STP 9-63B13-SM-TG

# Soldier's Manual and Trainer's Guide

# MOS 63B

# WHEELED VEHICLE MECHANIC

### SKILL LEVELS 1, 2, and 3

### **JANUARY 2005**

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### HEADQUARTERS DEPARTMENT OF THE ARMY

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HEADQUARTERS DEPARTMENT OF THE ARMY Washington, D.C., 26 January 2005

### SOLDIER'S MANUAL and TRAINER'S GUIDE

### MOS 63B

### Wheeled Vehicle Mechanic

### Skill Levels 1, 2, and 3

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#### PREFACE

This soldier training publication (STP) is intended for soldiers holding military occupation specialty (MOS) 63B, Skill Levels (SLs) 1, 2, and 3; their supervisors; trainers; and commanders. It contains an MOS Training Plan providing information needed to plan, conduct, and evaluate unit training, one of the most important jobs of military leaders. It includes standardized training objectives in the form of task summaries that can be used to train and evaluate soldiers on critical tasks supporting unit missions during wartime.

Soldiers holding MOS 63B should have access to this publication. Trainers and first line supervisors should actively plan for soldiers' access, making it available in work areas, unit learning centers, and unit libraries. However, it is not intended for an individual copy to be provided to each MOS holder. The STP is obtainable on line from the Reimer Digital Library (RDL) at www.adtdl.army.mil.

Tasks in this manual apply to both active Army and Reserve Component soldiers.

The proponent of this publication is the Combined Arms Support Command (CASCOM). Submit comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Department of the Army, Training Directorate, Ordnance Training Division, ATTN: ATCL-AO, 401 First Street, Suite 227, Fort Lee, VA 23801-1511.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

#### CHAPTER 1

#### Introduction

1-1. <u>General</u>. This soldier training publication (STP) identifies individual military occupational specialty (MOS) training requirements for soldiers holding MOS 63B. Commanders, trainers, and soldiers should use it to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference for supporting self-development, evaluating MOS proficiency, and training of 63B soldiers. Commanders employ two primary methods to evaluate soldiers' proficiency:

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

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

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

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

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

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

- Task number. The task number is a 10-digit number that identifies the task, MOS and skill level. Include the task number and title in any correspondence relating to the task.
- Task title. The task title identifies the action to be performed.
- Conditions. The task conditions statement describes the field or garrison conditions under which the task will be performed and identifies the equipment, tools, references, job aids, and supporting personnel that the soldier needs to perform the task in wartime.
- Standards. The task standards describe how well and to what level of proficiency the soldier must perform the task under wartime conditions. Standards are typically expressed in terms of accuracy, completeness, duration, sequence, speed, and tolerance.
- Performance measures. This section identifies specific actions that the soldier must accomplish to complete the task successfully. Performance measures appear in a GO/NO GO rating format for easy evaluation. Some tasks may also include detailed training information in a Training Information Outline and an Evaluation Preparation Section. The Evaluation Preparation Section indicates necessary modifications to task performance in order to train and evaluate a task that cannot be trained to the wartime standard under wartime conditions. It may also include special training and evaluation preparation instructions to accommodate these modifications and any instructions that should be given to the soldier before evaluation.
- References. This section identifies references that provide more detailed explanations of task performance requirements than are given in the task summary.
- Warnings. Warnings alert users to the possibility of immediate personal injury or equipment damage.
- Notes. Notes provide additional supportive explanations or tips relating to task performance.

1-3. <u>Soldier's Responsibilities</u>. Each soldier is responsible for performing individual tasks identified by the first-line supervisor based on the unit's mission-essential task list (METL). Soldiers must perform tasks to the standards included in the task summary. If soldiers have questions about tasks or which tasks in this manual they must perform, they are responsible for asking their first-line supervisor for clarification. First-line supervisors know how to perform each task or can direct soldiers to appropriate training materials, including current field manuals, technical manuals, and Army regulations. Soldiers are responsible for using these materials to maintain performance. They are also responsible for maintaining performance of all common tasks listed in the SMCTs at their current skill level and below. Periodically, soldiers should ask their supervisor or another solder to check their performance to ensure that they can perform the tasks.

1-4. <u>Noncommissioned Officer (NCO) Self-Development and the STP</u>. Self-development is a key component of leader development. Leaders follow planned, progressive, sequential self-development programs developed by the individual NCO and his or her first-line supervisor to enhance and sustain military competencies. Self-development consists of individual study, research, professional reading, practice, and self-assessment. The self-development concept requires NCOs, as Army professionals, to take responsibility for remaining current in all phases of their MOS. The STP is the NCO's primary source for maintaining MOS proficiency.

Another important resource for self-development is the Army Institute for Professional Development (AIPD) which administers many distributed learning courses and the Army Correspondence Course Program. The AIPD web site, http://www.atsc.army.mil/accp/aipdnew.asp provides course listings with detailed eligibility requirements and enrollment information.

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

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

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

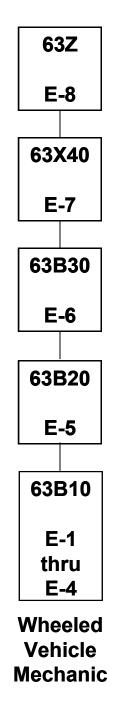
Every task summary in this STP includes performance measures, which trainers may use year-round to determine if soldiers can perform critical tasks to the specified standards. The performance measures identify what the trainer needs to observe to score a soldier's performance. A blank space is provided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

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

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

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

### **CAREER PROGRESSION CHART**



#### CHAPTER 2

#### Trainer's Guide

2-1. <u>General</u>. The MOS Training Plan identifies the essential components of a unit training plan for individual training. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion, and similar factors. Therefore, the MOS Training Plan should be used as a guide for conducting unit training and not a rigid standard. The MOS Training Plan consists of two parts. Each part is designed to assist the commander in preparing a unit training plan which satisfies integration, cross training, