a rain or drizzle begins. Loosed grease and oil mix with raindrops, quickly covering the surface with a slippery film.

1. Operate vehicle in heavy rain.
 - a. If CTIS equipped, select mode for this type of weather or terrain (as necessary). Watch for indicator lamp showing correct mode selection on CTIS panel and adhere to speed restrictions.

NOTE: Recognizes that the M1078/1083 and M939 series vehicle CTIS starts automatically when engine is started and adjusts pressure to highway mode.

- b. Accelerate moderately.
- c. Reduce speed as necessary for conditions.
- d. Moderately apply the brakes when slowing down.
- e. Make no quick turns.
- f. Allow at least twice the normal following distance.
- g. Do not pump the brakes (ABS only).
- h. Hold the brake pedal down and let the ABS system work.
- i. During emergencies, steer and brake at the same time (ABS only).
- j. Release enough pressure on the brakes to get the vehicle rolling again to regain steering (front ABS only).
- k. Recover from skid by:
 - (1) Staying off the brakes.

(2) Turning quickly. Turn the steering wheel in the direction you want the vehicle to go. This lines the front of the vehicle up with the back.

(3) Countersteer-turn back the other way. As soon as the vehicle begins to straighten out, turn the wheel back the other way so that the vehicle will not turn too far.

(4) Continue to correct your steering left and right until you recover from the skid.

(5) Turn back to straight ahead.

2. Operate vehicle in extremely hot, dusty, desert environment.

NOTE: As a general rule vehicles in a convoy should not follow directly behind one another due to high concentrations of dust in the air. Visibility may be reduced to zero facilitating a vehicle accident.

a. Don protective goggles and other facial protection if available.

b. If CTIS equipped, select mode for this type of terrain, watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.

c. Select a gear or range that will start you with a minimum of, or no clutch slippage (manual transmission) and wheel spinning.

d. Use rear wheel drive if possible due to the front wheels tendency to dig into the sand.

e. Accelerate slowly.

f. Check instrument panel gauges more frequently while operating vehicle to prevent a mechanical failure due to extremely hot temperatures.

g. Maintain a steady and even rate of movement.

h. Avoid unnecessary shifting of gears (manual transmission).

i. Anticipate difficult spots and bypass if possible.

j. Approach a dune from the windward side slope at a 90-degree angle.

k. Follow the track of preceding vehicle or break a new path depending on conditions.

l. Make wide turns.

m. Let your vehicle roll to a halt as practicable.

n. Attempt to stop on a downhill slope.

3. Operate vehicle through streams.

a. If CTIS equipped, select mode for this type of terrain; watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.

b. Follow the applicable steps provided in the vehicle TM for fording streams.

- c. Check the bottom to see how firm a support can be expected.
- d. Keep the cab door open when crossing frozen streams.
- e. After reaching dry land, test brakes at a reduced speed by:
 - (1) Lightly applying and releasing brakes until normal braking is restored (Non ABS only).
 - (2) Apply light steady pressure on brakes until normal braking is restored (ABS only).
- 4. Operate vehicle in extreme cold weather (32 degrees F to -24 degrees F) and blowing snow.
 - a. Start the vehicle using cold weather starting procedures referenced in the applicable vehicle TM.
 - b. Turn on vehicle cab heater and adjust to defrost position to clear windows while engine is warming up.
 - c. Remove ice and snow from windows.
 - d. If CTIS equipped, select mode for this type of terrain; watch for indicator showing correct mode selection on CTIS panel and adhere to speed restrictions.
 - e. Place vehicle into motion by following general operating procedures in the applicable vehicle TM under "operation under unusual conditions."
 - f. Begin movement in second or third gear (manual transmission) rather than first or low. Engage clutch gradually to prevent wheel spin.
 - g. For automatic-transmission-vehicles use D2 range and gradually apply throttle.
 - h. Avoid quick acceleration.
 - i. Drive at reduced speed for better control and safer stops.
 - j. Display turn signals earlier than usual (if tactical situation permits).
 - k. Maintain at least double the normal following distance from the vehicle ahead.
 - l. Pump brakes to give early warning to those following of your intention to stop (Non ABS).
 - m. Apply steady brake pressure earlier when stopping for warn others of your intentions (ABS only).
 - n. Descend moderate grades in the gear normally used to climb the same grade.

Evaluation Preparation:

Setup: Provide the Soldier with a tactical wheeled vehicle, winterization kit, and all other items required for inclement weather preparations.

Brief Soldier:

You are required to prepare your vehicle for inclement weather operation by installing/adjusting AAL issued items with your vehicle and use procedures covered under "operation under unusual conditions" in the reference TM.

Performance Measures	GO	NO GO
1 Operated vehicle in rain.	_____	_____
2 Operated vehicle in extremely hot, dusty, desert environment.	_____	_____
3 Operated vehicle through streams.	_____	_____
4 Operated vehicle in extreme cold weather (32 degrees F to -24 degrees F) and blowing snow.	_____	_____

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

References

Required

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Primary

FM 90-3 Desert Operations

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

Subject Area 15: Transportation of Cargo

551-88M-2374

Supervise Loading/Unloading a Tracked/Wheeled Vehicle onto/from a Semitrailer

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

DO NOT use a "cheater bar" to engage or disengage the operating lever. Failure to comply may result in serious painful injury or death to personnel.

WARNING

Before loading, payload vehicle driver must have at least one ground guide to guide vehicle onto semitrailer, and two to guide it off the semitrailer. Payload vehicle operator cannot clearly see on all sides. Failure to comply may result in death or serious injury to personnel or damage to equipment. Adhere to all WARNING statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

CAUTION

DO NOT overload semitrailer. Ensure that the GVW of the payload vehicle does not exceed the semitrailer's load capacity. Failure to comply may result in equipment damage. Adhere to all CAUTION statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given a mission-ready, coupled tractor-semitrailer combination (M915/M872), vehicle tiedown devices, payload vehicle (tracked or wheeled), Soldiers performing duties as vehicle driver and assistant, crew from payload vehicle, route height and width restriction data, payload vehicle characteristic information, level ground, loading dock, work gloves. Coupled tractor-semitrailer has been parked against a loading dock for loading.

Standards:

Supervise Soldiers loading a tracked or wheeled vehicle onto/from the semitrailer. Vehicle is to be positioned according to both the semitrailer and payload vehicle center-of-gravity with 100% accuracy. Payload vehicle is to be secured using serviceable tiedown devices positioned to provide secure transport of payload vehicle without injury to personnel or damage to any equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has received a mission to transport several payload vehicles to the port for redeployment.

Note: None

Performance Steps

1. Perform a risk assessment (DA Form 7566).
 - a. Identify hazards.
 - b. Assess hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.
 - e. Supervise.
 - f. Evaluate.
2. Ensure the following actions are completed in preparation for loading.
 - a. Remove semitrailer sideboards (if installed).
 - b. Ensure semitrailer is clear of all obstacles, nails or any foreign objects that may interfere with safe loading of payload vehicle.
 - c. Emplace loading ramps between loading dock and rear of semitrailer if necessary.
 - d. Gather all necessary tiedown materials for securing vehicle payload to semitrailer.
 - e. Prepare payload vehicle by:
 - (1) Reducing it by folding in the outside mirrors, lowering or removing radio antennae, and crew served weapons are removed.
 - (2) Ensure canvas and bows, if installed, are removed or secured tightly against payload vehicle to prevent loosening or loss during movement.
3. Ensure that payload vehicle is properly aligned to allow driver to drive straight onto the semitrailer.
 - a. Note shifting of weight and width of payload vehicle as compared to semitrailer width.

WARNING

Care should be taken to ensure any leaking tire (wheeled vehicle) is replaced on payload vehicle because premature deflation during movement could cause load to dangerously shift or fall from semitrailer causing injury or death to personnel and damage to equipment.

(3) Secure payload vehicle cargo load (if loaded). If payload vehicle is combat loaded, ensure all items are secured on inside of vehicle.

(4) Check payload vehicle tire pressure (wheeled) and inflate or deflate to proper pressure.

- b. If payload vehicle appears to be loaded improperly or is characteristically unbalanced, do not allow loading.
4. Direct loading of payload vehicle onto semitrailer.
 - a. Position yourself to clearly view movement of payload vehicle onto semitrailer.
 - b. Ensure vehicle ground guides are positioned properly so that the payload vehicle driver has a clear field of view.
 - c. Direct that payload vehicle is shutdown and brakes are set by vehicle operator.
 - d. Ensure vehicle is guided into position on semitrailer by closely monitoring weight shifting and direction of travel.
 - e. For tracked vehicles, ensure that any payload vehicle overhang is evenly distributed on both sides of the semitrailer.
 5. Once payload vehicle is loaded, ensure that there are no height and width violations.
 - a. Ensure that driver uses a suitable measuring device such as a retractable measuring tape (25ft.) or telescoping rod/pole with measuring graduations.

CAUTION

Ensure that point from which measurements are taken on the ground, is at the same level as the semitrailer wheels. Failure to comply could result in an inaccurate measurement. Measure at least two times in each direction (vertically and horizontally).

- b. Ensure the height is measured from level ground on side of semitrailer to the highest point of the payload vehicle. Height should not exceed 13 feet, 5 inches in CONUS and 13 feet, 1 inch OCONUS. A minimum of two measurements are required.
 - c. Ensure that the width measurement is taken from the widest point of the load. Measure at least twice.
 - d. Compare measurements to any route restrictions. Reduce or reject load if this restriction is exceeded.
6. Ensure that payload vehicle is secured to semitrailer.
 - a. Position yourself to clearly view personnel securing the payload vehicle.
 - b. Ensure the selection of appropriate tiedown anchor points on semitrailer and tiedown clevises on payload vehicle.
 - c. Ensure that all tiedown devices are routed properly and attached to appropriate anchor points.
 - d. Ensure that all tiedown devices are securely tightened.
 - e. Ensure that any loose ends of tiedown devices are secured.

7. Ensure preparations are made for unloading of payload vehicle from semitrailer. Position yourself so that you can see all aspect of the unloading process to include ground guide signalling and movement of the payload vehicle.

a. For the tractor-semitrailer ensure the following is accomplished:

- (1) Tractor-semitrailer is parked against the loading dock with brakes set.
- (2) Tractor-semitrailer is chocked and loading ramps or spanners are emplaced (as needed).

b. For the payload vehicle ensure the following is accomplished:

- (1) Vehicle has not shifted out of position on semitrailer which would make removal a hazard.
- (2) Removal and stowage of all tiedown materials from payload vehicle.
- (3) Movement of payload vehicle from the semitrailer and positioned as directed in loading area (parked with brakes set).

Evaluation Preparation:

Setup: Provide for the Soldier a truck tractor coupled to a flatbed semitrailer (M915/M872) and payload vehicle to load/unload; payload vehicle operator, tractor-semitrailer driver/assistant, loading dock, tiedown materials, measuring device, wheel chocks, spanner.

Performance Measures	GO	NO GO
1 Performed a risk assessment.	_____	_____
2 Ensured preparations were completed for the load/unload operation.	_____	_____
3 Ensured the payload vehicle was aligned properly for loading.	_____	_____
4 Directed the loading of payload vehicle on semitrailer.	_____	_____
5 Ensured that height and weight of semitrailer with load did not exceed route restrictions (CONUS or OCONUS).	_____	_____
6 Ensured that payload vehicle was secured to semitrailer.	_____	_____
7 Ensured that payload vehicle was unloaded from semitrailer.	_____	_____

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

**References
Required**

Primary

GGG-B-325B FEDERAL SPECIFICATIONS,
BINDER, LOAD

Required**Primary**

FM 5-19 COMPOSITE RISK MANAGEMENT

TM 9-2330-359-14&P OPERATORS,
ORGANIZATIONAL, DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL
TOOLS LISTS) FOR SEMITRAILER, FLATBED:
BREAKBULK/CONTAINER TRANSPORTER, 34
TON M872

TM 9-2320-426-10 TRUCK, TRACTOR, LINE
HAUL, M915A3 (NSN 2320-01-432-4847)

FM 21-60 VISUAL SIGNALS

TC 21-305-20 MANUAL FOR THE WHEELED
VEHICLE OPERATOR {AFMAN 24-306(I)}

SDDC TEA PAM 55-20 TIEDOWN HANDBOOK
FOR TRUCK MOVEMENTS 4TH EDITION

Subject Area 16: Hazardous Cargo Transportation

551-88M-2420

Supervise Transportation of Hazardous/Sensitive Cargo

DANGER

Soldiers must be aware of the inherent dangers of working in and around tactical wheeled vehicles. Hot surfaces, sharp, moving objects such as fan blades, slippery surfaces, and excessively loud noises are all dangers. These dangers are also applicable to hazardous cargo being transported (as applicable). Each Soldier should take every precaution not to become a victim of these dangers by following regulatory guidance and risk management rules.

WARNING

Adhere to all WARNING statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

CAUTION

Adhere to all CAUTION statements in the referenced vehicle or equipment technical manuals for the procedures identified for this task.

Conditions: In an operational environment, given an operator and a mission-ready cargo vehicle with or without a trailer or tractor-semitrailer combination. Hazardous/sensitive cargo, tiedown materials, tarpaulin, blocking and bracing materials (as needed), completed 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), and Soldiers to assist in loading and ground guiding as needed to transport hazardous/sensitive cargo. As part of a vehicle convoy the operator is to conceal the load from casual observation throughout the movement.

Standards: Direct crewmembers in preparation of the vehicle, and hazardous/sensitive cargo for transportation. Cargo is to be positioned, secured, and covered as required. Cargo is to be transported without incident or compromise of identity of cargo, or constant custody. Upon arrival, cargo is offloaded to appropriate authority upon identification and disposition of all cargo documentation is assured.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has received a mission to transport hazardous/sensitive cargo.

Note: None

Performance Steps

1. Perform a risk assessment.
 - a. Identify hazards associated with transporting this hazardous/sensitive cargo.

- b. Assess the hazards to determine risk.
 - c. Develop controls.
 - d. Implement controls.
 - e. Supervise.
 - f. Evaluate.
2. Direct preparation of the vehicle to transport hazardous /sensitive cargo by ensuring the vehicle crew does the following:
- a. For shipping hazardous materials, ensure additional vehicle inspections by shipper (DD Form 626) have been performed and deficiencies corrected (as applicable).
 - b. Position vehicle near cargo to be loaded and shutdown engine unless needed to operate onboard MHE. Set vehicle parking brakes and chock vehicle.
 - c. Clean out cargo bed to allow room for cargo to be loaded.
 - d. Tiedown materials are on hand to secure load to vehicle.
 - e. Cargo canvas and bow assembly and any required tarpaulins are available to conceal and protect the cargo during transport. If canvas is installed, remove it for loading.
 - f. If load is containerized, check to see that the semitrailer hold down devices function properly and are placed in proper configuration to receive container.
 - g. Applicable placarding materials are on hand that match the load characteristics and hazards.
 - h. If necessary, ensure all blocking and bracing materials are on hand to secure load.
 - i. No smoking within 50 feet and no open flame within 100 feet of load.
 - j. There are two 10-BC fire extinguishers are present and one is mounted on outside of cab on driver's side and the other is mounted inside cab.
 - k. Any load-specific response equipment is available such as breathing apparatus in case of hazardous chemical loads.
 - l. Prepare vehicle-mounted Material Handling Equipment for operation.
3. Direct the preparation of hazardous/sensitive cargo for movement by ensuring the operator does the following:
- a. Obtains a copy of a completed DD Form 836 from the shipper (if applicable).
 - b. The load is configured as applicable PRIOR to movement (courier duties if shipping classified items).

CAUTION

CAUTION:

Classified material will be prepared for shipment, packaged, and sealed in ways that minimize the risk of accidental exposure or undetected deliberate compromise.

(1) If the classified material is an inaccessible component of a packageable item of equipment, the outer shell or body can be considered as the inner enclosure provided it does not reveal classified information.

(2) If the classified material is an inaccessible internal component of a bulky item of equipment, the outside or body of the item can be considered to be sufficient enclosure provided it does not reveal classified information.

(3) If the classified material is an item or piece of equipment that isn't easily packageable and the shell of body is classified, it will be concealed with an opaque covering that will hide all classified features.

(4) Specialized shipping containers including closed cargo transporters, can be considered the outer wrapping or cover when used.

(5) NATO-restricted materials do not have to be double-wrapped when it is transmitted within the United States. The marking "NATO CLASSIFIED" will not appear on the outermost wrapper.

c. Cover the classified/sensitive cargo to prevent accidental exposure or undetected deliberate compromise.

d. Secure load to prevent access to unauthorized personnel throughout custody.

e. Custody receipt is attached to the load.

NOTE: If cargo is classified SECRET or TOP SECRET, the cargo must have an attached receipt form to be completed by the recipient and returned to the originator.

f. Establish radio communications link with security team.

g. Adequate armed security is available and ready for movement.

h. If cargo is sensitive and considered dangerous, ensure proper placarding is displayed on load-carrying vehicle.

4. Direct loading cargo onto vehicle/semitrailer by ensuring the operator does the following:

a. If necessary, manipulate MHE into position, lift and place cargo onto vehicle/trailer/semitrailer with heavier items on bottom.

b. Secure all cargo items with tiedown devices ensuring no damage to containers.

c. Cover the dangerous/sensitive cargo to prevent unauthorized deliberate compromise or casual observation.

d. Custody receipt is attached to the load.

NOTE: If cargo is classified SECRET or TOP SECRET, the cargo must have an attached receipt form to be completed by the recipient and returned to the originator.

e. Establish radio communications link with security team (as applicable).

5. Direct operator conducting movement with classified/sensitive cargo to -
 - a. Notify security personnel of start of movement.
 - b. Follow designated route to destination.
 - c. Notify chain-of-command as each route checkpoint is passed.
 - d. Maintain positive control of classified/sensitive cargo throughout movement.
 - e. Allow no unauthorized person(s) visual or physical access to cargo during movement.
 - f. Upon reaching destination, relinquish custody of classified/sensitive cargo to authorized personnel with proper identification.
 - g. Obtain authorized signature from recipient on custody receipt (if cargo is classified as SECRET or TOP SECRET).
 - h. Upon return to origin, ensure custody receipt is given to originator (if cargo is classified SECRET or TOP SECRET).
 - i. Transfer DD Form 836 to recipient of cargo (as applicable).

Evaluation Preparation:

Setup: Provide everything stated in conditions statement.

Brief Soldier: You are required to supervise an operator assuming custody of a hazardous/sensitive shipment of cargo. You are to supervise the loading, concealing, and transporting the cargo while maintaining security at all times. At no time will the operator allow any unauthorized person(s) access to cargo while in their possession. Supervise the transfer of custody to the designated person authorized receipt of property.

Performance Measures	GO	NO GO
1 Performed a Risk Assessment.	_____	_____
2 Directed preparation of vehicle to transport hazardous/sensitive cargo.	_____	_____
3 Directed preparation of hazardous/sensitive cargo for shipment.	_____	_____
4 Directed loading cargo onto/into vehicle/trailer/semitrailer for movement	_____	_____
5 Directed the movement and custody transfer of the hazardous/sensitive 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 any performance measure is failed, tell the Soldier what was done wrong and how to do it correctly.

**References
Required**

Primary

Required

Primary

FM 5-19 COMPOSITE RISK MANAGEMENT

PAM 385-64 AMMUNITION AND EXPLOSIVES
SAFETY STANDARDS

DD FORM 626 MOTOR VEHICLE INSPECTION
(TRANSPORTING HAZARDOUS MATERIALS)

DA FORM 5988-E EQUIPMENT INSPECTION
MAINTENANCE WORKSHEET

TC 21-305-20 MANUAL FOR THE WHEELED
VEHICLE OPERATOR {AFMAN 24-306(I)}

AR 190-11 PHYSICAL SECURITY OF ARMS,
AMMUNITION AND EXPLOSIVES (*RAR 001,
06/28/2011)

TM 9-2320-366-10-1 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6; MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-254-3386) (EIC: B

TM 9-2320-366-10-2 OPERATORS
INSTRUCTIONS MANUAL FOR M1083 SERIES,
5-TON, 6X6; MEDIUM TACTICAL VEHICLES
(MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV,
M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3)
W/O WN (2320-01-254-3386) (EIC: BR2)

AR 380-5 DEPARTMENT OF THE ARMY
INFORMATION SECURITY PROGRAM

DA FORM 7566 COMPOSITE RISK
MANAGEMENT WORKSHEET

DD FORM 836 DANGEROUS GOOD SHIPPING
PAPER/DECLARATION AND EMERGENCY
RESPONSE INFORMATION OF HAZARDOUS
MATERIALS TRANSPORTED BY GOVERNMENT
VEHICLES/CONTAINERS/

DA FORM 5987-E MOTOR EQUIPMENT
DISPATCH (EGA)

TM 9-2330-359-14&P OPERATORS,
ORGANIZATIONAL, DIRECT SUPPORT AND
GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL
TOOLS LISTS) FOR SEMITRAILER, FLATBED:

Required

BREKKBULK/CONTAINER TRANSPORTER, 34
TON M872 (T

Primary

Skill Level SL3
Subject Area 17: Accident Forms and Reporting
551-88M-3353

Review Vehicle Accident Reports

Conditions: You are the supervisor of a Soldier involved in an Army motor vehicle accident. The Soldier involved in the accident has completed the Standard Form (SF)91 (Motor Vehicle Accident Report) and the Department of Defense (DD) Form 518 and has provided the SF Form 91 and DD Form 518 for supervisor review and completion.

Standards: You will review the SF Form 91 and DD Form 518 and confer with the vehicle driver to verify accuracy of information. You will complete the supervisory sections of the forms and ensure that the forms are turned in to the unit commander or his/her designated representative.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: None

Note: None

Performance Steps

1. Review SF Form 91 for operator entries (pages 1, 2, and 3).

NOTE: Verify by asking driver that DD Form 518 (Accident-Identification Card) has been completed and provided to the other driver(s) involved in the accident at the accident scene.

NOTE: This form is used to record vital information about the accident and given to the commander of the person(s) involved in the accident.

a. Ensure that sections I through IX are filled out by the vehicle operator. Information must be entered clearly, accurately, and completely. Sections follow:
I - Federal Vehicle Data - Self-explanatory, see form.
II - Other Vehicle Data - Self-explanatory, see form.
III - Killed or Injured - Self-explanatory, see form.
IV - Accident Time and Location - Follow instructions on form.
V - Witness/ Passenger - Self-explanatory, see form.
VI - Property Damage - Self-explanatory, see form.
VII - Police Information - Self-explanatory, see form.
VIII - Extra Details - Self-explanatory, see form. Use this section if needed but be clear and detailed in providing information and indicate which section you refer from.
IX - Federal Driver's Certification - Driver will read the privacy act statement and sign the form indicating information provided is correct.

b. Ensure information entered is legible. This report will be used to investigate the accident

2. Complete supervisor entries of SF Form 91.

a. Complete section X, items 72 to 82c (page 3) as follows (self-explanatory).
72 - Origin.
73 - Destination.

- 74 - Exact purpose of trip.
- 75 - Date and Time (when trip began).
- 76 - Date and Time (when accident occurred).
- 77 - Authority for the trip.
- 78 - Deviation from direct route.
- 79 - Was the trip during established working hours?
- 80 - Did the operator, while en route, engage in any activity other than that for which the trip was authorized.
- 81a - Did the accident occur within the employee's scope of duty?
- 81b - Comments.
- 82a - Name and title of supervisor.
- 82b - Supervisor's signature and date.
- 82c - Telephone number.

b. Refer form to unit commander or accident investigator as applicable.

Evaluation Preparation:

None

Performance Measures

- 1. Reviewed SF Form 91 for operator entries (pages 1, 2, and 3).
- 2. Completed supervisor entries of SF Form 91.

GO	NO GO
_____	_____
_____	_____

Evaluation Guidance: None

References

Required

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

Primary

DD FORM 518 ACCIDENT-IDENTIFICATION CARD

SF FORM 91 MOTOR VEHICLE ACCIDENT REPORT

Subject Area 18: Motor Vehicle Operator Maintenance
551-88M-3322
Manage Preventive Maintenance Checks and Services

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment.

WARNING

Adhere to all Warning statements referenced in the Technical Manual for the type of equipment involved. You must ensure injury or damage to the equipment or personnel do not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel do not occur.

Conditions: You are assigned duties as a platoon sergeant. You are given platoon assets consisting of Soldiers and vehicles assigned to your platoon. You are also provided with all technical manuals (TMs) issued for each vehicle, basic issue items (BII), lubricants, access to company maintenance personnel and maintenance facilities, maintenance worksheets, and maintenance records. Some replacement parts are available.

Standards: You will manage the performance of preventive maintenance checks and services of your platoon vehicles. You will provide proper instructions to your squad leaders in the performance of their roles during the vehicle inspection process. During the conduct of platoon preventive maintenance checks and services, your platoon, under your guidance, will identify all deficiencies according to each TM and make corrections on the spot or record the deficiency properly on the maintenance inspection worksheet. All forms will be completed properly. Replacement parts if available will be replaced or if not available will be properly placed on order through the company maintenance section. Scheduled services will be identified and applicable vehicle(s) and operator(s) report to company maintenance section to complete the service under the guidance of company maintenance section personnel.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: If your unit is exposed to a chemical environment, this task will have to be performed while wearing chemical protective gear. The task should be performed exactly as it is when not in a chemical environment, only you will be wearing chemical protective gear.

Note: None

Performance Steps

1. Ensure squad leaders have made preparations to perform maintenance inspections.
 - a. Vehicles are positioned as to enable a 360-degree walk around, with wheel chocks in place.

-
- b. Drip pans are positioned under vehicles (if available).
 - c. Technical manuals, tools, and inspection forms are present.
 - d. Squad leaders are present and actively involved and have current status of vehicles during preparation.
 - e. Squad leaders acquire any available replacement parts that can be installed by the operator.
2. Ensure squad leaders supervise the performance of before, during, after, weekly, or monthly operational preventive maintenance checks.
 - a. Squad leaders are present and actively involved in the maintenance inspection process.
 - b. Squad leaders report any needed urgent repairs.
 - c. Squad leaders check with maintenance section for any replacement parts.
 - d. Squad leaders mentor their subordinates in correct inspection procedure and criteria.
 - e. Squad leaders and their subordinates adhere to all safety and environmental restrictions, according to unit standing operating procedure (SOP), regarding no smoking areas, oil and lubricant disposal, and refueling.
 - f. Squad leaders and vehicle drivers adhere to all WARNING and CAUTION statements covered in the applicable vehicle TMs within the maintenance inspection tables.
 - g. Squad leaders check all vehicle operator inspection worksheets for proper completion.
 3. Conduct random vehicle inspections to ensure operators are performing proper maintenance checks.
 - a. Check operator maintenance worksheet for entries and verify upon check of vehicle.
 - b. Check to ensure that all inspections are performed according to intervals in the TM.
 - c. Inform squad leader of any discrepancies found and direct corrections to be made.
 4. Coordinate with maintenance section for necessary maintenance support beyond operator capability.
 - a. Provide maintenance section with status of vehicles needing repairs.
 - b. Schedule appropriate time for vehicle repairs according to maintenance section availability.
 - c. Ensure vehicle(s) and operator(s) are available to report, at allotted time, to maintenance section.
 - d. Ensure replacement parts are properly installed on vehicle.
 5. Coordinate with other platoon sergeants for maintenance support (as necessary).
 - a. Identify need for additional personnel support to perform maintenance on your platoon vehicles.
 - b. Identify need for additional personnel requested by other platoons for maintenance assistance.

6. Ensure squad leaders have accounted for all maintenance worksheets, upon completion of maintenance checks, for each vehicle inspected.

a. Squad leaders check validity of entries on maintenance worksheets.

b. Ensure a signature is entered as appropriate, if so stated in unit SOP, in the "Maintenance Supervisor" (block 9a, DA Form 2404 [Equipment Inspection and Maintenance Worksheet]) or "Operator's Supervisor" signature block on DA Form 5988-E (Equipment Inspection Maintenance Worksheet).

c. Ensure all parts on order have been properly logged into Unit Level Logistics System (ULLS) on the applicable vehicle's DA Form 5988-E or annotated on DA Form 2408-14 (Uncorrected Fault Record) by unit maintenance section for each vehicle.

d. Inspection worksheet is turned in to unit maintenance section if faults are found and recorded for future correction.

7. Ensure all vehicles and equipment are secured upon completion of maintenance checks.

a. Squad leaders account for all vehicles BII and other tools and ensure all tools are stowed properly.

b. Squad leaders ensure their vehicles with drivers report to maintenance section for repairs as necessary.

c. Squad leaders ensure security of all vehicles.

d. Squad leaders report their squad operational status.

8. Ensure that scheduled vehicle services are conducted.

a. Coordinate with maintenance section for scheduled times for services.

b. Ensure squad leaders prepare the vehicle and operator for reporting for services.

(1) Daily preventive maintenance checks and services (PMCS) must be completed and all faults corrected or parts ordered.

(2) Vehicle must be clean to include undercarriage.

(3) Inspection worksheets must be completed and available to maintenance section.

(4) Any additional requirements identified in maintenance SOP.

c. Conduct follow-up checks with maintenance section to ensure service completion with minimal delay.

d. Ensure squad leader and/or vehicle operator remains present during service according to SOP guidelines.

e. Have squad leader report vehicle status at completion of service.

9. Report platoon vehicle status to platoon leader and/or maintenance section sergeant/company truckmaster.

- a. Number of vehicles fully mission capable by bumper number.
- b. Number of vehicles in service or due service.
- c. Number of vehicles that are non-mission capable.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Ensured squad leaders had made preparations to perform maintenance inspections.	_____	_____
2 Ensured squad leaders supervised the performance of before, during and after, weekly, or monthly operational preventive maintenance checks.	_____	_____
3 Conducted random vehicle inspections to ensure operators are performing thorough maintenance checks.	_____	_____
4 Coordinated with maintenance section for necessary maintenance support beyond operator capability.	_____	_____
5 Coordinated with other platoon sergeants for maintenance support (as necessary).	_____	_____
6 Ensured squad leaders have accounted for all maintenance worksheets, upon completion of maintenance checks, for each vehicle inspected.	_____	_____
7 Ensured all vehicles and equipment are secured upon completion of maintenance checks.	_____	_____
8 Ensured that scheduled vehicle services are conducted.	_____	_____
9 Reported platoon vehicle status to platoon leader and/or maintenance section sergeant/company truckmaster.	_____	_____

Evaluation Guidance: None

References

Required

Primary

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

DA FORM 2404 EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

DA FORM 2408-14 UNCORRECTED FAULT RECORD

DA FORM 5988-E Equipment Inspection Maintenance Worksheet

Required

Primary

DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual.

Subject Area 19: Motor Transport Supervision
551-88M-3340
Supervise Operations of Vehicle-Mounted Crane

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment you are operating.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are operating. You must ensure injury to personnel or damage to the equipment do not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: Given Soldiers to supervise, vehicle-mounted crane, basic issue items (BII), load to lift, hearing protection, and flat surface to operate.

Standards: Your supervision will result in a successful operation of the vehicle-mounted crane to transfer a load to or from the vehicle to the ground or another vehicle. Operation must be conducted without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are tasked by your unit to transfer cargo either from one vehicle to the ground or from one vehicle to another using the vehicle mounted crane. You must ensure the operator keeps the ground guide in sight at all times and that the operator obeys all hand and arm signals from the guide.

Note: None

Performance Steps

1. Supervise starting procedures.
 - a. Ensure that operator is wearing hearing protection (as applicable).
 - b. Ensure the vehicle operator adheres to all procedural steps listed in the appropriate vehicle technical manual (TM) for engine starting.
 - c. Ensure the vehicle operator adheres to all SAFETY and WARNING statements in the vehicle TM for this procedure.
2. Supervise preparation of crane for use.

- a. Ensure that operator is wearing hearing protection (as applicable).
- b. Ensure that operator adheres to all steps listing in the TM for this procedure.
- c. Ensure that the operator has chocked the vehicle wheels prior to operation.
- d. Ensure that load to be lifted is positioned and prepared and does not exceed weight limitations of the crane.

(1) For M977/M985 vehicles, refer to TM 9-2320-279-10-1.

(2) For M1074 vehicle, refer to TM 9-2320-364-10.

(3) For M1078 (light medium tactical vehicle [LMTV]) vehicles, refer to TM 9-2320-365-10.

(4) For M1083 (medium tactical vehicle [MTV]) vehicles, refer to TM 9-2320-366-10-1.

- e. Never allow personnel to stand under a suspended load.
3. Supervise the operation of the crane.
- a. Ensure operator follows visual hand and arm signals.
 - b. Ensure that crane-lifting hook is properly connected to the load being lifted.
 - c. Ensure that operator maintains control of crane and load during movement.
 - d. Ensure that operator places load as directed.
 - e. Never allow personnel to stand under a suspended load.
4. Supervise stowage of crane.
- a. Ensure that operator completes all steps outlined in the applicable vehicle TM.
 - b. Ensure that operator adheres to all WARNING and CAUTION statements in the vehicle TM.
 - c. Ensure that operator follows all visual hand and arm signals.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Supervised starting procedures.	_____	_____
2 Supervised preparation of crane for use.	_____	_____
3 Supervised operation of the crane.	_____	_____
4 Supervised stowage of crane.	_____	_____

Evaluation Guidance: None

References

Required

Primary

FM 21-60 Visual Signals

TM 9-2320-279-10-1 Operators Manual for M977 Series 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT), Truck, Cargo, With Winch, M977; Truck, Cargo, With Winch, M977A2; Truck, Cargo, With Winch, M977A2R1; Truck, Cargo, Without Winch, M977; Truck, Cargo,

TM 9-2320-364-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1074 AND M1075 PALLETIZED LOAD SYSTEM (PLS) (NSN 2320-01-304-2277) (2320-01-304-2278)

TM 9-2320-365-10 OPERATORS INSTRUCTIONS MANUAL FOR M1078 SERIES, 2-1/2 TON, 4X4 LIGHT MEDIUM TACTICAL VEHICLES (LMTV) TRK, CAR., LMTV, M1078 W/WN (NSN 2320-01-360-1898) (EIC: BHH) W/O WN (2320-01-354-3385) (EIC: BHD) TRK

TM 9-2320-366-10-1 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 1 OF 2 TRK, CAR., MTV, M1083 W/WN (NSN 2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386)

TM 9-2320-366-10-2 OPERATORS INSTRUCTIONS MANUAL FOR M1083 SERIES, 5-TON, 6X6, MEDIUM TACTICAL VEHICLES (MTV) VOLUME NO. 2 OF 2 TRK, CAR., MTV, M1083 W/WN (2320-01-360-1895) (EIC: BT3) W/O WN (2320-01-354-3386) (EIC: BR2)

Subject Area 20: Convoy Execution/Defense

551-88M-3339

Perform Advanced Vehicle Recovery Operations and BDAR

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manuals to ensure you are aware of the possible dangers involved.

WARNING

Adhere to all Warning statements referenced in the Technical manuals. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: In an operational environment , given a broken down vehicle in need of recovery or repair.

Standards: Perform recovery/repair Battle Damage Assessment and Repair (BDAR) to the vehicle in order to enable the vehicle to be returned to base and eventually the return of equipment to mission capable status to support combat operations or self-recovery.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are in a convoy and one of your vehicles brakes down while enroute. You are in a hostile environment and no immediate mechanical assistance is available. You must supervise your operator in either recovering the vehicle or in performing BDAR. You must also ensure that it is properly annotated so the vehicle can be put back to its original state when you return from your convoy.

Note: None

Performance Steps

WARNING

Adhere to all Danger statements in reference to the vehicles Technical Manuals to ensure you are aware of the possible dangers involved.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

1. State the policy on BDAR in unit standing operating procedures (SOPs).

2. Confirm unit personnel can state the command BDAR policy.
3. Verify BDAR manuals are on hand for all unit and supported equipment.
4. Verify vehicle operators and mechanics are trained in BDAR procedures.
5. Ensure training of new BDAR techniques.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Stated the policy on BDAR in unit standing operating procedures (SOPs).	_____	_____
2. Confirmed unit personnel could state the command BDAR policy.	_____	_____
3. Verified BDAR manuals were on hand for all unit and supported equipment.	_____	_____
4. Verified vehicle operators and mechanics were trained in BDAR procedures.	_____	_____
5. Ensured training of new BDAR techniques.	_____	_____

Evaluation Guidance: None

References

Required

Primary

FM 4-30.31 Recovery and Battle Damage Assessment and Repair

TC 21-305-20 Manual for the Wheeled Vehicle Operator {AFMAN 24-306(I)}

TC 43-4 COMMANDERS AND SHOP OFFICERS GUIDE FOR SUPPORT MAINTENANCE MANAGEMENT

551-88M-3355

Conduct Mounted Land Navigation

Conditions: Applied to a tactical environment, given dispatched vehicle(s), vehicle operator(s), vehicle navigator(s) (assistant drivers), topographic, and grid maps, and strip map information, plotting protractor, map markers, legend information, route information, and communications equipment.

Standards: As a result of your instruction, all vehicles will navigate to their destination without becoming disoriented or traveling on unauthorized routes thus endangering the transport mission. The navigator of each vehicle must be able to properly identify, and plot all route and mission essential information on topographic maps or tourist road maps. Strip maps will be prepared based on map sheets used for mission and accurately depict applicable route information that successfully contributes to the mission.

Special Condition: The Soldiers receiving the instruction are given the duty as vehicle navigator. The navigator will be the only person making movement decisions within each vehicle involved. Driver will NOT attempt to assist as this action as it seriously increases the possibility of vehicle accident during movement. NOTE: The focus of this task is to emphasize the motor transport operator's ability to navigate while mounted using various types of maps. In contrast to dismounted land navigation, the mounted navigator and vehicle operator must consider the vehicle's ability to maneuver through varying terrain as a factor of their selection of routes. NOTE: The duties of a navigator are so important that he/she should not be given any other duties.

Special Standards: None

Special Equipment: None

Cue: None

Note: None

Performance Steps

1. Define mounted navigator (assistant driver) duties.

a. Assembling Equipment. The navigator must gather all the equipment that will help him/her perform his/her job (maps, pencils, and so forth). He/She must do this before the mission starts.

b. Servicing Equipment. It is the navigator's duty to make sure that all the equipment he/she may use or require is working. This may include but is not limited to a compass or a Precision Lightweight GPS Receiver (PLGR).

c. Recording Data for Precise Locations. During movement, the navigator must make sure that the correct direction and distance are recorded and followed. Grid coordinates of locations must be recorded and plotted.

d. Supply Data to Subordinate Leaders. During movement, any change in direction or distance must be given to the subordinate leaders in sufficient time to allow them to react.

e. Maintaining Liaison with Commander. The commander normally selects the route that he/she desires to use. The navigator is responsible for following that route; however, there may be times when the route must be changed during a tactical operation. For this reason, the navigator must maintain constant communication with the commander. The navigator must inform the commander when checkpoints are reached, when a change in direction of movement is required, and how much distance is traveled.

2. Orient the map.

a. First technique.

(1) With the map in a horizontal position, take the straightedge on the left side of the compass and place it alongside the north-south grid line with the cover of the compass pointing toward the top of the map. This procedure places the fixed black index line of the compass parallel to north-south grid lines of the map.

(2) Keeping the compass aligned as directed above, rotate the map and compass together until the magnetic arrow is below the fixed black index line on the compass. At this time, the map is close to being oriented.

(3) Rotate the map and compass in the direction of the declination diagram.

(4) If the magnetic north arrow on the map is to the left of the grid north, check the compass reading to see if it equals the grid-magnetic (GM) angle given in the declination diagram.

b. Second technique.

(1) Determine the direction of the declination diagram and its value from the declination diagram.

(2) Using any north-south on the map as a base, draw a magnetic azimuth equal to the GM angle given in the declination diagram with the protractor.

(3) If the declination is easterly (right), the drawn line is equal to the value of the GM angle. Then align the straightedge, which is on the left side of the compass, alongside the drawn line on the map. Rotate the map and compass until the magnetic arrow of the compass is below the fixed black index line. The map is now oriented.

c. Using terrain association. A map can be oriented by terrain association when a compass is not available or when the user has to make many quick references as he/she moves across country. Using this method requires careful examination of the map and the ground, and the user must know his/her approximate location.

3. Explain the details of a topographic map.

NOTE:

This is a map that portrays terrain features in a measurable way (usually through use of contour lines), as well as the horizontal positions of the features represented. The vertical positions, or relief, are normally represented by contour lines on military maps. On maps showing relief, the elevations and contours that are measured from a specific vertical datum plane, usually mean sea level.

This is the military map that is most commonly used by maneuvering units to navigate. The standard scale is 1:50,000.

a. Identify and/or determine topographic symbols such as:

(1) The map's legend. It normally contains the symbols used in a particular series or on that specific map sheet. Therefore, the legend should be referred to each time a new map sheet is used. The symbol should reflect as closely as possible what the feature is intended to be.

(2) Military symbols are added to give additional significance to the military application at the time the map is used. Refer to FM 1-02 for friendly and enemy unit symbols.

- b. Identify terrain features on the map.
 - c. Determine grid coordinates using the military grid reference system.
 - d. Determine distance on the map from one point to another.
4. Explain the details of a road map.

NOTE: These are maps of a region in which the main means of transportation and areas of interest are shown. Some of these maps show secondary networks of roads, historic sites, museums, and beaches in detail. They may contain road and time distance between points. Careful consideration should be exercised about the scale when using these maps.

a. Scale of the map if different than a topographic map. Determine to the best extent possible what the scale is of the map you are using.

- b. Origin and destination.
- c. Selected routes.
- d. Cities and towns.
- e. Four-lane divided highways, principle highways, and other thruways and roads.
- f. Width and height of bridges and overpasses.
- g. Rest and service areas.
- h. Distance (miles, kilometers) from point of origin to destination.
- i. Map symbols.
- j. Special features on the map.
- k. Alternate route(s).

5. Explain the details of a strip map.

NOTE: A strip map is an unscaled drawing of routes or a march including the critical points along those routes. It may be prepared either as an overlay or as a schematic of the map itself. It is similar to a route overlay but not to scale. The purpose of a strip map is to graphically portray a routes of movement over a distance that may exceed standard military map sheets of that requires multiple map sheets.

a. Explain the following regarding strip maps.

- (1) Origin and destination.
- (2) Start Point (SP) and Release Point (RP) if different from 4a above.
- (3) Routes and route numbers.
- (4) Major towns.

- (5) Major roads and crossroads.
- (6) Mileage between points.
- (7) Bivouac, rest, halt and refuel point.
- (8) Directional arrows.
- (9) Legend transferred from the map onto the strip map.
- (10) Alternate route(s).
- (11) Critical point(s).

b. Present the following information concerning characteristics of a strip map:

(1) A strip map may be prepared from a route overlay, a route reconnaissance report, or a map reconnaissance. It is drawn on a standard sheet of paper to give the user the necessary information to reach his/her destination.

(2) A strip map is generally distributed to squad leaders, convoy commanders, drivers, or route guides and normally shows only one route.

(3) A strip map used as an appendix or annex could have many routes on it and could include bypasses for each route.

(4) A strip map may indicate a sketch of a march, which may or may not be drawn to scale.

6. Prepare a strip map.

NOTE: Figure 3-38 depicts a Single Route Strip Map. Figure 3-39 depicts a Multiple Route Strip Map.

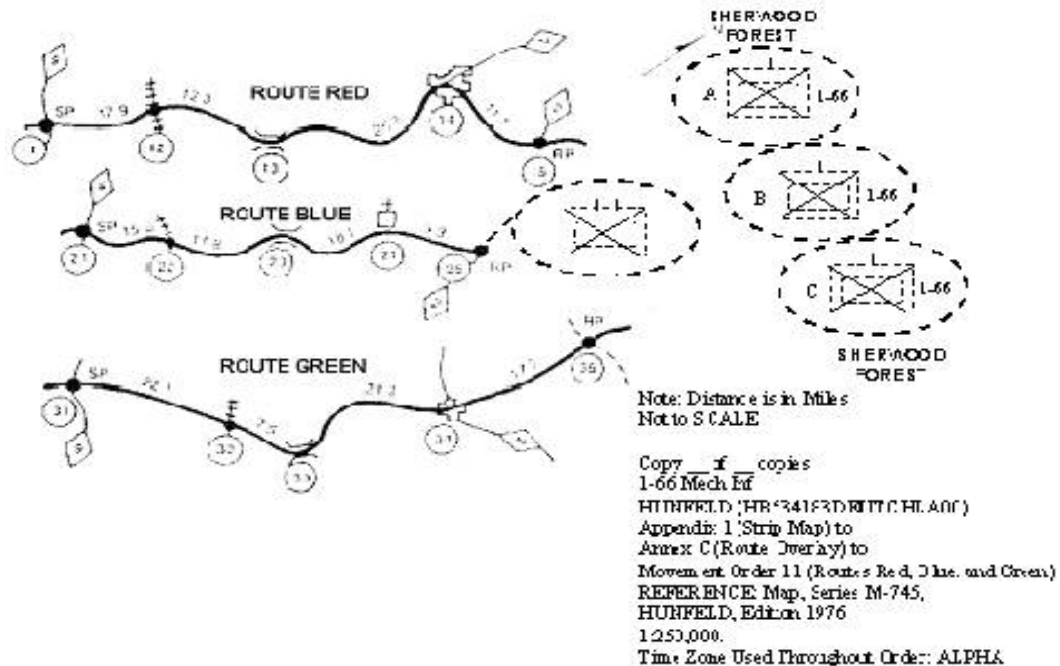


Figure 3-40.

Multiple Route Strip Map

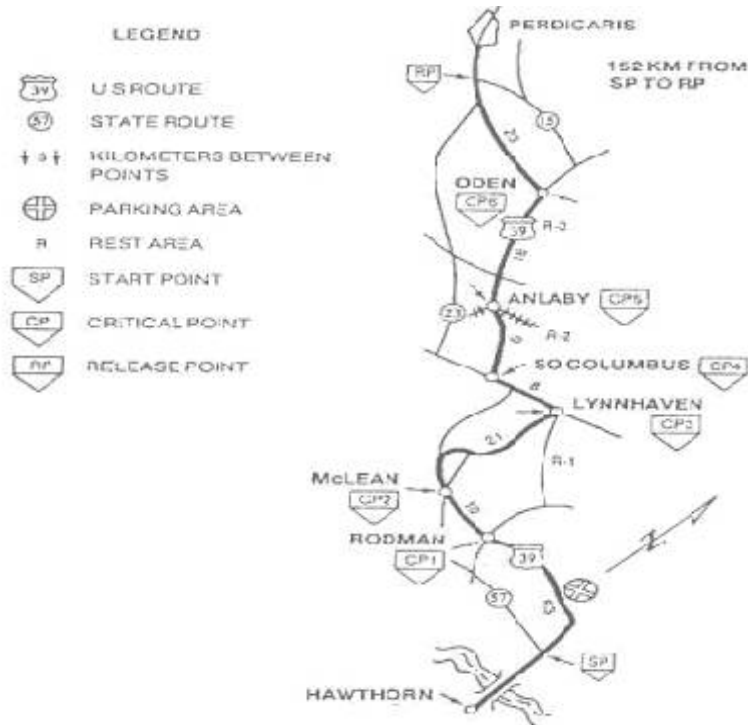


Figure 3-39.

Single Route Strip Map

a. Orientation. Place the symbol for grid north on the sketch. Label it with an N to designate the general direction of north. Do not make any other orientation or grid references.

b. Plot the details.

(1) Draw the route of movement.

(2) Plot all critical points or areas along a route where movement may occur or where timing is critical. These include SPs, checkpoints, RPs, phase lines, bridges, tunnels, road junctions, city or town intersections where passage could be confusing, and areas or halts for messing, and refueling.

(3) Plot the SPs, and RPs. Label them with their abbreviation or number if appropriate.

(4) Place the distance between critical points in kilometers or miles (use a measurement that would be applicable based on the movement).

c. Create the Heading.

(1) An example of a title is Appendix 1 (strip map) to Annex C (route overlay) to movement order 11 (Routes Red, Blue, and Green to Sherwood forest).

(2) Map references for a strip map are normally the same as for the operation order that the strip map supports.

d. When a strip map is prepared as an appendix or annex issued separately (this is when it is to have wide distribution), then the order must have a heading, ending, and a classification, as does the overlay.

e. Strip maps for general use that are to be distributed to the lowest level will have only the information pertaining to that level (example: squad leader, vehicle commander, or driver).

(1) The detail on such a map is the same as for a strip map used as an appendix or annex except no unit symbols or designation are used. If the map is extracted from a strip map with multiple routes, the only route that is included is the one the user needs.

(2) Use the title that alludes to the order, but does not mention the order by name, number, or letter. Use the route name or a name that would be applicable for the movement; for example, Route Blue to Sherwood Forest.

(3) These maps are not classified. However, caution personnel on the sensitivity of the document. Do not issue the strip map until the last possible moment.

7. Conduct mounted vehicular movement.

NOTE: This performance step is the practical application of navigating along a specified route using one or more of the maps previously covered. Navigation will be accomplished using necessary route and mission information (local SOP) that has been plotted on the map being used by the person(s) receiving this instruction.

a. Via a road network.

(1) In most cases, the motor transport operator will have a route that has been cleared by reconnaissance in order to conduct movement. However, this is not always the case.

(2) Determine your exact starting location and that of your destination.

(3) Using either of the types of maps previously discussed, instruct your driver to begin movement along the route that has been selected.

(4) Unlike dismounted land navigation, mounted navigating requires greater vigilance in determining your progress along the route while monitoring the map. Selected points may pass much faster than anticipated.

(5) Compare your location relative to the following:

(a) Your directional orientation.

(b) The direction and distances to your destination.

(c) Other landmarks and features (towns, intersections, lakes, streams, and so forth).

(d) Any impassible terrain, the enemy, and danger areas.

(e) Both the advantages and disadvantages presented by the terrain between you and your objective.

(6) Use terrain features as checkpoints. You will use plotted checkpoints along the route, but if there are long distances between points you will want to use terrain features that cross your path that are easily identifiable to check your progress.

NOTE: Always consider the tactical aspects of your movement. Avoid "skylining" if at all possible as your chances of detection are increased. Use the "cliché "expect the unexpected" along your route. Up-to-date intelligence degrades with time.

(7) Determine distance. Get the total distance to be traveled and the approximate distance between points. Plan to use the vehicle odometer to keep track of distance traveled.

b. Via cross-country.

(1) Travel over cross-country route may be much more difficult in that there are not always road networks that are plotted on the map. A route that has not been used in long periods of time may be overgrown or washed out. This is where route reconnaissance pays off. Using alternate routes when this occurs will ensure mission success.

(2) Vehicle capabilities. When determining a route to be used when mounted, consider the capabilities of the vehicles to be used. Most military vehicles are limited in the degree of slope they can climb and the type of terrain they can negotiate. Swamps, thickly wooded areas, or deep streams may present no problems to dismounted Soldiers, but the same terrain may completely stop mounted Soldiers. The navigator must consider this when selecting a route.

(3) Most military vehicles will knock down a tree. The bigger the vehicle, the bigger the tree it can knock down. Vehicles cannot knock down several trees at once. It is best to find paths between trees that are wide enough for your vehicle. Military vehicles are designed to climb 60 percent slopes on a dry, firm surface.

(4) Determine slope by referring to map sheet. A typical road map will not have contour lines; therefore, refer to topographic maps).

(a) Check selected route on the map. Determine the slope by checking to see if there is a contour line in any 100 meters of map distance. If so, it is a 10 percent slope. If there are two contour lines, it is a 20 percent slope and so forth.

(b) Side slope is even more important than the slope you can climb. Normally, a 30 percent slope is the maximum in good weather. If you traverse a side slope, do it slowly and without turns.

c. Recheck your progress along the route by comparing the map's terrain features and plotted checkpoints. Note any discrepancies that conflict with intelligence or reconnaissance reports and notify higher headquarters in accordance with local SOP.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Defined mounted navigator (assistant driver) duties.	_____	_____
2 Oriented the map.	_____	_____
3 Explained the details of a topographic map.	_____	_____
4 Explained the details of a road map.	_____	_____
5 Explained the details of a strip map.	_____	_____
6 Prepared a strip map.	_____	_____

Performance Measures

GO **NO GO**

7 Conducted mounted vehicular movement.

Evaluation Guidance: None

References

Required

Primary

FM 1-02 Operational Terms and Graphics {MCRP 5-12A} (This item is included on EM 0205)

FM 3-25.26 MAP READING AND LAND NAVIGATION

551-88M-3600

Operate the Movement Tracking System Control Station (MT3)

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment you are PMCSing.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are PMCSing. You must ensure injury or damage to the equipment or personnel do not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As a Movement Tracking System (MTS) Control Station operator, given an installed and fully operational MTS Control Station, you will perform control station functions on the MTS.

Standards: You must operate the MTS Control Station either by direct input or by supervising the operator in your section. You will use the MTS functions to create and modify groups, promote and demote mobile units to control station status and use the messaging capabilities to direct/redirect vehicle movement in support of your unit's ongoing mission.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are in a unit and tasked to operate the Movement Tracking System (MTS). You may be required to reroute vehicles to a new designated point. You must be thoroughly familiar with all of the capabilities of the MTS system.

Note: None

Performance Steps

1. Read Messages

NOTE: When the incoming message queue indicator in status block two (2) contains unread messages, the bottom will turn YELLOW until all messages are read. If the bottom bars turn RED, a distress signal has been sent out by another unit and is in the message queue. MTS Messenger window must be ACTIVE - Dark Blue background on title bar.

- a. Select Read Messages, then Read Current, press F1.
- b. In the Read Messages screen, click the message number you wish to read.

c. Click the Reply button to return a message to the sender, or Done button to go back to the main window.

2. Send Messages:

a. To send a message to a control station; press F2, or choose menu option "Send Messages", then menu option "To CS".

b. To send a message to a mobile unit, press F3, or choose menu option "Send Messages", then select "?To Mobile".

c. To send a distress message, press F12 or choose menu option "Send Messages", then select "Send Distress Message".

d. To choose a recipient for your message, choose a unit from Select Unit List.

NOTE: To choose a recipient for your message, choose a unit from Select Unit List. The UNIT STATUS shows if the intended recipient is on-line or off-line. The Unit Location Field will indicate the position of unit.

e. Type the message into the Message to Send box.

f. Once satisfied that the message is completed, Press the Send button.

(1) Press the Cancel button to return to the main window without sending the message.

(2) Press the Recall button to load the last sent message into the message box.

(3) Press the Clear button to clear the message text field.

g. Press F6, select Review Sent Messages.

h. Choose the message by using the up and down arrows to move between messages.

3. Start TracerLink Pro

NOTE: Double-click the Vehicle Server icon located on the desktop to start the TracerLink process.

4. Initiate the map viewer

NOTE: Click on the icon of the loaded map icon shortcut that most closely represents the area of operation.

5. Display Pop-Up Menu

a. Right Click anywhere on map to display a Pop-Up Menu. The most useful functions of this menu are: Select Vehicle, Normal, Zoom In, Zoom Out, Move, Change Center, Measure and Reset.

b. Select Vehicle

(1) Click on Select Vehicle from the pop-up menu.

(2) Move the pointing hand over the vehicle on the map (or group of vehicles) and click on it.

NOTE: The Server Vehicle Kit Control window will open. The Selection tab appears. A vehicle or list of vehicles at that location will be listed. If you do not click on or near a vehicle, the list will be empty. In

cases where the icon is not on the map, due to being hidden or off the edge of the map, it is necessary to go to the Assignments tab, open the fleet containing the vehicle, and operate on the vehicle there.

(3) Click on the vehicle of interest to select it.

(a) Time toggles the time and date tag on or off.

(b) Trace allows you to draw a line that shows the history of a vehicle's travels. Make sure that Trace has a check mark so as to enable this feature.

(4) Right click on the vehicle to display a pop-up menu. The most useful functions of this menu are: Center on Vehicle, Display, Clear Trace, Trace Options and State.

(a) Center on Vehicle will relocate the map so that the vehicle is at the center of the map.

(b) Display has a sub menu: Vehicle, Name, Time and Trace. Vehicle allows you to choose whether to display that unit on the map or not. Name toggles the name tag on or off.

(c) Clear Trace will remove from the map the line representing the path that the vehicle has taken. Once removed, it cannot be restored.

(d) Trace Options allows you to choose the color, type and width of the line for the path being traced for the specific vehicle.

(e) State has one sub menu: Track. When this option is checked, the map will automatically redraw when the specific vehicle reaches the edge of the map. This will keep the vehicle displayed on the map at all times for the purpose of "tracking" it.

NOTE: This function could be used along with Trace for your own vehicle. This would allow you to follow yourself on the map and if necessary, follow the same path back to the point of origin.

c. Normal will return your pointer to a standard pointer.

d. Zoom In, Zoom Out: Zooming in provides more detail for a specific area, while zooming out is a way to show less detail, but more geographic area. Click on the map at the point you wish to become the center of map. The map will zoom with the point clicked becoming the new center of the map.

NOTE: While zooming in or out, the user can click the mouse several times and the software will skip the intermediate redraws. So instead of clicking, waiting, clicking, and waiting, just click several times and wait once.

e. When Move is selected, the cursor becomes a hand. Click on the map and hold down the left mouse button, then drag the map to the desired position. When you release the mouse, the map will redraw in the new position.

f. When Change Center is selected simply click on the map and the map will move with the point clicked becoming the new center of the map.

g. When Measure is selected, straight-line distances can be measured on a map. Click and drag the cursor from point A to point B on the map. Before releasing the mouse button, look at the scale display at the bottom of the map window. It displays the distance in kilometers, nautical miles, or statute miles. Once you release the mouse, the distance measurement will disappear. To change the Units of Measure Right click on the map and select Units. Select whether you want the map in kilometers, nautical, or statute miles.

h. Select Reset to return the map to the view seen at startup.

6. Review vehicle groups.

- a. Select Review Groups from the Options Menu of MTS Messenger.
- b. Select a group from the Select Control Group. The vehicles assigned within the selected group will be displayed in the Vehicles in Group box .
- c. Modify Groups.
 - (1) Select Modify Groups from the MTS Control Station Messenger menu.
 - (2) Select the control group to be modified.
 - (3) Select vehicles and press the left or right arrow symbol to add or remove vehicles from the group. Press the Shift and Ctrl together to select multiple vehicles.
- d. Add a new group.

NOTE: Select Add New Group from the MTS Messenger control station menu. The new group may add new MTS units. Mobile units will be removed from their existing group and added to the new group, while control stations will be added to the new group and remain in their existing group. This allows the control station operator, System Administrator, or CSSAMO the ability to customize control groups to suit the mission.

7. Promote Mobile to CS

NOTE: Under certain situations, a mobile unit may need promotion to control station status.

- a. Select Control Station, Promote Mobile to CS on the MTS Messenger menu bar.
- b. Select a control group.
- c. Identify and select the unit within the control group needing promotion and press Promote Mobile.
- d. A window will appear confirming the mobile unit's promotion to a control station. The mobile unit will receive notification of its new status in about five minutes.

NOTE: If a user attempts to promote a unit already promoted, or, if a unit demoted to mobile unit status while choosing what unit to promote will receive a message indicating the attempt failed.

8. Demote CS to Mobile

- a. Select Control Station, Demote CS to Mobile on the MTS Messenger menu bar.
- b. Select a control group. Identify and select the unit within the control group that should be demoted and press Demote CS.

NOTE: A control station can NOT be demoted if they belong to more than one Group. Before they can be demoted they must be removed from all but one group. The Modify Control ON allows an Administrator to remove the unit from extra groups.

- c. A window will appear showing status of demotion.

9. Release Bumper Number

- a. Select Release Bumper Number on the Control Station menu.

- b. Select the bumper number to release.
- c. Press the Cancel button to exit the dialog.
- d. Press the Release button.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Read messages.	_____	_____
2 Sent messages.	_____	_____
3 Sent message to Control Station.	_____	_____
4 Started TracerLink Pro.	_____	_____
5 Double-clicked on the Vehicle Server Icon to start TracerLink Pro.	_____	_____
6 Initiated Map Viewer.	_____	_____
7 Clicked on Icon representing area of operation.	_____	_____
8 Displayed Pop-Up Menu.	_____	_____
9 Reviewed vehicle groups.	_____	_____
10 Promoted Mobile to CS.	_____	_____
11 Demoted CS to Mobile.	_____	_____
12 Released a Bumper Number.	_____	_____

Evaluation Guidance: None

References

Required

MTS CS HANDBOOK MTS CS Handbook

Primary

MTS PLUS EUM REV B Movement Tracking
System Plus End User Manual CMDC-DOC-076
Rev B

551-88M-3601
Perform Duties as Convoy Commander

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment operating in the convoy.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are operating. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: In an operational environment (OE), given a mission by the company commander to serve as a convoy commander; vehicles and operators; subordinate noncommissioned officers (NCOs) to serve as serial/march unit commanders; information from the commander's operation order (OPORD); map overlays; cargo to transport; and a timeline to follow.

Standards: Plan, prepare, and execute the mission of commanding a convoy in OE by ensuring that the following was accomplished; notification of all supporting elements to determine ability to support mission, clearly define intent and requirements of mission operations order, sufficient number of vehicles is allocated for mission, a route reconnaissance is performed by designated personnel, brief all convoy participants on their duties and responsibilities, resolve all issues that may hinder or prevent successful completion of mission, completed all actions while adhering to convoy time line without injury to personnel or damage to equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are given a mission by the company commander to serve as convoy commander, vehicles, operators, subordinate NCOs to serve as serial/ march unit commanders, information from the commander's operation order and map overlays, cargo to transport and a timeline to follow.

Note: None

Performance Steps

1. Perform Composite Risk Mangement.
2. Prepare a Risk Assessment.
3. Plan the convoy movement.

a. Consider the following as key factors in the planning process of a convoy.

- (1) Mission, Enemy, Terrain, Troops Available, Time, and Civilian Considerations (METT-TC).
- (2) The state of the training of drivers.
- (3) Types of loads.
- (4) Number of vehicles involved.
- (5) Traffic conditions.
- (6) Quality of road networks.
- (7) Advanced/quartering party.
- (8) Convoy control personnel.
- (9) Start and release points.
- (10) Halts.
- (11) Gaps and march rate.
- (12) Submission of movement bid (if applicable).
- (13) Communications.
- (14) Route reconnaissance.
- (15) Escort and security elements.
- (16) Convoy support.

NOTE: The convoy commander should always refer to the unit standing operating procedures (SOP) for standardized information concerning convoy guidelines. Whenever the SOP fails to provide the needed information, the convoy commander should solicit information from the unit chain of command and applicable regulations.

b. Review the OPORD.

- (1) Determine the number of vehicles needed.
- (2) Determine the number of personnel required.
- (3) Determine if a special hauling permit is required.
- (4) Determine the necessity of available supporting elements (fire support, close air support, engineer, chemical, or refueling support).
- (5) Determine if a movement bid or convoy clearance is necessary. If so, submit request (DD Form 1265 (Request for Convoy Clearance)). This requirement is based on local guidelines (SOP) and the selected route for the convoy. In North Atlantic Treaty Organization (NATO) controlled areas,

standardization agreements (STANAG) 2154 and STANAG 2155 are applicable. Submit at least 10 days prior to planned move.

(6) Determine if request for oversized vehicles/loads is required. If so, submit DD Form 1266 (Request for Special Hauling Permit). The request must reach the approving authority 15 days before the planned move.

(7) Determine the convoy route.

c. Conduct a map and route reconnaissance of the convoy route. Use engineer reconnaissance report information (DA Form 1711 (Engineer Reconnaissance Report)), if available, to determine route characteristics that may play a key part in your convoy mission.

(1) Select an alternate route, if possible.

(2) Determine all critical points/check points.

(3) Determine situational requirements.

(4) Determine choke points along the route that may endanger the mission.

(5) Plot all necessary items on a map.

(6) Plot scheduled halts.

d. Perform a risk management in accordance with FM 5-19.

e. Determine the size of serial/march units.

f. Determine march rate (if not covered by the SOP).

g. Determine the vehicle march order, interval, and location of key vehicles within the convoy.

h. Determine the pre-departure assembly area. Seek command guidance if information is not provided in OPORD.

i. Determine security requirements. Consider the following:

(1) Noise and light discipline.

(2) Front, flank, and rear security.

(3) Security during halts.

(4) Air cover.

(5) Fire support.

(6) Communications security.

(7) Deception.

j. Determine necessity and availability of spare vehicle (bobtails) for recovery.

k. Determine maintenance support.

l. Determine key convoy chain of command duty positions. Include the following:

- (1) Assistant convoy commander.
- (2) Serial/march unit commanders.
- (3) Pacesetter.
- (4) Trail officer.
- (5) Trail maintenance officer.

m. Delegate responsibility to construct strip maps for all drivers.

n. Determine if and how many route guides are necessary.

o. Determine time/distance factors. Consider driver limitations, maximum driving time per shift, and co-drivers.

p. Coordinate with squad leaders and maintenance sergeant and other platoon sergeants on availability of vehicles to support the movement.

q. Determine the preparation timeline for the following:

- (1) Loading of vehicles.
- (2) Marshaling vehicles.

r. Determine the makeup and duties of the advance/quartering party to be performed at the destination (as applicable). Consider the following:

- (1) NCOIC.
- (2) Other key personnel.
- (3) Ensuring that the convoy is able to move quickly off the route and into the marshaling area.
- (4) Positioning of vehicles within the marshaling area.

4. Prepare for convoy movement.

NOTE: The convoy commander must perform specific actions to prepare the convoy. A limited amount of time is available to accomplish the following: select and reconnoiter the route, submit a movement bid if required (DD Form 1265), effect coordination for en route security, give instructions to subordinate element commanders and other supervisory personnel, inspect personnel and vehicles, and brief convoy personnel).

- a. Submit a request for convoy clearance and oversized vehicle/load permits (if applicable).
- b. Assign key convoy duty positions within the convoy to include the following:

- (1) Assistant convoy commander.
 - (2) Serial/march unit commanders.
 - (3) Pacesetter.
 - (4) Trail officer.
 - (5) Trail maintenance officer.
 - (6) Route guides (if necessary).
 - (7) Security NCOIC and force.
- c. Brief and dispatch the advance/quartermen party to destination (as applicable).
- d. Ensure that the following pre-departure actions are done prior to movement.
- (1) Instruct the serial/march unit commander(s) to do the following:
 - (a) Supervise and spot check all preventive maintenance of convoy vehicles.
 - (b) Ensure that all vehicles are dispatched according to the unit SOP.
 - (c) Ensure that all personnel involved in the convoy are prepared and have in their possession all items identified by unit SOP for the convoy mission.
 - (d) Ensure that all vehicles, to include trailers and support vehicles, are loaded and prepared for movement as directed.
 - (e) Ensure that all personnel have in their possession all applicable accident and load forms required by the unit SOP and regulation (DD Form 518 [Accident Identification Card] and SF Form 91 and DD Form 626 [Motor Vehicle Inspection] and DD Form 836 [Dangerous Goods Shipping Paper/Declaration and Emergency Response] [if transporting HAZMAT] prior to movement.
 - (f) Ensure that all vehicles are marked with convoy clearance numbers (if movement is over a controlled route).
 - (g) Ensure that convoy control vehicles are marked with the appropriate flags, signs, or lights (as applicable).
 - (h) Relay all necessary communications information.
 - (i) Hand out all strip maps to vehicle crews.
 - (j) Perform sensitive items check (to be verified during convoy briefing).
 - (2) Once all vehicles, loads, and personnel have been checked, supervise the staging of vehicles in the designated assembly area by order of march and serial/march unit.
 - (3) Coordinate to obtain artillery support (if available).
- e. Ensure that all of the following questions are answered (Convoy Commander's Checklist) prior to movement.

- (1) Where is the start point (SP)? The release point (RP)?
- (2) What route is to be used?
- (3) Has reconnaissance been made? Condition of route determined?
- (4) Can bridges, tunnels, underpasses, and defiles safely accommodate all loaded and tracked (if applicable) vehicles?
- (5) Are critical points known and listed on the map?
- (6) What is the size of serials?
- (7) What is the size of march units?
- (8) What is the rate of march?
- (9) What is the vehicle interval on an open road? Built-up road?
- (10) What type of column will be used?
- (11) What provision has been made for refueling (if applicable)?
- (12) Has a suitable operations area been selected?
- (13) Have suitable rest and mess-halt area been selected?
- (14) Have convoy clearances been obtained? What date?
- (15) Is an escort required? Has it been requested?
- (32) Have times been established for unloading trucks?
- (33) Has time been established for releasing trucks? Who is responsible?
- (34) Is there a carefully conceived plan known to all convoy personnel that can be used in case of an attack?
- (35) Is a written OPORD, if required, on hand?
- (36) Will a log of road movement be required at the end of the trip? Are necessary forms on hand?
- (37) Has a weather forecast been obtained?
- (38) Do all personnel have proper clothing and equipment?
- (16) Are spare trucks available for emergencies?
- (17) Are vehicles fully serviced and ready for loading?
- (41) Have vehicles containing HAZMAT been placed at appropriate locations within the convoy to reduce residual damage in case of enemy attack?

(42) Has every effort been made to camouflage vehicles to the extent possible during movement?
At halts?

(20) Is the convoy marked front and rear of each march unit? With convoy number when required? Is each vehicle marked? Are convoy flags on the vehicles?

(21) Are guides in place? Have arrangements been made to post and recover them?

(22) Are blackout lights functioning?

(23) Have maintenance services been alerted?

(24) Is the maintenance truck in the rear? Are medics in the rear?

(25) Are all interested parties advised of the estimated time of arrival (ETA)?

(26) Is the officer at the rear of the convoy ready to take necessary corrective action (such as investigating accidents and unusual incidents and changing loads)?

(27) Who is the trail officer?

(28) Is there a truck unloading plan? Who is responsible? Do they have the necessary equipment?

(29) Is there a plan for feeding personnel?

(30) Have times been established for loading trucks?

(31) Has time been established for formation of convoy?

f. Conduct convoy briefing.

NOTE: NOTES:

The convoy commander's briefing is given after all other movement preparations have been completed and verified by all responsible parties and the convoy is prepared to move.

Gather applicable information from the commander's OPORD and local SOP to complete your convoy briefing. Provide as much applicable information as possible that may affect the convoy movement. Apply the information in the following format.

(1) Situation.

(a) Enemy forces.

(b) Friendly forces.

(c) Support units.

(2) Mission.

(a) Type of cargo (to include hazardous materials precautions and guidelines).

(b) Origin.

(c) Destination.

(3) Execution.

(a) General organization.

(b) Time schedule.

(c) Convoy speed.

(d) Catch-up speed.

(e) Vehicle distance.

(f) Emergency measures (for accidents, breakdowns, and separation from the convoy).

(g) Actions of convoy and security personnel if attacked.

(h) Medical support.

(4) Administration and logistics.

(a) Personnel control.

(b) Billeting.

(c) Messing.

(d) Refueling and servicing of vehicles, complying with spill prevention guidelines.

(5) Command and signal.

(a) Convoy commander's location.

(b) Assistant convoy commander's designation (succession of command).

(c) Actions of security force commander.

(d) Serial commander's responsibilities.

(e) Arm and hand signals.

(f) Other prearranged signals.

(g) Radio frequencies and call signs (for control personnel, security force commanders, fire support elements, reserve security elements, and medical evacuation).

(6) Safety.

(a) Hazards of the route.

(b) Weather conditions.

- (c) Defensive driving.
- (7) Environmental protection.
 - (a) Spill prevention.
 - (b) Transporting HAZMAT.
- 5. Conduct the convoy movement.

NOTE:

Convoy commander should maintain a log of events during the convoy that may be required in the convoy commander's report upon completing the convoy movement.

The convoy commander must be able to monitor and control all aspects of vehicle operations within the convoy. The convoy commander is ultimately responsible for ensuring that all assets arrive safely at the destination with a minimal amount of losses. The convoy commander's ability to delegate authority and enforce march discipline are key factors in mission accomplishment.

- a. Conduct a communications check of all systems in the convoy radio net. Correct all communications deficiencies on the spot.
- b. Signal all drivers to start engines.
- c. Give the signal to begin movement and depart the assembly area (at the time designated in movement order). Use the closed column formation until entry onto the main convoy route. If expressways are used, instruct drivers to close to approximately 20 meter vehicle interval when entering the acceleration ramp.
- d. Ensure that the convoy reaches the SP according to the established timeline.
- e. Monitor radio traffic.
- f. Ensure that the trail officer relays passing the SP on the established timeline.
- g. Ensure that the pacesetter maintains established speed.
- h. Signal drivers to adjust speed and interval accordingly.
- i. Notify higher headquarters upon passing each check/critical point on the route (as directed by the SOP or commander).
- j. During halts, ensure that serial/march unit commanders (if entire convoy is at halt) complete halt checks on personnel, vehicles, and loads.
 - (1) Ensure that vehicles are staged so as to facilitate rapid movement. Vehicles should remain in the same order of march as during movement.
 - (2) Ensure that security is posted to prevent pilferage or compromise by enemy forces.
 - (3) Exchange drivers if operating limits have been reached. Do not exceed authorized driving times as listed in AR 385-10, paragraph 11-4.
- k. As terrain dictates, direct the column into open or closed formations. Movement through urban areas will facilitate closing the formation to established vehicle intervals.

l. Enforce passive and active defense measures within the convoy.

m. Enforce operations security (OPSEC) and communications security (COMSEC).

n. Report any enemy contact made during movement to higher headquarters. Include attack location, size of the enemy force if known, types and number of weapons used, damage inflicted on convoy assets, reactive measures taken, casualties incurred, and any information covered in the unit SOP.

o. As the convoy passes the RP, ensure that vehicle accountability is conducted and that control is relinquished (as applicable) for those elements (supply convoy) in which custody and control will change and elements may continue to other destinations.

p. Contact trail/trail maintenance officer for updates on any/all vehicle breakdowns, actions taken, and status of effected equipment/loads/personnel.

6. Conduct convoy closure operations.

a. For those convoy assets that are relinquished upon crossing the RP, ensure that the chain of custody is not broken and that all command and control of released assets is delegated to authorized personnel.

b. For those convoy assets that remain under current convoy control upon crossing RP, the following steps apply.

c. Ensure that persons designated as ground guides (either assistant drivers or advanced party personnel) escort vehicles off the convoy route and into the assembly area in a timely manner to minimize congestion.

d. Enforce security measures in the assembly area.

e. Ensure that all vehicles are positioned in the assembly area as to facilitate security and for off-loading operations as necessary.

f. Instruct serial/march unit commanders/squad leaders to conduct sensitive items checks and supervise after-operations maintenance on vehicles.

g. Ensure that vehicles with hazardous cargo are positioned away from facilities according to regulations (DA Pamphlet 385-64, paragraph 11-15).

h. Maintain contact with trail/trail maintenance officer for closure through RP.

i. Facilitate the recovery of damaged or other non-operational vehicles upon arrival at the assembly area.

j. Coordinate with trail/trail maintenance officer for information regarding any vehicle accident reports that may be necessary (DA Form 285 [U.S. Army Accident Report]).

k. Report closure and convoy status to higher headquarters according to the unit SOP.

l. If required, submit convoy commander's report to higher headquarters according to FM 55-15, Chapter 3 and ATP 4-11.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Performed Composite Risk Management.	_____	_____
2 Prepared a Risk Assessment.	_____	_____
3 Planned the convoy movement.	_____	_____
4 Prepared for convoy movement.	_____	_____
5 Conducted the convoy movement.	_____	_____
6 Conducted convoy closure operations.	_____	_____

Evaluation Guidance: None

References

Required

Primary

ADP 5-0 THE OPERATIONS PROCESS

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

AR 55-162 PERMITS FOR OVERSIZE, OVERWEIGHT, OR OTHER SPECIAL MILITARY MOVEMENTS

ATP 4-16 MOVEMENT CONTROL

DA FORM 1711 Engineer Reconnaissance Report

DA FORM 285 U.S. ARMY ACCIDENT REPORT

DD FORM 1265 REQUEST FOR CONVOY CLEARANCE

DD FORM 1266 REQUEST FOR SPECIAL HAULING PERMIT

DD FORM 518 ACCIDENT-IDENTIFICATION CARD

DD FORM 626 MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)

DD FORM 836 DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION OF HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES/

Required

CONTAINERS/VESSELS

Primary

FM 21-60 Visual Signals

FM 3-34.170 ENGINEER RECONNAISSANCE

FM 4-01.45 Multi-Service Tactics, Techniques, and
Procedures for Tactical Convoy Operations {MCCRP
4-11.3H; AFTTP(I) 3-2.58; NTTP 4-01.3}

FM 5-19 COMPOSITE RISK MANAGEMENT

ATP 4-11 ARMY MOTOR TRANSPORT UNITS
AND OPERATIONS

DA PAM 385-64 Ammunition and Explosives Safety
Standards

SF FORM 91 MOTOR VEHICLE ACCIDENT
REPORT

STANAG 2154 Regulations for Military Motor
Vehicle Movement by Road

STANAG 2155 Road Movement Bid and Credit

Subject Area 21: Motor Pool Management
551-88M-3333
Supervise Motor Pool Operations

DANGER

Adhere to all Danger statements in reference to Technical Manuals to ensure you are aware of the possible dangers involving the different types of equipment.

WARNING

Adhere to all Warning statements referenced in the Technical Manuals. You must ensure injury or damage to the equipment or personnel do not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As a squad leader within a truck platoon, given vehicles, motor pool area, maintenance area, dispatching office and Soldiers assigned to your squad, all necessary applicable forms and records, and an ongoing support mission you are required to supervise motor pool operations. Given vehicles, motor pool area, maintenance area, dispatching office, personnel, and all appropriate vehicle operator's manuals (-10 series TMs) to accomplish the mission of the motor pool operation.

Standards: You will perform supervisory duties over your squad assuring that all your Soldiers are fully qualified to maintain and operate assigned vehicles, briefed about upcoming missions, maintained your squad-assigned area within the motor pool, and ensure that your platoon sergeant is kept informed of your squad's complete operational status for mission support.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: As a squad leader within a truck platoon, given vehicles, motor pool area, maintenance area, dispatching office and soldiers assigned to your squad, all necessary applicable forms and records, and an ongoing support mission.

Note: None

Performance Steps

1. Supervise squad vehicle operators performing operator maintenance of assigned vehicles.
 - a. Ensure all squad personnel are trained in the use of applicable vehicle and/or equipment technical references.
 - b. Ensure that all applicable maintenance forms and records are available and used in accordance with DA Pamphlet 750-8.
 - c. Conduct spot checks of vehicles to ensure accuracy of operator maintenance being performed.

- d. Ensure all required petroleum, oil, and lubricants are available and properly used in the performance of preventive maintenance checks.
- e. Spot check maintenance forms to ensure proper information is provided by vehicle or equipment operator upon completion of maintenance checks.
- f. Sign maintenance worksheets as supervisor upon completion of preventive maintenance checks (if so designated by unit SOP).
- g. Coordinate with platoon sergeant and unit maintenance personnel on availability of replacement parts for assigned vehicles and equipment.
- h. Ensure that all vehicle operators adhere to all safety guidelines as specified in the unit maintenance SOP.
- i. Ensure that your squad members adhere to proper disposal of hazardous waste from vehicles as needed.
- j. Enforce no smoking regulations within motor pool and fuel points.
- k. Update platoon sergeant on vehicle and equipment operational status at completion of maintenance checks.
- 1. Report evidence of vehicle abuse or neglect to platoon sergeant.
- 2. Ensure all vehicle operators are fully qualified to operate assigned vehicles.
 - a. Coordinate with the commander's designated records reviewer on accuracy of DA Form 348 (Equipment Operator's Qualification Record (Except Aircraft)) or DA Form 5983-E.
 - b. Ensure all newly assigned drivers are scheduled to attend drivers training course.
 - c. Ensure driving records are updated to reflect current operator performance and completed driver training.
 - d. Ensure that newly licensed operators are familiarized and if possible assigned a vehicle of responsibility within the squad.
 - e. Ensure that all operators receive recognition for outstanding performance and submit recommendations to platoon sergeant for all applicable driving awards.
- 3. Ensure availability of vehicles and operators for mission support.
 - a. Coordinate with platoon sergeant for requirements of vehicles and operators for mission support.
 - b. If vehicles are to be loaded, ensure loads are properly placed and secured to vehicle. Ensure placarding is properly placed if cargo is hazardous.
 - c. Ensure proper number and type vehicles are available and dispatched.
 - d. Ensure that all squad vehicle operators are familiar with mission, route, and destination.
 - e. Inspects and if necessary, corrects the trip records maintained by operators.

4. Ensure squad-assigned area within motor pool is maintained.
 - a. All vehicles are positioned according to motor pool layout.
 - b. All vehicles have drip pans positioned properly.
 - c. All vehicles are properly parked and chocked to prevent accidental movement.
 - d. Vehicle canvas and bow assemblies are properly installed and secured.
 - e. Ensure that all vehicles are properly grounded (as applicable).
 - f. Ensure that all assigned tools, vehicle BII, and equipment is accounted for, kept clean and serviceable, and secured in squad building or CONEX when not being used by squad personnel.
 - g. Ensure that all vehicles not on dispatch are properly secured as designated in unit SOP.
 - h. Ensure all vehicle equipment record folders and maintenance worksheets are turned in to unit maintenance personnel (guidance in accordance with unit SOP).
 - i. Keep platoon sergeant informed as to status of squad personnel, vehicles, and equipment.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Supervised squad vehicle operators performing organizational maintenance of assigned vehicles.	_____	_____
2 Ensured all vehicle operators are fully qualified to operate assigned vehicles.	_____	_____
3 Ensured availability of vehicles and operators for mission support.	_____	_____
4 Ensured squad-assigned area within motor pool is maintained.	_____	_____

Evaluation Guidance: None

References

Required

Primary

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

AR 600-55 THE ARMY DRIVER AND OPERATOR STANDARDIZATION PROGRAM (SELECTION, TRAINING, TESTING, AND LICENSING)

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

DA PAM 750-3 SOLDIERS' GUIDE FOR FIELD

21 November 2013

Required

MAINTENANCE OPERATIONS

Primary

DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual.

551-88M-3335
Supervise Driver's Training Program

DANGER

Ensure Soldiers adhere to all Danger statements in reference to Technical Manuals to ensure you are aware of the possible dangers involving the equipment.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are training. You must ensure injury to personnel or damage to equipment does not occur.

CAUTION

Adhere to all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As a certified driver training instructor, given a driver testing and training device, designated driver training and testing area, lesson plans and reference materials, dispatched vehicles, safety cones, and qualified driver candidates.

Standards: You must complete the setup of the training and testing facilities, administer all physical evaluation measures, ensure that student prerequisites are met, administer required driver training instruction, control all student vehicle operation, enforce driver safety rules and techniques, test candidates according to regulation, and assist in the licensing process of all drivers. All student performance will be documented and the appropriate actions taken. No injury to personnel or damage to vehicles or driving facilities will occur.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You just arrived at your new unit and you are selected by your Battalion to serve as the Battalion Master Driver trainer.

Note: None

Performance Steps

1. Conduct preparations for driver/operator selection, training, and testing.

THE PROCESS

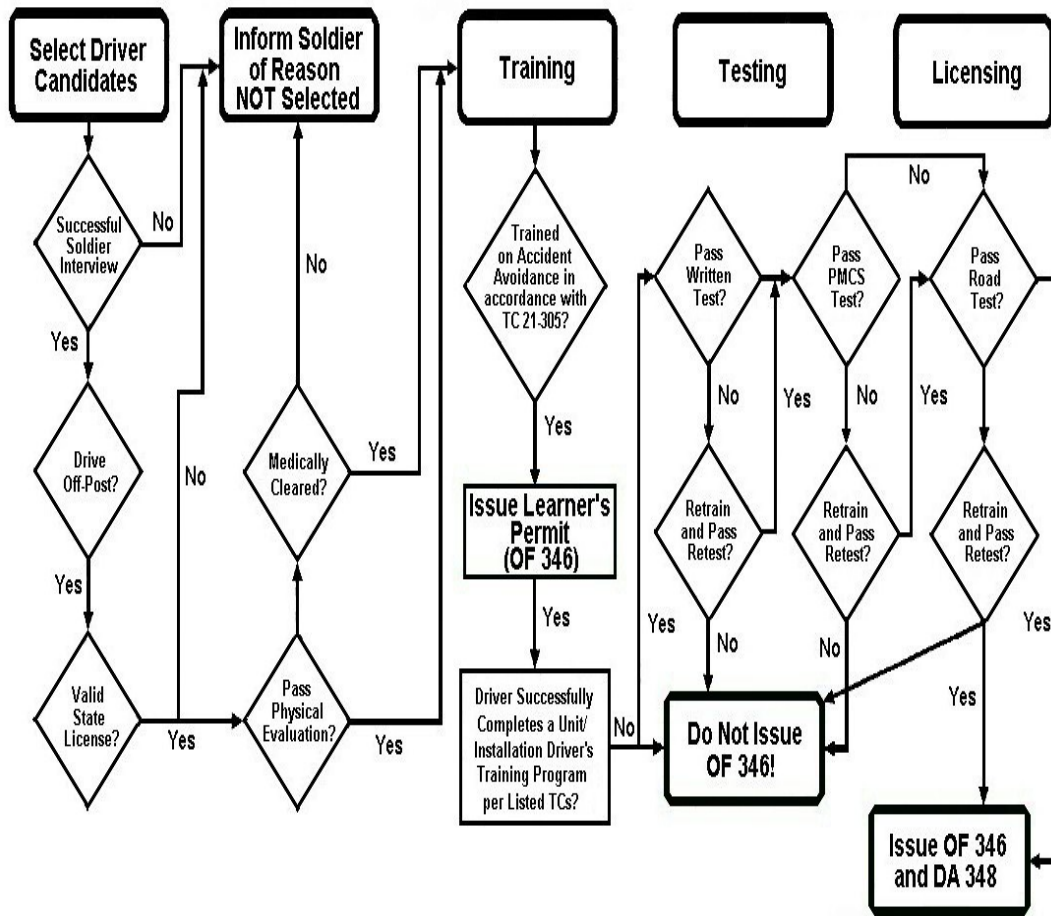


Figure 3-41.

The Driver/Operator Training Process

- a. Ensure all driver training lesson plans are present and up to date.
- b. Ensure all reference materials are available (regulations and training circulars).
- c. Ensure all vehicles are dispatched and ready for training.
- d. Ensure driver testing and training device is available and in working condition.
 - (1) Perform trial test to familiarize with equipment and to ensure it is working condition.
 - (2) Construct equivalent testing instruments in lieu of availability of testing and training device (must be made to accurately measure the same physical characteristics).
- e. Conduct a risk analysis of the training to be conducted.
- f. Setup the assigned driving range.

g. Testing site should include:

- (1) Forward stop.
- (2) Straight line backing.
- (3) Right turn.
- (4) Alley dock.
- (5) Eight left and eight right turns.
- (6) Straight section of urban business street.
- (7) Two through intersections and two intersections requiring stop.
- (8) Two railway crossings.
- (9) Two curves, one left, one right.
- (10) A two-lane rural or semi-rural road.
- (11) A section of expressway.
- (12) A downgrade.
- (13) An upgrade.
- (14) A downgrade for stopping.
- (15) An upgrade for stopping.
- (16) An underpass or low clearance and one bridge.

2. Conduct physical evaluation of driver candidates (if required by regulation).

a. Ensure all candidates have been interviewed and selected by the commander or their designated representative.

b. Ensure all candidates possess a valid civilian driver's license (required if they are vehicle operators and will be required to drive off-post).

c. Ensure the purpose and objective of physical evaluation (if used), is understood.

d. Ensure students meet minimum physical evaluation performance standards (if required) for:

- (1) Visual acuity.
- (2) Field of vision.
- (3) Depth perception.
- (4) Color perception.

(5) Foot reaction time.

(6) Hearing test.

e. Ensure results are posted to DA Form 348.

f. Ensure a Learner Permit OF Form 346/DA Form 5984-E (Operator's Permit Record) is issued to each candidate after they successfully complete the Accident Avoidance portion of training (if required).

3. Conduct review of examiner, instructor, and assistant instructor qualifications, to include:

a. Ensure they have been selected and are appointed in writing to train operators. Appointment should be on the specific type of equipment/vehicle according to the regulations.

b. Ensure they are licensed to operate the type of equipment/vehicle being used for training.

c. Ensure they possess the technical knowledge and experience required for the equipment/vehicle being used for training.

4. Conduct driver training instruction, to include:

a. Unit A - Introduction (to include safety briefing), organization of the course, materials review.

b. Unit B - Driver responsibilities and government liability.

c. Unit C - State, local, host nation, and post traffic regulations.

d. Unit D - Use of Army publications and blank forms, to include:

(1) DA Form 5987-E/DD Form 1970.

(2) DA Form 5988-E/DA Form 2404/DA Form 2408-14 (Uncorrected Fault Record).

(3) DD Form 518.

(4) SF Form 91.

e. Unit E - Vehicle inspection, preventive maintenance checks and services (PMCS).

f. Unit F - Accident avoidance.

g. Unit G - Driver energy and environmental consideration.

h. Unit H - Introduction to specific vehicles.

i. Unit I - Military convoy operations, including night driving.

j. Unit J - Off-road driving.

k. Unit K - Vehicle self-recovery operations.

l. Unit L - Vehicle driver performance evaluation.

m. Unit M - Response to emergency situations, vehicle malfunctions.

n. Unit N - Driving Range as setup by local commanders.

o. Unit O - Written examination.

p. Unit P - Preventive Maintenance (PMCS) test.

q. Unit Q - Road test (after completion of training).

r. Unit R - Additional course instruction should be included with respect to unit-specific vehicle characteristics and ancillary devices as part of vehicle performance (for example coupling/uncoupling semitrailer and crane/winch operation).

5. Conduct driver testing.

NOTE: Only driver-training candidates that have received the complete course of instruction are to be tested.

a. Enforces vehicle safety and fire prevention measures.

b. Practices and administers test to qualified driver on same type of vehicle.

c. Verifies that all examinees have completed the course of instruction as stipulated by AR 600-55 and local standing operating procedure (SOP).

d. Administers written test.

e. Administers PMCS test.

f. Administers vehicle control test.

(1) Only tests those examinees that have successfully passed the PMCS test.

(2) Records examinee performance on DA Form 6125 (Road Test Score Sheet).

g. Administers on-the-road test.

(1) Only tests those examinees that have successfully passed the vehicle control test.

(2) Records examinee performance on DA Form 6125.

h. Terminates the test on any examinee(s) that failed to achieve a passing score on any test.

(1) Records results on DA Form 6125.

(2) Conducts after action review for the examinee.

6. Conduct equipment operator training instruction, to include:

a. Mechanical equipment required by regulation or command policy.

b. Ground support equipment required by regulation or command policy.

- c. Night vision goggles (if required).
- d. Special equipment required by regulation or command policy.

7. Conduct equipment operator testing.

NOTE: Only candidates that have received the complete course of instruction are to be tested.

- a. Ensure written examinations are administered according to regulatory guidance.
- b. Enforces vehicle safety and fire prevention measures.
- c. Verifies that all examinees have completed the course of instruction as stipulated by AR 600-55 and local authority (SOP).

d. Administers PMCS test.

e. Administers equipment-specific test.

(1) Only tests those examinees that have successfully passed the PMCS test.

(2) Records examinee performance on the equipment qualification record.

f. Terminates the test on any examinee(s) that failed to achieve a passing score on any test.

(1) Records results on equipment qualification record.

(2) Conducts after action review for the examinee.

8. Conduct sustainment and remedial training.

- a. Ensure sustainment training is conducted as required for active Army Soldiers.
- b. Ensure sustainment training is conducted as required for Reserve Component Soldiers.
- c. Ensure remedial training is conducted when required.
- d. Ensure refresher training is conducted when required.

9. Control the issue of operator permits (OF Form 346/DA Form 5984-E).

- a. Ensure standard permits are issued according to the regulations.
- b. Ensure special purpose permits are issued according to the regulations.
- c. Ensure renewals are issued according to the regulations.
- d. Ensure suspensions and revocations are controlled according to the regulations or local command policy.
- e. Ensure replacement permits are processed and issued according to the regulations.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Conducted preparations for driver/operator selection, training, and testing.	_____	_____
2 Conducted physical evaluation of driver candidates (if required by regulation).	_____	_____
3 Conducted review of examiner, instructor and assistant instructor qualifications, to include:	_____	_____
4 Conducted driver training instruction, to include:	_____	_____
5 Conducted driver testing.	_____	_____
6 Conducted equipment operator training instruction, to include:	_____	_____
7 Conducted equipment operator testing.	_____	_____
8 Conducted sustainment and remedial training.	_____	_____
9 Controlled the issue of operator permits (OF Form 346/DA Form 5984-E).	_____	_____

Evaluation Guidance: None

References

Required

Primary

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

AR 600-55 THE ARMY DRIVER AND OPERATOR STANDARDIZATION PROGRAM (SELECTION, TRAINING, TESTING, AND LICENSING)

AR 611-5 PERSONNEL AND CLASSIFICATION TESTING

DA FORM 2404 EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

DA FORM 2408-14 UNCORRECTED FAULT RECORD

DA FORM 348 Equipment Operators Qualification Record (Except Aircraft)

DA FORM 5984-E OPERATORS PERMIT RECORD (EGA)

DA FORM 5987-E MOTOR EQUIPMENT DISPATCH (EGA)

Required

DA FORM 5988-E Equipment Inspection
Maintenance Worksheet

DA FORM 6125 ROAD TEST SCORE SHEET
(LRA)

DD FORM 1970 MOTOR EQUIPMENT
UTILIZATION RECORD (AVAILABLE ON DOD
WEB SITE)

DD FORM 518 ACCIDENT-IDENTIFICATION
CARD

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

OF FORM 346 US Government Motor Vehicle
Operator's Identification Card.

SF FORM 91 MOTOR VEHICLE ACCIDENT
REPORT

Primary

Subject Area 22: Convoy Planning and Operation

551-88M-3603**Prepare an Operations Order (OPORD)**

Conditions: In an operational environment you are required to prepare an Operations Order (OPORD) for your platoon. Given the company OPORD with platoon requirements identified.

Standards: You will prepare a platoon OPORD identifying all the necessary information needed in order to complete the mission in accordance with the company OPORD.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: In an operational environment, your unit is preparing to go on a mission to another location and orders are given to construct an operations order for your platoon. You are provided the mission and all relevant information in order to conduct the operation, to include maps and all pertinent security information from your higher headquarters.

Note: None

Performance Steps

1. Place the classification at the top and bottom of every page of the OPORD.
2. Identify change from verbal orders, if any, under classification.
3. Fill in heading with the following information:
 - a. Copy # of # copies.
 - b. Issuing headquarters.
 - c. Place of issue.
 - d. Date-time group of signature.
 - e. Message reference number.
4. Identify OPORD number/code name.
5. Identify references. List the maps, charts, datum, or other related documents the unit needs to understand the OPORD.
6. Identify time zone used throughout OPORD.
7. List Task Organization. Describe the allocation of forces to support the concept of operations. Task organization may be placed in annex A if it is long or complicated.
8. Describe the Situation to include:
 - a. Enemy Forces.

b. Friendly Forces.

c. Environment.

(1) Terrain.

(2) Weather.

(3) Civil Considerations.

d. Attachments and Detachments.

9. Add the Mission statement. A mission statement contains no subparagraphs. The mission statement covers on-order missions.

10. Explain the Execution.

a. State the commander's intent.

b. Add the concept of operation.

(1) The concept of operations describes how the commander sees the actions of subordinate units fitting together to accomplish the mission. As a minimum, the concept of operations includes the scheme of maneuver and concept of fires.

(2) Fires: Describe the scheme of fires. State which unit has priority of fires. Include the purpose of, priorities for, allocation of, and restrictions for fire support.

(3) Maneuver: State the scheme of maneuver. Be sure this paragraph is consistent with the operation overlay.

c. Explain Coordinating instructions.

(1) Identify time or condition when a plan or an order becomes effective.

(2) List commander's critical information requirements.

(3) List risk reduction control measures that are unique to this operation and not included in unit SOPs.

(4) Identify Rules of engagement (ROE).

(5) Identify environmental considerations.

11. Address service support as needed to clarify the service support concept.

a. State the concept of logistics support to provide non-CSS commanders and their staffs a visualization of how the operation will be logistically supported.

b. Materiel and services.

c. Health service support.

d. Personnel service support.

12. Identify Command and Signal.

a. State the map coordinates for command post locations and at least one future location for each command post. Identify the chain of command if not addressed in unit SOPs.

b. List signal instructions not specified in unit SOPs. Identify the specific signal operating instructions edition in effect, required reports and formats, and times the reports are submitted.

13. Include instructions for the acknowledgement of the plan or order by addressees. The word “acknowledge” may suffice or you may refer to the message reference number. Acknowledgement of a plan or order means that it has been received and understood.

14. Include last name of individual signing OPORD.

15. List annexes by letter and title in sequence.

16. Furnish distribution copies either for action or for information. List in detail those who are to receive the order.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Placed the classification at the top and bottom of every page of the OPORD.	_____	_____
2. Identified change from verbal orders, if any, under classification.	_____	_____
3. Filled in heading with the following information:	_____	_____
4. Identified OPORD number/code name.	_____	_____
5. Identified references. Listed the maps, charts, datum, or other related documents the unit needs to understand the OPORD.	_____	_____
6. Identified time zone used throughout OPORD.	_____	_____
7. Listed Task Organization. Described the allocation of forces to support the concept of operations. Task organization may be placed in annex A if it is long or complicated.	_____	_____
8. Described the Situation.	_____	_____
9. Added the Mission Statement.	_____	_____
10. Explained the Execution.	_____	_____
11. Addressed service support as needed to clarify the service support concept.	_____	_____
12. Identified Command and Signal.	_____	_____

Performance Measures

	GO	NO GO
13. Included instructions for the acknowledgement of the plan or order by addressees. The word "acknowledge" may suffice or you may refer to the message reference number. Acknowledgement of a plan or order means that it has been received and understood.	_____	_____
14. Included last name of individual signing OPORD.	_____	_____
15. Listed annexes by letter and title in sequence.	_____	_____
16. Furnished distribution copies either for action or for information. Listed in detail those who are to receive the order.	_____	_____

Evaluation Guidance: None

**References
Required**

Primary

ADP 5-0 THE OPERATIONS PROCESS

ATP 4-11 ARMY MOTOR TRANSPORT UNITS
AND OPERATIONS

551-88M-3604**Prepare a Map Overlay**

Conditions: Given a clear sheet of overlay material, colored markers, 1:50,000-scale military map, protractor, guidance from commander, and information from operations order (OPORD).

Standards: You will completely, legibly, and accurately construct a map overlay and include all relevant information required. NOTE: Figure 3-41 depicts a map graphic.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Given all necessary information to complete the overlay, to include a clear sheet of overlay material, colored markers, 1:50,000-scale military map, protractor, guidance from commander, and information from operations order (OPORD). You must properly complete the Map overlay with all the relevant information.

Note: None

Performance Steps

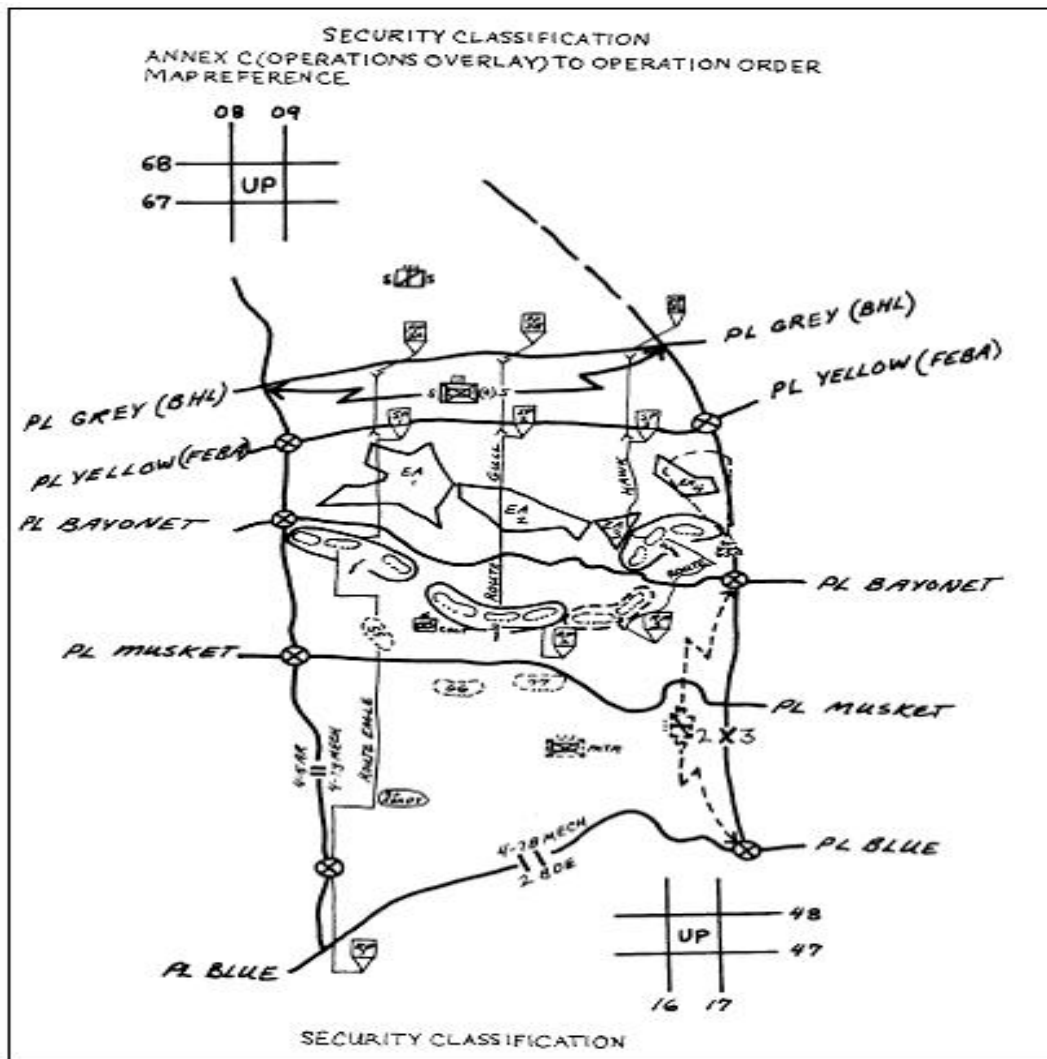


Figure 3-42.

Map Graphic

1. Place the title in the upper left margin (below the security classification).
2. Center the security classification at the top and bottom of the overlay.
3. Place the map reference in the upper left margin immediately below the title.
4. Plot detail information.
5. Place at least two overlay and map reference points (double crosshair reference marks on map grid lines) on opposite corners of the overlay.
6. Prepare the overlay to the scale of the maps units will use.
7. Make the overlay consistent with the applicable text from the OPORD.
8. Correctly transfer control measures onto the overlay from the OPORD.

9. Place symbols at doctrinally correct locations.

10. Keep the overlay simple, but give enough detail for others to understand the operation and its essential tasks.

NOTE: Make sure control measures give the commander flexibility to react to changing situations or conditions.

11. Limit control measures to the minimum needed to synchronize the operation and limit possible fratricide.

12. Roll up or fold the overlay with the classification, title, and map reference visible on the outside when transmitting or storing overlays.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Centered the security classification at the top and bottom of the overlay.	_____	_____
2. Placed the title in the upper left margin (below the security classification).	_____	_____
3. Placed the map reference in the upper left margin immediately below the title.	_____	_____
4. Plotted detail information.	_____	_____
5. Placed at least two overlay and map reference points (double crosshair reference marks on map grid lines) on opposite corners of the overlay.	_____	_____
6. Prepared the overlay to the scale of the maps units will use.	_____	_____
7. Correctly transferred control measures onto the overlay from the OPORD.	_____	_____
8. Made the overlay consistent with the applicable text from the OPORD.	_____	_____
9. Placed symbols at doctrinally correct locations.	_____	_____
10. Kept the overlay simple, but gave enough detail for others to understand the operation and its essential tasks.	_____	_____
11. Limited control measures to the minimum needed to synchronize the operation and limited possible fratricide.	_____	_____
12. Rolled up or folded the overlay with the classification, title, and map reference visible on the outside when transmitting or storing overlays.	_____	_____

Evaluation Guidance: None

References

Primary

Required

ADP 5-0 THE OPERATIONS PROCESS

FM 1-02 Operational Terms and Graphics {MCRP 5-12A} (This item is included on EM 0205)

FM 3-25.26 MAP READING AND LAND NAVIGATION

551-88M-3602**Conduct Reconnaissance of a Convoy Route**

Conditions: You have been tasked to conduct a road reconnaissance in support of an upcoming convoy movement. You are the convoy commander and have received operations order information and general area containing several possible routes. You have the necessary vehicle, equipment, and personnel.

Standards: You must successfully conduct a road reconnaissance of the convoy route. You will select an appropriate primary and alternate route that will support your movement. All critical points will be identified. Friendly and enemy units in the vicinity will be identified and plotted on your overlay. You will indicate halt and release point locations. You must record and report all necessary route information to higher headquarters and for use on your convoy movement.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You have been tasked to conduct a Convoy road reconnaissance in support of an upcoming convoy movement. You are the convoy commander and have received operations order information and general area containing several possible routes. You have the necessary vehicle, equipment, and personnel to conduct the Reconnaissance. You must completely and thoroughly conduct the reconnaissance identifying all necessary information to successfully brief the convoy on the chosen route.

Note: None

Performance Steps

1. Conduct reconnaissance preparations.
 - a. If convoy route has already been selected, obtain overlay information from commander or battalion Operations and Training Officer (S-3). If not, obtain guidance from commander/operations order (OPORD).
 - b. Select personnel, vehicles, and equipment involved in reconnaissance effort and provide this information to the commander prior to departure.
 - c. Conduct a map reconnaissance of selected route.
 - d. Select a tentative route (if not selected by S-3) based on the following:
 - (1) Time/Distance factors.
 - (2) Current and expected enemy activities.
 - (3) Availability of security forces.
 - (4) Fire support along the selected route.
 - (5) Trafficability of roadbed.
 - (6) Restrictions of transporting hazardous cargo through populated areas.

(7) Tentative checkpoints.

(8) Determine possible critical points and ambush sites. If available, contact the Division Transportation Officer (DTO) or servicing Movement Control Team (MCT) through whose area the convoy will pass.

(9) Possible fording locations.

(10) Built-up areas along the route.

(11) Availability of alternate route(s).

e. Establish communications with unit prior to departure.

f. Contact units through whose area (in the combat zone) the convoy will pass.

2. Conduct road reconnaissance.

a. Record the following information on the map.

(1) Indicate the location for scheduled halts.

(2) Draw in a bypass or alternate route.

(3) Indicate the location of problem areas along the route.

(4) Indicate release point.

b. Verify and record the following information from map reconnaissance.

(1) Critical/check points along the route.

(2) Condition of roadbed (will it support the convoy traffic)?

(3) Location of any halt areas.

(4) Defiles and ambush sites.

(5) Condition of major intersections.

(6) Condition of bridges.

3. Progress along route at established convoy speed to track/verify timeline.

4. Conduct closure procedures upon completion of road reconnaissance.

a. Mark the following points on the map and overlay.

(1) Start point.

(2) Release point.

(3) Check point.

(4) Critical points.

(5) Halt areas.

(6) Alternate route.

(7) Problem areas.

b. Relay route information to higher headquarters (in accordance with SOP). This should include:

(1) Condition of roadbed.

(2) Location of any halt areas.

(3) Condition of major intersections and bridges.

(4) Defiles and ambush sites.

(5) Report current enemy force activity along route.

(6) Bypass or alternate route selected.

5. If engineer support is available, request support to repair roadway or bridge(s) as needed.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Conducted reconnaissance preparations.	_____	_____
2 Conducted road reconnaissance.	_____	_____
3 Conducted closure procedures upon completion of road reconnaissance.	_____	_____

Evaluation Guidance: None

References

Required

FM 3-34.170 ENGINEER RECONNAISSANCE

Primary

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

Subject Area 23: Hazardous Cargo Transportation
551-88M-3700
Manage Transportation of Hazardous/Sensitive Cargo

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of hazardous materials being transported.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are operating and the materials you are transporting. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the handling instructions of materials being transported. You must ensure damage to equipment or injury to personnel does not occur.

Conditions: Given military or commercial transportation assets, equipment, documentation, Code of Federal Regulation (CFR) 49, Air Force Regulation (AFR) 71-4, Department of Defense (DD) Form 626, and other applicable regulations for cargo being shipped.

Standards: You must ensure the shipment of hazardous or sensitive cargo is in compliance with government, state and local laws, regulations, and policies.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your unit has been tasked to deliver hazardous cargo. As a transportation supervisor you are tasked with ensuring that it is accomplished. You are Given military or commercial transportation assets, equipment, documentation, Code of Federal Regulation (CFR) 49, Air Force Regulation (AFR) 71-4, Department of Defense (DD) Form 626, and other applicable regulations for cargo being shipped.

Note: None

Performance Steps

1. Review documentation to determine the amount of hazardous, classified, and sensitive cargo due into the unit.
2. Ensure security facilities and procedures are adequate for the volume of cargo and type of cargo.
3. Ensure personnel are properly trained/certified to handle or transport specific cargo.
4. Ensure that personnel handle and stow cargo in accordance with CFR 49 and local directives to prevent spillage, breakage, and shifting of cargo.

5. Adhere to cargo compatibility rules identified in CFR 49.
6. Ensure hazardous cargo containers are not damaged or leaking.
7. Ensure that shipper inspects vehicles using DD Form 626 before vehicles are loaded or unloaded.
8. Brief drivers and operators on safety requirements and emergency procedures for hazardous, classified, and sensitive cargo. Use DD Form 836.
9. Maintain accountability of all cargo through frequent checks of documentation and cargo seals.
10. Establish follow-up procedures (for example, verify signature on tally record or cargo manifest) to ensure the proper consignee receives the cargo.
11. Report any security violations such as theft or loss during the transport of classified and sensitive cargo to the command security manager.
12. Select appropriate transportation plan in accordance with AR 380-5 to protect classified and sensitive material.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Reviewed documentation to determine the amount of hazardous, classified, and sensitive cargo due into the unit.	_____	_____
2. Ensured security facilities and procedures are adequate for the volume of cargo and type of cargo.	_____	_____
3. Ensured personnel are properly trained/certified to handle or transport specific cargo.	_____	_____
4. Ensured that personnel handled and stowed cargo in accordance with CFR 49 and local directives to prevent spillage, breakage, and shifting of cargo.	_____	_____
5. Adhered to cargo compatibility rules identified in CFR 49.	_____	_____
6. Ensured hazardous cargo containers were not damaged or leaking.	_____	_____
7. Ensured that shipper inspects vehicles using DD Form 626 before vehicles were loaded or unloaded.	_____	_____
8. Briefed drivers and operators on safety requirements and emergency procedures for hazardous, classified, and sensitive cargo. Used DD Form 836.	_____	_____
9. Maintained accountability of all cargo through frequent checks of documentation and cargo seals.	_____	_____
10. Established follow-up procedures (for example, verify signature on tally record or cargo manifest) to ensure the proper consignee received the cargo.	_____	_____

Performance Measures	GO	NO GO
11. Reported any security violations such as theft or loss during the transport of classified and sensitive cargo to the command security manager.	_____	_____
12. Selected appropriate transportation plan in accordance with AR 380-5 to protect classified and sensitive material.	_____	_____

Evaluation Guidance: None

References

Required

Primary

AR 380-5 DEPARTMENT OF THE ARMY
INFORMATION SECURITY PROGRAM

ATP 4-11 ARMY MOTOR TRANSPORT
OPERATIONS

CFR 49 Title 49-Transportation

DD FORM 626 MOTOR VEHICLE INSPECTION
(TRANSPORTING HAZARDOUS MATERIALS)

DD FORM 836 DANGEROUS GOODS SHIPPING
PAPER/DECLARATION AND EMERGENCY
RESPONSE INFORMATION OF HAZARDOUS
MATERIALS TRANSPORTED BY
GOVERNMENT VEHICLES/
CONTAINERS/VESSELS

DOD 4500.9-R, PART III Defense Transportation
Regulation, Part III, Mobility

FM 55-60 ARMY TERMINAL OPERATIONS

TC 4-13.17 CARGO SPECIALISTS` HANDBOOK

Subject Area 24: Heavy Equipment Transport (HET) Operations

551-88M-3346

Unload Able/Disabled Tracked/Wheeled Vehicle from a Heavy Equipment Transporter**DANGER**

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment you are operating.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are operating. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As a heavy vehicle operator, given a coupled HET with before-operational maintenance performed, assistance from other crew members, chock blocks, vehicle and semitrailer basic issue items (BII), and an able/disabled tracked or wheeled vehicle payload.

Standards: You will supervise the safe completion of the unloading operation of an able/disabled tracked/wheeled vehicle from your HET semitrailer without injury to personnel, damaging the vehicle payload, semitrailer, or physical surroundings.

Special Condition: This task requires at least two persons.

Special Standards: None

Special Equipment: None

Cue: You have arrived at your destination with your able/disabled track vehicle loaded on your HET. You must ensure that it is unloaded without injury to personnel, damage to the vehicle payload, semitrailer, or physical surroundings.

Note: None

Performance Steps

1. Supervise preparation of Heavy Equipment Transporter System (HETS) for unloading operation.
 - a. Ensure operator positions HET on level ground or within 10 percent offset or 10 degrees difference between tractor and semitrailer. Follow hand and arm signals from ground guide.
 - b. Ensure operator chocks vehicle and semitrailer wheels as needed.
 - c. Ensure operator adheres to all WARNING and CAUTION statements listed in technical reference for this operation.

2. Supervise Unloading of able tracked/wheeled vehicle payload from HET.

a. Ensure operator refers to TM 9-2330-381-13.

b. Ensure operator adheres to all WARNING and CAUTION statements in the reference manual for this operation.

3. Supervise unloading disabled tracked/wheeled vehicle payload from HET.

a. Ensure operator refers to TM 9-2330-381-13 for detailed procedures in unloading disabled vehicle payload.

b. Ensure operator adheres to all WARNING and CAUTION statements in the reference manual for this operation.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Supervised preparation HETS for unloading operation.	_____	_____
2 Supervised correct unloading of able tracked/wheeled vehicle payload from HET.	_____	_____
3 Supervised correct unloading of disabled tracked/wheeled vehicle payload from HET.	_____	_____

Evaluation Guidance: None

References

Required

Primary

TM 9-2320-360-10 OPERATORS MANUAL FOR TRUCK, TRACTOR, M1070, 8X8, HEAVY EQUIPMENT TRANSPORTER (HET) (NSN 2320-01-318-9902) (EIC: B5C) (REPRINTED W/BASIC INCL C1-3)

TM 9-2330-381-13 OPERATOR AND FIELD MAINTENANCE MANUAL FOR SEMITRAILER, TRANSPORTER, HEAVY EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON EM 0049)

551-88M-3345

Load Able/Disabled Tracked/Wheeled Vehicle onto a Heavy Equipment Transporter

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment.

WARNING

WARNING: Load semitrailer on level ground whenever possible. In adverse conditions, loading can be done on grades up to 10 percent with a maximum offset angle of 10 degrees between tractor and semitrailer. Avoid exceeding these limitations to prevent payload from rolling on semitrailer and causing serious injury to personnel and damage to equipment.

WARNING: Due to semitrailers being outfitted with various chains (1/2-inch and/or 3/4-inch link sizes), all chains must be inventoried in the platform storage compartment prior to placing chains on platform. Once chains are inventoried, read and familiarize yourself with the information in steps (20) (a) thru (h) to determine tiedown needed to properly secure the payload or injury to personnel and damage to equipment may result.

WARNING: Two spotters are required for loading and unloading operations. The payload operator must know the position of spotters at all times or injury to personnel may result.

WARNING: Do not position a spotter on gooseneck if payload is to be backed onto semitrailer platform or injury to personnel may result.

WARNING: Unnecessary personnel must stand well clear of the vehicles, especially behind the payload (engine/turbine exhaust) during loading operations. At no time during any loading operation while the payload is moving should personnel be on the semitrailer platform. The payload operator must drive the payload slowly up the loading ramps and onto the platform or injury to personnel and damage to equipment may result.

WARNING: Payload adjustments, side to side (turning), must be kept to a minimum or serious injury to personnel and damage to equipment may result.

WARNING: Failure to set the payload parking brake could allow the payload to roll backward causing injury to personnel and damage to equipment.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: Given an able/disabled tracked/wheeled vehicle for loading onto HET, HET basic issue items (BII), a coupled HET with pre-operational maintenance checks performed, assistance from other crew members, and level ground to conduct loading operations. Special Conditions: Two-person operation. Assistance from another crew member is required.

Standards: You will supervise the completion of the loading operation of an able/disabled tracked/wheeled vehicle, position vehicle properly, and secure vehicle to prevent movement during

transport. Ensure that all procedures are accomplished safely without injury to personnel, damage to HET, or vehicle payload.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: Your Unit is called to transport an M1A2 Abrams Tank which would require you to be trained to transport a tracked/wheeled vehicle for loading onto the HET, you have all HET basic issue items (BII), a coupled HET with pre-operational maintenance checks performed, assistance is available from other crew members, and level ground to conduct loading operations. This is a minimum of a Two-person operation.

Note: None

Performance Steps

1. Supervise preparation of Heavy Equipment Transporter System (HETS) for loading operation.
 - a. Ensure operator positions HET on level ground or within 10 percent offset or 10 degrees difference between tractor and semitrailer. Follow hand and arm signals from ground guide.
 - b. Ensure operator chocks vehicle and semitrailer wheels as needed.
 - c. Ensure operator adheres to all WARNING and CAUTION statements listed in technical reference for this operation.
2. Supervise Loading able tracked/wheeled vehicle payload.
 - a. Ensure operator refers to TM 9-2330-381-13.
 - b. Ensure operator adheres to all WARNING and CAUTION statements in the reference manual for this operation.
3. Supervise loading disabled tracked/wheeled vehicle payload.
 - a. Ensure operator refers to TM 9-2330-381-13 detailed procedures in unloading vehicle payload.
 - b. Ensure operator adheres to all WARNING and CAUTION statements in the reference manual for this operation.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Supervised preparation of Heavy Equipment Transporter System (HETS) for loading operation.	_____	_____
2. Supervised loading able tracked/wheeled vehicle payload.	_____	_____
3. Supervised loading disabled tracked/wheeled vehicle payload.	_____	_____

Evaluation Guidance: None

References

Required

Primary

FM 21-60 Visual Signals

TC 21-305-9 TRAINING PROGRAM FOR THE
HEAVY EQUIPMENT TRANSPORTER SYSTEM

TM 9-2320-360-10 OPERATORS MANUAL FOR
TRUCK, TRACTOR, M1070, 8X8, HEAVY
EQUIPMENT TRANSPORTER (HET) (NSN 2320-
01-318-9902) (EIC: B5C) (REPRINTED W/BASIC
INCL C1-3)

TM 9-2330-381-13 OPERATOR AND FIELD
MAINTENANCE MANUAL FOR
SEMITRAILER, TRANSPORTER, HEAVY
EQUIPMENT 70 TON, M1000 (NSN 2330-01-303-
8832) (EIC: CXU) (THIS ITEM IS INCLUDED ON
EM 0049)

Skill Level SL4
Subject Area 25: Motor Pool Management
551-88M-4320
Manage Operator Training Program

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment you are Training/operating.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are training/operating. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: In an operational environment, reassigned as a noncommissioned officer in charge (NCOIC) of an established battalion driver-training program. Given an established driver training course of instruction, instructor and examiner cadre, driver candidates, driving record documentation for each candidate, qualification records for cadre, driver training area complete with organic vehicles used for training, and complete facilities for classroom instruction and ranges.

Standards: Manage the driver-training program and verify instructors and examiners are qualified and certified to teach and test driver candidates. Coordinate with company truckmasters for driver candidates, and ensure all driver candidates are fully qualified to start the driver training by appropriate interview process and selection. Issuance of driver's licenses must be given in accordance with AR 600-55, all driver candidates that fail driver training or are not qualified to start training are counseled.

Special Condition: Some iterations of this task should be performed in MOPP4.

Special Standards: Certified in writing by commander as an instructor. Qualified to operate, without restrictions, on all the vehicles used in training. Appointed by commander to train or instruct.

Special Equipment: MOPP4

Cue: You have been reassigned as noncommissioned officer in charge (NCOIC) of an established battalion driver-training program. Given an established driver training course of instruction, instructor and examiner cadre, driver candidates, driving record documentation for each candidate, qualification records for cadre, driver training area complete with organic vehicles used for training, and complete facilities for classroom instruction and ranges.

Note: None

Performance Steps

1. Verify all driver training cadre are fully qualified and certified by the commander to train or instruct.
 - a. All instructors and assistant instructors must be qualified and licensed to operate vehicles/equipment used in training.
 - b. All instructors and assistant instructors are appointed in writing by commander to train or instruct on an authorized type of vehicle.
 - c. Test examiners must be qualified in proper driving techniques and completely impartial in all examination procedures.
 - d. Instructors have appropriate instructor experience.
 - e. Instructors have adequate technical knowledge.
 - f. Instructors have the personality and desire to instruct.
2. Verify that DA Form 348 (Equipment Operator's Qualification Record (Except Aircraft) or DA Form 5984-E (Operator's Permit Record)(automated) is completed properly for each driver or driver candidate (if duties are assigned).
 - a. Review all driving records on file annually for:
 - (1) Safety awards.
 - (2) Expiration of permits.
 - (3) Accidents and moving traffic violations.
 - (4) Remedial, required, or refresher training.
 - (5) Re-examination.
 - (6) License suspension.
 - b. Issue new DA Form 348 or DA Form 5984-E (automated) when individual is first examined.
 - c. All DA Forms 348 are original (cannot be photocopied).
 - d. When individuals are transferred or released from regular driver or operator duties, ensure all the following information has been properly posted on DA Form 348 or DA Form 5984-E (automated):
 - (1) Information on official qualifications.
 - (2) Background and experience.
 - (3) Examination findings.
 - (4) Performance record.
 - (5) Driver or operator awards.
3. Ensure preparations are made for driver training and testing.

a. Coordinate with company truckmasters/first sergeants for driver candidates.

b. Instructors interview all driver candidates (if duties include as assigned) should consider the following areas (in accordance with AR 600-55, paragraph 5-1, subparagraph c).

(1) Maturity.

(2) Attitude.

(3) Past driving record.

(4) Hearing.

(5) Extreme nervousness.

(6) Any abnormal characteristics.

(7) Medication, if used on regular basis.

c. Cadre check with appropriate medical personnel regarding doubts or concerns about medications that are taken by driver candidates on a regular basis.

d. Verify individual possesses a valid state driver's license, if candidate is to operate vehicle off-post and that will not expire prior to completion of training.

e. Instructors counsel those driver candidates that fail the interview process.

f. Instructors, assistant instructors, and other cadre prepare all facilities, equipment, training materials, vehicles, ranges, and testing area prior to start of training.

(1) Facilities. Ensure classrooms for training and testing, driving ranges and maneuver stations, motor park for storage of vehicles and preventive maintenance, and maintenance shop are ready and will support training load.

(2) Training materials. Ensure all training materials to include lesson plans, slide material, applicable training circulars (TC), Army regulations (AR), Field Manuals (FM), Technical Manuals (TM) or student handouts are up to date, and structured to contain lesson Terminal Learning Objectives (TLOs) that are relevant, understandable, and obtainable.

(3) Testing materials. All copies are legible and accounted for and custody of examination materials are controlled to prevent unauthorized access or loss. Storage of all exam materials must be in accordance with AR 611-5.

(4) Training aids. All training aids are present and in good working condition (as applicable).

(5) Personnel. All driver training cadre (instructors/assistant instructors/examiners/other support personnel) duties are assigned and personnel have a clear understanding of their duties and are ready for training.

4. Confirm driver candidates, prior to issuance of OF Form 346 (U.S. Government Motor Vehicle Operator's Identification Card) or DA Form 5984-R (automated) (learners permit), receive instruction and evaluation in the following areas:

a. Ensure that each subject lesson has a task, condition, and standard that complies with AR 600-55 and the applicable training circular for the vehicle is being used for training.

b. Vehicle or equipment orientation.

c. Safety briefing to include driver attitude.

d. Local laws and road conditions.

e. Emergency procedures.

f. Physical evaluation measures.

5. Verify that drivers receive instruction on hazardous material (HAZMAT) (as required).

NOTE: At a minimum, military vehicle operators must receive training in the following areas.

a. Definition of hazardous materials.

b. Placarding requirements.

c. Handling (loading and unloading) hazardous materials.

d. Regulations and procedures pertaining to transporting hazardous materials.

e. Operation of emergency equipment to include fire extinguishers.

f. Forms and records (includes accident reporting).

g. Blocking and bracing.

h. Emergency response procedures (for example, spillage).

i. Vehicle parking rules.

j. Route selection.

k. Host nation requirements (if applicable).

6. Ensure proper issue of learners' permits.

a. Verify that all candidates have received required training prior to issue.

b. Verify candidate information is correct on OF Form 346 or DA Form 5984-E learner's permit.

c. Verify presence of commander's signature on OF Form 346 or DA Form 5984-E.

d. Annotate ledger with (as issuing authority):

(1) Date of issue.

(2) Expiration date.

(3) Permit number (first letter of the last name and last four digits of social security number [SSN] of licensee).

(4) Name and SSN of licensee.

(5) Type of equipment qualified to operate.

(6) Remarks.

(7) If automated, will include all information stated above.

7. Confirm continuation of driver training in the following areas:

- a. Publications and blank forms.
- b. Vehicle inspection and preventive maintenance checks and services.
- c. Accident avoidance.
- d. Military convoy operations to include night driving.
- e. Off-road operations.
- f. Self-recovery methods.
- g. Operation of vehicle at driving range as set up by local commands.

8. Ensure driver testing is conducted in the following areas:

- a. Written examination - Candidate must pass to continue with testing.
- b. PMCS examination - Candidate must pass to continue with testing.
- c. Road test - Candidate must pass.
- d. Maintain custody of examination materials in accordance with AR 611-5, Chapter 2.

9. Ensure conduct of remedial driver training.

- a. For drivers of at-halt accidents.
- b. Traffic violations.
- c. Misuse of vehicle.
- d. Other demonstrated need for additional training.

Evaluation Preparation:

None

Performance Measures

1. Verified all driver training cadre were fully qualified and certified by the commander to train or instruct.

GO **NO GO**

Performance Measures	GO	NO GO
2. Verified that DA Form 348 or DA Form 5984-E was completed properly for each driver candidate.	_____	_____
3. Ensured preparations were made for driver training and testing.	_____	_____
4. Confirmed driver candidates, prior to issuance of OF Form 346 (US Government Motor Vehicle Operator's Identification Card) or DA Form 5984-R (automated)(learners permit), received instruction and evaluation in required areas.	_____	_____
5. Ensured that drivers received instruction on HAZMAT (as required).	_____	_____
6. Ensured proper issue of learner's permits.	_____	_____
7. Confirmed continuation of driver training in the required areas.	_____	_____
8. Ensured driver testing was conducted in the following areas:	_____	_____
9. Ensured conduct of remedial driver training.	_____	_____

Evaluation Guidance: None

References Required

Primary

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

AR 600-55 THE ARMY DRIVER AND OPERATOR STANDARDIZATION PROGRAM (SELECTION, TRAINING, TESTING, AND LICENSING)

AR 611-5 PERSONNEL AND CLASSIFICATION TESTING

DA FORM 2404 EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

DA FORM 2408-14 UNCORRECTED FAULT RECORD

DA FORM 348 Equipment Operators Qualification Record (Except Aircraft)

DA FORM 5984-E OPERATORS PERMIT RECORD (EGA)

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Required

OF FORM 346 US Government Motor Vehicle
Operator's Identification Card.

Primary

Subject Area 26: Convoy Planning and Operation
551-88M-4401
Manage a Convoy Manifest

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As an operations sergeant or platoon sergeant given the requirement to conduct a convoy for combat operations. Given the higher headquarters operation order, commander's guidance, and a list of available vehicles, personnel, equipment and cargo.

Standards: You will complete the convoy manifest in accordance with the mission received and provide all copies as needed.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as an operations sergeant or platoon sergeant given the requirement to conduct a convoy for combat operations. Given the higher headquarters operation order, commander's guidance, and a list of available vehicles, personnel, equipment and cargo.

Note:None

Performance Steps

1. Ensure initial WARNO includes convoy manifest which has detailed information for combat to include:

- a. Convoy number, if assigned.
- b. Unit.
- c. Call sign for each vehicle.
- d. March Order.
- e. Convoy Commander.

f. Date.

g. Personnel Last Name, First Name, and Rank.

h. Communications.

i. Key equipment/cargo.

j. Tasks to be performed.

2. Retain a copy of manifest and file one with company headquarters (HQs).

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Ensure initial WARNO includes convoy manifest which has detailed information for combat that included:	_____	_____
2 Retained a copy of manifest and filed one copy with company headquarters (HQs).	_____	_____

Evaluation Guidance: None

References

Required

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Primary

551-88M-4333

**Coordinate External Support Requirements to Support a Transportation Battalion
OPLAN/OPORD/CONOP**

DANGER

Adhere to all Danger statements in reference to the Technical Manuals to ensure you are aware of the possible dangers involving the different types of equipment and operations involved.

WARNING

Adhere to all Warning statements referenced in the Technical manuals for the type of equipment being utilized. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: You will coordinate support requirements for your unit based on the truck battalion operations plan/operations order (OPLAN/OPORD). Given the necessary information on what type of support is needed and a pen or pencil. Given the higher headquarters operation order and commander's guidance.

Standards: You must coordinate support by correctly requesting the type of support needed to accomplish the mission identified.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are newly assigned to work in the Support operation office at your Battalion. You will coordinate support requirements for your unit based on the truck battalion operations plan/operations order (OPLAN/OPORD). Given the necessary information on what type of support is needed and a pen or pencil. Given the higher headquarters operation order and commander's guidance.

Note: None

Performance Steps

1. Review higher headquarters OPORD and commander's guidance.
 - a. Review the situation, mission, and concept of operations to determine support requirements for the operation.
 - b. Determine date and time the support is needed.
 - c. Determine location where the support is needed.
 - d. Determine type of support required.

- e. Review enemy and friendly forces paragraph.
- 2. Ensure that requested support is adequate to meet the needs of the mission.
- 3. Follow up on the request to ensure support is available.
- 4. Incorporate support needed into the OPLAN/OPORD.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Reviewed OPORD and commander's guidance to determine support requirements.	_____	_____
2 Ensured that requested support is adequate.	_____	_____
3 Followed up on the request to ensure support is available.	_____	_____
4 Incorporated support needed into the OPLAN/OPORD.	_____	_____

Evaluation Guidance: None

References

Required

ADP 5-0 THE OPERATIONS PROCESS

Primary

AR 25-50 Preparing and Managing Correspondence

551-88M-4334

Conduct Transportation Battalion Support Operations**DANGER**

Adhere to all Danger statements in reference to Technical Manuals and regulations to ensure you are aware of the possible dangers involved.

WARNING

Adhere to all Warning statements referenced in the Technical manuals for the type of equipment utilized. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: You have been assigned as the truckmaster, given ATP 4-11 and a requirement to conduct company motor transport operations under the supervision of the company commander.

Standards: You will conduct motor transport company operation and ensure each job area of moving vehicles, personnel accountability, vehicle status, and maintenance of vehicles is properly executed.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You have been assigned as the truckmaster, given ATP 4-11 and a requirement to conduct company motor transport operations under the supervision of the company commander.

Note: None

Performance Steps

1. Review and prepare operations SOPs.
2. Maintains visibility over all employed company assets and personnel and current roadnet data.
3. Maintains operational readiness data for all platoons in the company.
4. Maintains operational records and statistical reports.
5. Conducts liaison with supported units.
6. Inspects operational and unit dispatch areas.
7. Establishes procedures for dispatching and security.
8. Maintains centralized operational control over subordinate platoons.

- 9. Studies plans and operations continuously and prepares estimates, plans, and directives.
- 10. Receives requests for motor transport support (commitments).
- 11. Assigns workloads and specific operational tasks to subordinate platoons.
- 12. Maintains contact and exchanges information with security and intelligence personnel of higher and adjacent units.
- 13. Makes security inspections.
- 14. Requests road clearance for convoys and movement of oversize loads.
- 15. Advises the commander on operational, security, and training matters.
- 16. Assesses unit environmental risk assessments and advises the commander on their status and outcome.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1. Reviewed and prepared operations SOPs.	_____	_____
2. Maintained visibility over all employed company assets and personnel and current roadnet data.	_____	_____
3. Maintained operational readiness data for all platoons in the company.	_____	_____
4. Maintained operational records and statistical reports.	_____	_____
5. Conducted liaison with supported units.	_____	_____
6. Inspected operational and unit dispatch areas.	_____	_____
7. Established procedures for dispatching and security.	_____	_____
8. Maintained centralized operational control over subordinate platoons.	_____	_____
9. Studied plans and operations continuously and prepared estimates, plans, and directives.	_____	_____
10. Received requests for motor transport support (commitments).	_____	_____
11. Assigned workloads and specific operational tasks to subordinate platoons.	_____	_____
12. Maintained contact and exchanged information with security and intelligence personnel of higher and adjacent units.	_____	_____
13. Made security inspections.	_____	_____

Performance Measures

	GO	NO GO
14. Requested road clearance for convoys and movement of oversize loads.	_____	_____
15. Advised the commander on operational, security, and training matters.	_____	_____
16. Assessed unit environmental risk assessments and advised the commander on their status and outcome.	_____	_____

Evaluation Guidance: None

References

Required

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Primary

Subject Area 27: Motor Transport Management
551-88M-4323
Manage Transportation Operations

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manual to ensure you are aware of the possible dangers involving the different types of equipment being operated.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are PMCSing. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: You have been assigned duties as the company truckmaster. Your unit has established a tactical motor pool site for mission support. You are provided with company assets consisting of unit vehicles, assigned operators, support from company platoon sergeants and their platoons, and company maintenance section. Facilities have been erected to support motor pool operations. Communication has been established between company headquarters and the motor pool. Mission commitments and perimeter defense plans are provided.

Standards: You must manage motor pool operations to facilitate mission support. You will ensure your maintenance and dispatch operations are effective and you will accurately account for vehicle movement and accountability and mission readiness. All necessary vehicle status reporting will be according to regulation and unit standing operating procedure (SOP). Perimeter security must be enforced.

Special Condition: Some iterations of this task should be performed in MOPP4.

Special Standards: None

Special Equipment: MOPP4

Cue: You have been assigned duties as the company truckmaster. Your unit has established a tactical motor pool site for mission support. You are provided with company assets consisting of unit vehicles, assigned operators, support from company platoon sergeants and their platoons, and company maintenance section. Facilities have been erected to support motor pool operations. Communication has been established between company headquarters and the motor pool. Mission commitments and perimeter defense plans are provided.

Note: None

Performance Steps

1. Enforce safety and environmental guidelines.
 - a. Ensure safety precautions are implemented and understood.

-
- (1) During preventive maintenance.
 - (2) During refueling operations.
 - (3) During vehicle movement within the motor pool.
 - (4) Ensure adherence to establish no smoking areas.
- b. Spot-check locations around motor pool to ensure platoons are complying with established safety rules while working in and around vehicles or equipment.
 - c. Ensure every effort is made to reduce or eliminate damage to environment.
 - (1) Ensure that all petroleum, oils, and lubricants (POL) products are stored in designated storage areas.
 - (2) Ensure that spillage is recovered immediately.
 - d. If so stated in unit SOP, ensure that drip pans are placed under vehicles when parked.
 - e. Enforce the use of ground guides in motor pool.
 - f. Enforce the speed limits.
2. Enforce occupation and traffic plans for motor pool operations.
 - a. Coordinate with platoons to ensure that traffic plan is adhered to.
 - b. Designate entry and exit points.
 - c. Designate emergency exits and guidelines for using them.
 3. Coordinate for mission support:
 - a. With platoon leaders and platoon sergeants for available vehicles.
 - b. With platoon leaders and platoon sergeants for available vehicle operators.
 - c. With maintenance sergeant for status of vehicles due maintenance or service.
 4. Oversee dispatching and commitment of company vehicles.
 - a. Match available company assets to commitment requirements.
 - (1) Determine vehicle load requirements.
 - (2) Formulate each commitment into convoy movement plans as appropriate.
 - b. Ensure that platoons load and secure all cargo that is to be moved from motor pool on commitment (applicable).
 - c. Ensure that all personnel involved in each commitment are briefed on requirements.

- d. Ensure convoy leaders are briefed and have convoy route information as well as latest threat information.
 - e. If road clearances are required, coordinate with company headquarters for clearance in advance of the need. This applies to route restrictions as well as oversized loads.
 - f. Inform company commander of vehicle status on a daily basis or as often as SOP dictates.
5. Enforce preventive maintenance procedures.
- a. Ensure all inspection worksheets are available, completed properly, and turned in to maintenance section (if necessary) at completion of maintenance inspection.
 - b. Check driver maintenance through platoon sergeants or squad leaders.
 - c. Check with maintenance sergeant for the repair of vehicles requiring services beyond driver's ability.
6. Enforce security and defense procedures.
- a. Movement security.
 - (1) Ensure that loads, including classified loads, are provided security prior to departure.
 - (2) Coordinate with platoons for personnel to provide convoy security.
 - (3) Coordinate with company headquarters for security support.
 - b. Perimeter security. Coordinate with platoons for personnel to occupy defensive positions.
 - c. Review company SOP to ensure that provisions are present to man and secure motor pool area during normal operations and during enemy attack.
 - d. Maintain communications and communications security (COMSEC) with company headquarters and between vehicles on commitment and motor pool operations.
 - e. Ensure cover and concealment techniques are maximized.
 - (1) Cover glass and mirrors.
 - (2) Use camouflage screen and support systems.
 - (3) Enforce use of local vegetation and existing natural cover whenever possible.
 - (4) Disperse vehicles and platoons as much as possible and still maintain security.

Evaluation Preparation:

None

Performance Measures

1 Enforced safety and environmental guidelines.

GO **NO GO**

Performance Measures

	GO	NO GO
2 Enforced occupation and traffic plans for motor pool operations.	_____	_____
3 Coordinated for mission support.	_____	_____
4 Oversaw dispatching and commitment of company vehicles.	_____	_____
5 Enforced preventive maintenance procedures.	_____	_____
6 Enforced security and defense procedures.	_____	_____

Evaluation Guidance: None

References

Required

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

Primary

DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual.

551-88M-4325
Establish Transportation Safety Program

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manuals to ensure you are aware of the possible dangers involving the different types of equipment that is being utilized.

WARNING

Adhere to all Warning statements referenced in the Technical manuals for the types of equipment. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: Given available and existing safety guidelines and references the truckmaster will create a motor safety transport program in a tactical environment during day and night conditions to prepare Soldiers for a variety of environments, situations, and obstacles (including fire, convoy operations, and adverse environmental conditions).

Standards: You will review available and existing safety guidelines and determine what (if any) changes needed to be made. You will provide guidance on fire prevention, vehicle operations, general safety, security, environmental protection (adverse conditions), asphyxiation, transport of hazardous material, convoy operations, personnel movement, and risk management based on accident reports, Army regulations, driver proficiency, and suggested areas. You will submit recommendations to unit commander for approval.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned to a new unit as the Truckmaster. You are given available and existing safety guidelines and references you will create a motor safety transport program in a tactical environment during day and night conditions to prepare Soldiers for a variety of environments, situations, and obstacles (including fire, convoy operations, and adverse environmental conditions).

Note: None

Performance Steps

1. Review available and existing safety guidelines.
 - a. Existing local company and battalion standing operating procedure (SOP).
 - b. Applicable regulations including AR 385-10 and ATP 4-11.
2. Suggest changes to safety guidelines and operations based on:

-
- a. Accident Reports.
 - b. Army regulations.
 - c. Driver proficiency/evaluation reports.
 - d. Provide guidance on:
 - (1) Fire Prevention.
 - (a) Permit smoking only in designated areas.
 - (b) Never permit smoking within 50 feet of vehicles or stored flammables or within applicable ammunition guidelines.
 - (c) Never use gasoline as a cleaning solution.
 - (d) Train personnel to properly use fire extinguishers.
 - (e) Vehicles transporting explosives will be equipped with two fire extinguishers that are appropriate for the type of explosive being transported.
 - (f) No smoking while operating any government vehicle.
 - (g) Refueling vehicles will be properly grounded when parked, and grounded and bonded when refueling.
 - (h) All refueling vehicles will have the fire extinguisher un-mounted and at point of use during refueling operations.
 - (2) Vehicle Operations.
 - (a) Use ground guides whenever a vehicle is being moved in the motor pool or company operational location.
 - (b) Use two ground guides when backing a vehicle.
 - (c) Ground guides and vehicle operators must be visible to each other at all times. The front ground guide must be visible to the driver at all times.
 - (d) Ground guides must know the proper hand and arm signals.
 - (e) Ground guides must never stand between a moving vehicle and a stationary object.
 - (f) When ground guiding at night, guide will have a clearly observable flashlight or chemical light that can be seen by vehicle operator (when tactically permitted). When direct line of sight is broken, driver will halt vehicle immediately.
 - (g) Do not leave vehicles unattended with the engine running.
 - (h) Make no mention of tracked vehicles. Placement of personnel during transport with respect to cargo loads will be reflective of Unit Commanders guidance, and Army regulations.

(i) Use personnel safety straps when transporting personnel in vehicle cargo beds.

(j) Personnel will only be transported in vehicles equipped with fixed troop seating in the cargo area.

(k) Use seat belts when the vehicle is so equipped.

(l) Only properly licensed drivers will start and operate vehicles.

(m) Drivers will not be assigned to drive for more than 10 continuous hours, nor will the combined duty period exceed 12 hours in any 24-hour period without at least 8 consecutive hours of rest.

(n) If more than 10 hours are needed to complete operations, a qualified assistant driver must be assigned to each vehicle.

(o) Drivers will take 15-minute rest breaks every 2 to 3 hours of driving or every 100 to 150 miles, whichever occurs first.

(p) With the exception of hearing protection, the use of headphones or earphones while driving Army motor vehicles is prohibited.

(q) All vehicle or equipment operators will strictly adhere to ALL WARNING and CAUTION statement in the respective technical manual (TM).

(3) General Safety.

(a) Do not permit horseplay.

(b) Use hearing protection in areas with high noise levels.

(c) Secure loose parts, tools and loads before vehicle movement.

(4) Security.

(a) Harden vehicles with at least double interlocking layer of sandbags (there are additional hardening measures listed in TC 21-305-20). Hardening of vehicle also depends on availability of materials and type of vehicles used.

(b) Camouflage and concealment will be maximized when vehicle(s) are parked in company areas (tactical).

(c) All vehicle shiny areas such as mirrors, windows will be covered when vehicle is parked for extended periods (tactical).

(d) All sensitive items will be accounted for by platoon leadership before and after all missions. Platoons will designate location and person accountable for ensuring proper security. Missing sensitive items will be reported to Chain-of-Command IMMEDIATELY.

(e) All platoons will occupy perimeter defensive locations upon occupation of platoon-designated areas within the company operational area (tactical).

(f) All platoons will report to company operations upon return to company area.

(g) Spacing and arrangement of parked vehicles will provide ready access and fire lanes.

(5) Environmental Protection (Adverse Environmental/Terrain Conditions).

(a) Turn in used or contaminated petroleum, oils, and lubricants (POL) products through the maintenance section/designated disposal point.

(b) Keep the entire area highly policed.

(c) Protect waste oil storage from contamination and entry into local water source.

(d) Ensure that vehicles are equipped and maintained (good tires, lights, wipers, and chains) to cope with potential adverse conditions.

(e) Ensure that drivers know and follow established emergency procedures in case of vehicle rollover.

(6) Asphyxiation.

(a) Vehicle inspections will highlight any exhaust leakage. Do not idle engines any longer than absolutely necessary or unless used for operation of materials handling equipment (MHE).

(b) Sleeping in parked vehicles with the engine or heater running is prohibited.

(7) Transport of Hazardous Material.

(a) All drivers tasked with transporting hazardous material will be trained and certified to do so. They must have certification card on their person.

(b) Bilingual placards that comply with Part 171, Title 49, Code of Federal Regulation will be placed on all sides of transports of hazardous materials. Loads will be blocked and braced to prevent shifting.

(c) Drivers will follow a preplanned route that minimizes exposure in densely populated areas and park in areas where exposure to inhabited buildings and public gatherings is limited.

(d) (Not necessary in tactical environment.) No person(s) will be allowed to ride on or in the cargo compartment of a vehicle transporting hazardous materials.

(e) Explosives will not be transported in the passenger compartment of vehicles.

(f) An assistant must be used when transporting hazardous materials.

(g) Trucks hauling passengers will be separated from any vehicle hauling hazardous cargo by at least one buffer vehicle hauling general cargo.

(8) Convoy Operations.

(a) Reconnaissance will be performed in advance for oversized vehicles.

(b) Do not place a passenger-vehicle in a convoy as the last vehicle.

(c) Drivers will not back any type of vehicle before first checking for clearance and giving warning.

(d) Ground guides will be used in congested areas.

(e) If convoys will be traveling at night, the convoy commander should make every effort to keep the convoy small, use secured routes if at all possible that the drivers know and have rehearsed. Tell drivers to make maximum use of night vision devices, and conduct leader reconnaissance whenever possible before the convoy begins.

(f) In the event of an air attack, the convoy commander must prescribe alarm signals, give instructions for actions to take while under attack, prescribe actions to take in the absence of orders, ensure that defense procedures are rehearsed, and review procedures with convoy personnel before the convoy moves out.

(g) In the event of sniper fire, extreme caution must be taken to ensure that return fire does not enter a no-fire zone.

(h) In the event of an ambush, parts of the convoy not trapped in the kill zone must take up defensive position and await instructions from the convoy commander. They must not rush into the kill zone.

(i) Decide between an open and closed column defense lineup in convoys.

(j) Prepare for terrain obstacles through map studies and route reconnaissance. If the area that you will be traveling through is open to attack, prepare alternate routes.

(9) Personnel Movement.

(a) When more than one person (besides the driver) is transported in a cargo truck, there must be adequate fixed seating.

(b) Before starting the engine, drivers transporting passengers in cargo trucks will make sure all passengers are seated and all safety equipment is in place.

(c) Drivers will warn passengers not to jump from passenger beds and, upon dismounting, move away from traveled portions of the roadway.

(d) Drivers will refuse to move any vehicle in which anyone is in an unsafe position.

(10) Risk Management.

(a) Integrate risk management into mission planning, preparation, and execution.

(b) Make risk decisions at the appropriate level in the chain of command.

(c) Accept no unnecessary risk.

(d) Conduct a risk assessment prior to each mission.

3. Submit recommendations to unit commander for approval.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Reviewed available and existing guidelines.	_____	_____
2 Suggested changes to safety guidelines and operations based on:	_____	_____
3 Submitted recommendations to unit commander for approval.	_____	_____

Evaluation Guidance: None

References

Required

AR 385-10 The Army Safety Program (*RAR 004, 10/04/2011)

Primary

AR 600-55 THE ARMY DRIVER AND OPERATOR STANDARDIZATION PROGRAM (SELECTION, TRAINING, TESTING, AND LICENSING)

AR 700-68 STORAGE AND HANDLING OF LIQUEFIED AND GASEOUS COMPRESSED GASSES AND THEIR FULL AND EMPTY CYLINDERS

CFR 49 Title 49-Transportation

FM 5-19 COMPOSITE RISK MANAGEMENT

ATP 4-11 ARMY MOTOR TRANSPORT OPERATIONS

551-88M-4404
Perform Logistics Planning using MDMP

DANGER

Adhere to all Danger statements in reference to the Technical Manuals and regulations to ensure you and your subordinates are aware of the possible dangers involving the different types of equipment being utilized.

WARNING

Adhere to all Warning statements referenced in the Technical manuals for the type of equipment that you are using. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As a truckmaster or operations sergeant, given a mission, commander's guidance, and associated references.

Standards: You will provide input and planning considerations for the logistics support of your unit using the Military Decision-Making Process (MDMP) process in accordance with ADP 5-0.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as a truckmaster or operations sergeant, given a mission, commander's guidance, and associated references.

Note: None

Performance Steps

1. Receive Mission.

NOTE: Gather necessary tools.

- a. Appropriate maps/overlays.
- b. Existing Logistics Estimates.
- c. Standing operating procedures (SOPs) (unit and higher headquarters [HQ]).
- d. Appropriate field manuals (FMs).
- e. Logistic status charts.

2. Conduct Mission Analysis.

NOTE: Produce updated Logistics Estimate which is an accurate and current assessment of the combat service support (CSS) situation of the organization. It is an analysis of how CSS factors can affect mission accomplishment.

- a. Gather current Logistics data.
- b. Update Logistics status charts.
- c. Develop Logistics facts and assumptions.
- d. Determine Capabilities.
- e. Determine Requirements.
- f. Determine Shortfalls/Excesses (Impact Upon Mission).
- g. Determine Constraints.
- h. Identify possible solutions (recommendations).

3. Develop Courses of Action.

- a. Updated Logistics Estimates.
- b. Recommendations for placing and employing CSS assets.
- c. Recommended CSS priorities of support.
- d. CSS options available.
- e. Logistic impact upon Friendly Course of Action (COA) Statements.
- f. Logistic impact upon Friendly COA Sketches.

4. Analyze Courses of Action.

- a. Analyze each COA to assess its sustainment feasibility.
- b. Compare sustainment requirements to available assets and capabilities.
- c. Identify potential shortfalls and recommend actions to eliminate or reduce their effect for that COA.
- d. Forecast CSS requirements.
- e. Ensure that available movement times and assets will support the COA.

5. Compare Courses of Action.

- a. Evaluation Criteria for Course of Action Comparison.

(1) Identify Logistics assets required to support the friendly scheme of maneuver.

(2) Synchronization of support effort with maneuver.

(3) Recommended CSS priorities of support based on Commander's guidance and intent for the situation.

(4) Recommended allocation of CSS assets.

(5) Identifying additional requirements for CSS support.

(6) Effect of enemy COAs upon CSS mission.

b. Analyze advantages and disadvantages of each COA from the Logistics perspective.

c. Present your findings to other staff elements for their consideration.

d. Ensure that critical CSS considerations are included in the COA comparison process.

e. Present decision brief to the commander for approval/rejection or modification.

6. Obtain Courses of Action Approval.

7. Produce Orders.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Received Mission.	_____	_____
2 Conducted Mission Analysis.	_____	_____
3 Developed Courses of Action.	_____	_____
4 Analyzed Courses of Action.	_____	_____
5 Compared Courses of Action.	_____	_____
6 Obtained Course of Action Approval.	_____	_____
7 Produced Orders.	_____	_____

Evaluation Guidance: None

References

Required

ADP 5-0 THE OPERATIONS PROCESS

Primary

Subject Area 28: Logistics Automated Systems
551-88M-4402
Manage Tactical Automation Systems

DANGER

Adhere to all Danger statements in reference to the vehicles Technical Manuals to ensure you are aware of the possible dangers involving the different types of equipment.

WARNING

Adhere to all Warning statements referenced in the Technical manual for the type of equipment that you are utilizing. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: As an operations sergeant or truckmaster, you have access to Tactical Automation Systems (Force XXI Battle Command System Brigade and Below [FBCB2] and Battle Command Sustainment and Support System [BCS3] or the Movement Tracking System [MTS]) and references needed to complete your mission.

Standards: You must set up and perform basic functions on the given Tactical Automation Systems to complete the assigned mission without damaging the Tactical Automation Systems.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are assigned as an operations sergeant or truckmaster. You have access to Tactical Automation Systems (Force XXI Battle Command System Brigade and Below [FBCB2] and Battle Command Sustainment and Support System [BCS3] and or the Movement Tracking System [MTS]) and references needed to complete your mission.

Note: None

Performance Steps

1. Employ the Movement Tracking System (MTS).
 - a. Conduct V2 configuration power on procedures.
 - b. Start MTS Messenger.
 - c. Read messages.
 - d. Send messages.

- e. Start TracerLink program.
- f. Perform power off procedures.
- 2. Perform basic operations with FBCB2.
 - a. Identify battle command operations main screen.
 - b. Employ map functions.
 - c. Employ administrative functions.
 - d. Perform message management.
 - e. Prepare/send combat messages.
 - f. Employ application functions.
 - g. Employ overlay functions.
- 3. Employ FBCB2.
 - a. Perform before-operation preventive maintenance checks and services (PMCS).
 - b. Perform start-up procedures.
 - c. Perform shut-down procedures.
 - d. Perform after-operation PMCS.
- 4. Identify BCS3 Capabilities.
 - a. Providing a robust opportunity to standardize or create a Common Operating Picture (COP), in support of logistical operations.
 - b. Provides a flexible logistics reporting process that includes bottom up and top down input capabilities as well as a web service interface to forecast logistics on the battlefield.
 - c. Provides an extensive convoy operations support package that may include managing networks, convoy movement request, convoy tracking, and proximity alerts.
 - d. Provides the capabilities to support a commodity management, using myriad of source interfaces, such as Logistics Support Agency (LOGSA), LIW (Logistic Information Warehouse), MTS, Defense Transportation Reporting and Control System (D-TRACS) (In-Transit Visibility [ITV] Servers), and Property Book Unit Supply Enhanced (PBUSE).
 - e. BCS3 offers a very good command and control tool that can really assist in any Reception, Staging, Onward Movement, and Integration (RSOI) mission.

Evaluation Preparation:

None

Performance Measures

- 1. Employed the Movement Tracking System (MTS).
- 2. Performed basic operations with FBCB2.
- 3. Employed FBCB2.
- 4. Identified BCS3 Capabilities.

GO	NO GO
_____	_____
_____	_____
_____	_____
_____	_____

Evaluation Guidance: None

References

Required

BCS3 SYS ADMINBCS3 System Administrator-
User's Guide

Primary

BCS3 USERBCS3 User's Guide

MTS PLUS EUM REV B Movement Tracking
System Plus End User Manual CMDC-DOC-076
Rev B

551-88M-4403

Use Logistics Automation Systems to Manage Unit Equipment

DANGER

Adhere to all Danger statements in reference to the Technical Manuals to ensure you are aware of the possible dangers involving the different types of equipment being utilized.

WARNING

Adhere to all Warning statements referenced in the Technical manuals for the type of equipment. You must ensure injury to personnel or damage to the equipment does not occur.

CAUTION

Be aware of all Caution statements referenced in the equipment Technical Manuals to ensure damage to equipment or injury to personnel does not occur.

Conditions: You are given operational logistics systems and network, unit's logistical automation requirements, local command directives and regulations, AR 380-5, AR 25-1, AR 700-138, DA Pamphlet 25-1-1, FM 1-02, and TB 380-41.

Standards: Your guidance will result in logistics automation systems being successfully implemented to manage unit equipment.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: You are given operational logistics systems and network, unit's logistical automation requirements, local command directives and regulations, AR 380-5, AR 25-1, AR 700-138, DA Pamphlet 25-1-1, FM 1-02, and TB 380-41.

Note: None

Performance Steps

1. Identify systems and their capabilities.
 - a. Transportation Coordinator's-Automated Information for Movements System II (TC-AIMS II).
 - (1) Joint Services automated information system.
 - (2) Designed to function as a universal tool for the UMO, ITO, and theater movement control/mode operations.
 - (a) System for unit movement officers, planners, movement controllers, and transportation operators at all levels.

(b) Employed from ITOs at power projection platforms, other TC-ACCIS locations, and from theater level commands to battalion and separate company levels.

(3) Provides transportation functions such as plan convoys, request convoy clearances, conduct load planning, and manage mode operations.

(a) Supports daily transportation operations.

(b) Provides enhancements to the deployment process by building automated unit equipment lists and deployment equipment lists.

(4) Supports planning, executing, managing, and reporting movement-related deployment, sustainment, and redeployment activities.

(a) Facilitates the movement of personnel, equipment, and supplies.

(b) Provides visibility data of those forces from factory to fighting position.

b. Movement Tracking System (MTS).

(1) Install satellite tracking system on all common user logistic transport vehicles, selected tactical wheeled vehicles, and Army watercraft.

(2) Integrate MTS with TC-AIMS II.

(3) Facilitates movement control elements, and distribution terminal locations.

c. Maintenance: Standard Army Maintenance System (SAMS-1 and SAMS-2).

(1) SAMS-1.

(a) Maintenance management system that automates shop operations within FSC MCS, BSC MCS, AMC MCS, and ASMC MCS.

(b) Provides shop management control of workload, manpower, and supply.

(c) Capable of automatically producing work orders, requisitions repair parts, manage shop and bench stock, and provide detailed labor costs related to a specific work order.

(d) SAMS-1 information is passed to the SAMS-2 located in respective support operations sections.

(e) SAMS-1 interfaces with ULLS-A, ULLS-G, SAMS-2, SAMS-I/TDA, SARSS-1, and SARSS-GW.

(2) SAMS-2.

(a) Provides mid-level maintenance management and readiness visibility at the support operations level through selected maintenance, equipment readiness, and equipment performance reports.

(b) Produces management reports related to work orders, shop capabilities, production, backlog, manpower, and parts costs.

d. Supply: Unit Level Logistics System-Ground (ULLS-G).

(1) Located at any unit that has an organizational or tactical field maintenance facility.

(2) Designed to be operated by unit level personnel.

(3) Automates entire range of supply functions associated with the prescribed load list (PLL), vehicle dispatching, and the Army maintenance management system (TAMMS) function at the motor pool.

(4) Interfaces with SARSS-1, SARSS-GW, ULLS-S4, and SAMS-1.

e. Supply: Unit Level Logistics System-Air (ULLS-A).

(1) Located in all aviation units.

(2) Performs those functions for aviation that the ULLS-G performs for ground units.

(3) Will automate the production control, quality control, and tech supply (Class IX) functions at the aviation unit maintenance (AVUM).

(4) Interfaces with SARSS-1, SARSS-GW, ULLS-S4, and SAMS-1.

f. Supply: Unit Level Logistics System-Battalion (ULLS-S4).

(1) Located at all companies, battalion S4s, and brigade S4s.

(2) Provides hand receipt accountability for property, requests supplies, and requests transportation.

(3) Interfaces with SARSS-1, Standard Property Book System-Revised (SPBS-R), Standard Army Ammunition System-Modified (SASS-MOD), SARSS-GW, and CSSCS.

(4) System Requirements.

(a) CD-ROM Drive.

(b) DOS 6.22.

(c) Windows CANNOT be on system.

(d) Autoexec.bat and Config.sys must be added before the ULLS-S4 baseline (L3S-00-05) can be loaded.

g. Standard Army Retail Supply System (SARSS).

(1) SARSS-1 Overview.

(a) An interactive, menu-driven, automated supply accounting system.

(b) Provides asset visibility.

(c) Automates supply support functions of the DSB SSA, DASB SSA, FSB SSA, and FSC supply platoons.

(d) Processes supply requests, issues, receipts, and tracks storage of items.

(e) Interfaces with the ULLS-S4, SAMS-1, SPBS-R, CSSCS, ULLS-A, ULLS-G, and SARSS-2A.

(2) Requirements/Capabilities.

(a) MS3 baseline.

(b) Requires coordination between losing and gaining tactical Army Capital Working Fund SARSS-1 data transfer.

(3) SARSS-2A Overview.

(a) Provides intermediate management of supply at the DISCOM level.

(b) Provides reparable management and tracks excesses.

(c) Provides referrals by conducting lateral searches among SARSS-1 locations within the division.

(d) Interfaces with the SARSS-2A(C) located at corps material management center (CMMC).

(e) CMMC tracks demand and document history, financial record keeping, and conducts lateral searches at corps level.

(4) Requirements/Capabilities.

NOTE: 400Mhz or higher manager work station with 8MB video card.

(5) SARSS-2B Overview.

(a) Performs non-time sensitive supply management functions for catalog update, document history, demand analysis, and financial interface.

(b) Employed at the COSCOM MMC, TAACOM, TAMMC, TDA/installation, USARC, and National Guard USP&FO.

(6) SARSS-Gateway Overview.

(a) Designed to make optimum use of automation and communication techniques by integrating the wholesale and retail supply systems into a single seamless supply system.

(b) Provides for the same day processing of requests for issue.

(c) Provides visibility of all assets.

(d) System includes a Gateway computer system in St. Louis, MO and all units operating a logistics STAMIS.

(e) Communications (SARSS GATEWAYCOMM_BLAST) links the existing five STAMIS (ULLS, DS4, SAMS-1, SAILS, and SARSS-O) to the SARSS-Gateway using the defense data network (DDN).

h. Standard Property Book System-Revised (SPBS-R).

- (1) Interactive, menu driven, property accountability system.
- (2) Operates in both centralized and decentralized mode.
- (3) Provides asset visibility wherever the requirement exists.

(4) Interfaces with ULLS-S4, SARSS-1, Tactical Unit Financial Management System (TUFMIS), and CSSCS.

i. Standard Army Ammunition System-Modified (SAAS-MOD). Consolidates three levels of operations into a single software baseline.

(1) Theater support command material management center (TSC MMC/CMMC), ammunition supply point, and division ammunition office (DAO).

(2) Designed to manage conventional ammunition, guided missiles and large rockets, and related crating/packing materials.

(3) Provides formal stock record accountability, asset visibility, in-transit visibility, management control, and automatic-reporting capabilities for ammunition stored at the retail level.

(4) Supports basic load, war reserve, and operational stock management.

(5) Supports Class V conventional ammunition missions for units ranging in size from a brigade size task force to theater.

(6) Located at the Class V branch of general supply office, division support operations section.

(7) Interfaces with SASS, Commodity Command Standard System (CCSS), LOGSA, Worldwide Ammunition Reporting System (WARS), SPBS-R, DAMMS, ULLS-S4, and CSSCS.

j. Medical: Medical Communication for Combat Casualty Care (MC4).

(1) Theater level, automated combat health system (CHS).

(2) Receives, stores, processes, transmits, and reports C2, medical surveillance, patient/movement/tracking, medical treatment, medical situational understanding, and CHL data across all echelons of care.

(3) Consists of three basic components.

(a) Software: the Joint Theater Medical Information Program (TMIP).

(b) Supports Army unique requirements.

(c) Interfaces with GCSS-A, CSSCS, FBCB2, warrior programs, and the MTS.

(4) Hardware: consists of commercial off the shelf (COTS) automation equipment.

(5) Communications: Relies on current and proposed Army solutions for tactical, operational, and strategic telecommunications systems to transmit and receive.

(a) Brigade and below will utilize tactical internet.

(b) Above brigade will utilize WIN architecture.

2. Prioritize requirements and ensure appropriate system is used to manage equipment and fulfill requirements.

Evaluation Preparation:

None

Performance Measures

	GO	NO GO
1 Identified systems and their capabilities.	_____	_____
2 Prioritized requirements and ensured appropriate system was used to manage equipment and fulfill requirements.	_____	_____

Evaluation Guidance: None

References

Required

Primary

AR 25-1 ARMY KNOWLEDGE MANAGEMENT AND INFORMATION TECHNOLOGY

AR 25-2 INFORMATION ASSURANCE

AR 380-5 DEPARTMENT OF THE ARMY INFORMATION SECURITY PROGRAM

AR 700-127 Integrated Logistic Support

AR 700-138 Army Logistics Readiness and Sustainability

AR 700-4 LOGISTICS ASSISTANCE

FM 1-02 Operational Terms and Graphics {MCRP 5-12A} (This item is included on EM 0205)

PAM 25-1-1 Installation Information Services

TB 380-41 Security: Procedures for Safeguarding, Accounting and Supply Control of COMSEC Material

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CHAPTER 4

Duty Position Tasks

- 4-1. Military Occupational Specialty 88M10. Operates wheeled vehicles and equipment over varied terrain and roadways for support of combat operations. Manages entrucking and detrucking of personnel being transported. Oversees and checks proper loading and unloading of cargo on vehicles and trailers. Secures cargo against inclement weather, pilferage, and damage. Operates vehicle component material handling equipment (MHE), as required. Employs land navigation techniques. Must be knowledgeable of tactical automated communications systems and weapons when they are mounted on the vehicle. Performs vehicle self-recovery and field expedients to include towing vehicles. Corrects or reports all vehicle deficiencies; supports mechanics where necessary. Prepares vehicle for movement/shipment by air, rail, or vessel.
- 4-2. Military Occupational Specialty 88M20. Supervises and provides technical guidance to subordinate in accomplishing their duties. Organizes and participates in convoys. Dispatches vehicles; verifies vehicle logbooks. Receives and fills requests from authorized persons for motor transport. Compiles time, mileage and load data. Operates the Heavy Expanded Mobility Tactical Transport (HEMTT), Heavy Equipment Transporter (HET), and Palletized Loading System (PLS).
- 4-3. Military Occupational Specialty 88M30. Supervises drivers performing preventive maintenance checks and services (PMCS) on vehicles. Operate in the truck terminal as a squad leader. Trains new drivers and manages the driver sustainment training program. Plans, organizes, and operates a motor vehicle convoy. Perform convoy route reconnaissance; Commands a convoy or convoy security element. Prepares OPORD/OPLAN/CONOP and overlays. Supervise transporting of all types of cargo. Posts and controls guards used to prevent pilferage and vandalism of cargo and equipment. Takes charge of vehicle recovery. Supervise personnel preparing vehicles for deployment.
- 4-4. Military Occupational Specialty 88M40. Provide professional support and technical guidance to all Army soldiers requiring motor transport. Plans, manages, and monitors motor transport and support operations. Establishes and organizes the unit motor park. Prepares and implements the truck company security and defense plan. Receives and distributes highway motor transport missions. Assembles and prepares highway reconnaissance data for motor convoy transport. Supervises and directs unit dispatching of vehicles. Coordinates external support requirements in support of a truck battalion.
- 4-5. Additional Skill Identifiers. The following additional skill identifiers (ASIs) are associated with MOS 88M.
- F7 – Pathfinder.
 - P5 – Master Fitness Trainer.
 - 2B – Air Assault (personnel only).
 - 2S – Battle Staff Operations (SL3 and above).
 - 4A – Reclassification Training.
 - 5W – Jumpmaster.
 - 6T – Military Auditor (Reserve Component personnel only).
 - 8P – Competitive Parachutist (skill level 2-4 personnel only).
 - M9 – Master Driver-Trainer

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APPENDIX A

Appendix A DA Form 5164

Appendix A

Sample DA Form 5164-R (Hands-on Evaluation)

DA Form 5164-R (Hands-on Evaluation) allows the trainer to keep a record of the performance measures a Soldier passes or fails on each task.

Before evaluation:

Obtain a blank copy of DA Form 5164-R, that you may locally reproduce on 8 ½ x 11 paper.

Enter the task title and 10-digit number from the STP task summary.

In Column a, enter the performance measure numbers from the task summary.

In Column b, enter the performance measure corresponding to the number in Column a (you may abbreviate this information, if necessary).

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:

Enter the date just before the Soldier's task performance.

Enter the evaluator's name, the Soldier's name, and the unit.

For each performance measure in Column b, enter a check in Column c (PASS) or Column d (FAIL), as appropriate.

Compare the number of performance measures the Soldier passes (and, if necessary, 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.

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APPENDIX B

Appendix B DA Form 5165

Appendix B
Sample DA Form 5165-R (Field Expedient Squad Book)

DA Form 5165-R (Field Expedient Squad Book) allows the trainer to keep a record of task proficiency for a group of Soldiers.

Before evaluation:

Obtain a blank copy of DA Form 5165-R, which you may locally reproduce on 8 ½ x 12 paper. Locally reproduce the partially completed form if you are evaluating more than nine Soldiers.

During evaluation:

Enter the names of the Soldiers you are evaluating, one name per column, at the top of the form. 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 data on which the Soldier demonstrated task proficiency. Record the date in the NO-GO block if the Soldier failed to demonstrate 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:

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 trained on.

Read across the rows for each task to determine the training status of the Soldiers. You can readily see which tasks to focus training on.

Line through the STATUS column of any Soldier who leaves the unit.

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GLOSSARY

Section I

Acronyms & Abbreviations

AAL	additional authorization list
ABS	antilock brake system; acrylonitrile-butadiene-styrene
AC	active component; acromioclavicular; air conduction; alternating current (an electric current that reverses direction at a regular, recurring interval); aircraft; attack control
APU	Auxiliary Power Unit; ambulatory procedure unit
AR	armor; Army regulation
AVUM	Aviation Unit Maintenance
BII	basic issue items
BLK	black
BSA	brigade support area
C	chemical (graphics); cover; Celsius; status indicating that all record items have been completed within the proper timeframe: it is the default status when the Deficiency Delinquency function is first accessed; centigrade; change; Cluster command and control; coordination and collaboration in a DSCA environment
C2	command and control; coordination and collaboration in a DSCA environment
CD-ROM	compact disk-read only memory
CFR	Code of Federal Regulations
CG	commanding general; center of gravity
CHS	combat health support; common hardware and software; Theater level, automated combat health system
CHU	container handling unit
CM	countermobility; centimeter(s); Chemical; Countermeasure
COE	contemporary operational environment; Common Operating Environment
COM	chief of mission; collection operations management; commander; commercial; common; communication
COMSEC	communications security
CONEX	container express
COOP	continuity of operations plan; Continuity of Operations Procedures
COTS	cargo offload and transfer system; commercial off-the-shelf
CP	checkpoint; command post; contact point
CROP	Container(ized) Roll-In/Roll-Out Platform
CS	central server; civil support; combat support; conditioned stimulus; control station
CSSAMO	Combat Service Support Automation Management Office
CTIS	central tire inflation system
CTRL	control
CW	chemical warfare; continuous wave; clockwise; USS Curtis Wilber
D	dental (graphics); diopter; during
DA	Department of the Army; direct action; Defended Area
DA PAM	Department of the Army pamphlet
DAP	Decontamination Apparatus, Portable
DD	double double (Bailey Bridge); Department of Defense; Degrees (latitude); Day
DDN	digital data network; Defense Data Network
DEL	Deployment Equipment List; delete key
DISA	Defense Information Systems Agency
DISCOM	division support command
DOD	Department of Defense
DOS	day of supply; Department of State; disk operating system

DS2	Decontaminating Solution #2
DTO	division transportation office(r)
DVE(1)	Driver's Vision Enhancer
ETA	estimated time of arrival
F	frequency; fail; Fahrenheit; full; failed; Feeder; FMC
FBCB2	Force XXI Battle Command Brigade and Below
FM	field manual; frequency modulated/modulation; flare multiunit; force module
GATES	Global Air Transportation Execution System
GCCS-A	Global Command and Control System-Army
GM (1)	grid-magnetic; gram
GMT	Greenwich Mean Time
GPFU	gas particulate filter unit
GPS	global positioning system
HAZMAT	hazardous material
HEMTT	Heavy Expanded Mobility Tactical Truck
HEMTT-LHS	Heavy Expanded Mobility Tactical Truck-Load Handling System
HET	heavy equipment transporter
HETS	Heavy Equipment Transport Semitrailer
HMMWV	high-mobility multipurpose wheeled vehicle
Hz	Hertz: measures electrical frequency in cycles per second
IAW	in accordance with
ID	identification; infantry division; internal diameter; intradermal; interface device; Identifier
ISO	International Organization for Standardization; International Standards Organization; information systems office
IT	information technologies; information technology
ITO	invitational travel orders; installation transportation officer
Inf	infantry
KMPH	kilometers per hour
LAN	local area network
LCE	load-carrying equipment; logistics capability estimator
LED	law enforcement desk; light emitting diode
LHS	load-handling system
LMTV	light medium tactical vehicle
MCO	movement control office(r); major contingency operation; Marine Corps order; major combat operations
MCT	major crimes team; movement control team
MEDEVAC	medical evacuation
METT-T	Mission, Enemy, Terrain (and Weather), Troops, and Time Available
MHE	materiel handling equipment
MMC	materiel management center; mission management center; multimedia card; Microsoft Management Console
MOPP	mission-oriented protective posture
MTMCTEA	Military Traffic Management Command Transportation Engineering Agency
MTS	module test set; multichannel television sound; Movement Tracking System
MTV	medium tactical vehicle
N	neutral; north; northings; nose lift; number; Nuclear
NATO	North Atlantic Treaty Organization
NBC	nuclear, biological, and chemical
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NTE	nontest ear; not to exceed; Non-Tactical Equipment
No	number
OCONUS	outside the continental United States
OF	optional form; observed fire
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security

OVE	on vehicle equipment
PAM (1)	pamphlet
PLGR	precise lightweight global positioning system (GPS) receiver
PLS	palletized load system
PMCS	preventive maintenance checks and services
POC	platoon operations center; point of contact; point of capture; Principals of Conditioning
POD	port of debarkation; point of distribution
POL	petroleum, oils, and lubricants
PTM	indicates plain text message at a variable length; pantilt mechanism; Power Transfer Module
PTO	Power Take Off
R	reinforcing; resistance; reverse
RP	rally point; reference point; release point
RPM	revolutions per minute; rounds per minute
RR	receiving report; rolling resistance; Ready Reserve; reroute; release run; ITU Radio Regulations; railroad
S-3	operations staff officer
S4	logistics officer (below division level)
SAT	security assistance team; Saturday
SEP	separate; September; Spherical Error of Probability; Student Evaluation Plan
SF	special forces; solid fiberboard; Standard Form
SMCT	Soldier's Manual of Common Tasks
SNCO	senior noncommissioned officer
SOP	standing operating procedure
SP	self-propelled; start point; strongpoint; Server - Periodic; Space, i.e., the space bar on the keyboard
SSN	attack submarine, nuclear; Social Security number; space surveillance network
STANAG	standardization agreement (NATO)
STB	supertropical bleach; Special Troops Battalion
STP	shielded twisted pair; Soldier Training Publication; spanning-tree protocol; Soldier training plan
TAACOM	Theater Army Area Command
TAMMC	Theater Army Materiel Management Center
TC	technical coordinator; training circular; track commander; tank commander; tactical commander; technical configuration
TC-ACCIS	Transportation Coordinator's Automated Command and Control Information System
TC-AIMS II	Transportation Coordinator's Automated Information for Movement System II
TCMD	transportation control movement document
TCP/IP	transmission control protocol with Internet protocol
TDA	table of distribution and allowances; Tactical Decision Aid
TLO	terminal learning objective
TM	team; technical manual; trademark; theater missile; tympanic membrane; target materials
TOC	tactical operations center; total organic carbon
ULLS	Unit Level Logistics System
US	United States; ultrasound; unconditioned stimulus
USB	upper sideband; universal serial bus
VAC	volts alternating current
W	west; weekly; with; Watt
WAN	wide area network
WHT	white
WPS	Worldwide Port System
alt	alternate; altitude; alanine transaminase
ccw	counterclockwise
kg	kilogram(s)
mm	millimeter

mph; MPH

miles per hour

psi

pounds per square inch; the amount of pressure exerted on one square inch of surface often stated as PSIA, or PSIG, signifying absolute or gauge pressure.

Section II

Terms

MILVAN

A military-owned demountable container, conforming to US and international standards, operated in a centrally controlled fleet for the movement of military cargo.

OK

okay

lbs

pounds

m

mechanized (graphics)

mech

mechanized

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DA FORM 2404	EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET
DA FORM 2408-14	UNCORRECTED FAULT RECORD
DA FORM 285	U.S. ARMY ACCIDENT REPORT
DA FORM 348	EQUIPMENT OPERATORS QUALIFICATION RECORD (EXCEPT AIRCRAFT)
DA FORM 5164-R	HANDS ON EVALUATION
DA FORM 5165-R	FIELD EXPEDIENT SQUAD BOOK
DA FORM 5823	EQUIPMENT IDENTIFICATION CARD
DA FORM 5982-E	DISPATCH CONTROL LOG (EGA)
DA FORM 5983-E	EQUIPMENT OPERATOR QUALIFICATION RECORD (EGA)
DA FORM 5984-E	OPERATORS PERMIT RECORD (EGA)
DA FORM 5987-E	MOTOR EQUIPMENT DISPATCH (EGA)
DA FORM 5988-E	EQUIPMENT INSPECTION MAINTENANCE WORKSHEET
DA FORM 6125	ROAD TEST SCORE SHEET (LRA)
DA FORM 7566	COMPOSITE RISK MANAGEMENT WORKSHEET

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DOD 4500.9-R, PART III DEFENSE TRANSPORTATION REGULATION, PART III,
MOBILITY

Department of Defense Forms

DD FORM 1265 REQUEST FOR CONVOY CLEARANCE

DD FORM 1266 REQUEST FOR SPECIAL HAULING PERMIT

DD FORM 1970 MOTOR EQUIPMENT UTILIZATION RECORD

DD FORM 518 ACCIDENT-IDENTIFICATION CARD

DD FORM 626 MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)

DD FORM 836 DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION OF HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES/ CONTAINERS/VESSELS

Other Forms

OF FORM 346 US GOVERNMENT MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD

SF FORM 91 MOTOR VEHICLE ACCIDENT REPORT

Other Product Types

GGG-B-325B FEDERAL SPECIFICATIONS, BINDER, LOAD

MTS CS HANDBOOK MTS CS HANDBOOK

MTS PLUS EUM REV B MOVEMENT TRACKING SYSTEM PLUS END USER MANUAL
CMDC-DOC-076 REV B

SDDC TEA PAM 55-20 TIEDOWN HANDBOOK FOR TRUCK MOVEMENTS 4TH EDITION

STANAG 2154 REGULATIONS FOR MILITARY MOTOR VEHICLE MOVEMENT BY ROAD

STANAG 2155 ROAD MOVEMENT BID AND CREDIT

TEA PAM 55-20 TIEDOWN HANDBOOK FOR TRUCK MOVEMENTS

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21 November 2013

By order of the Secretary of the Army:

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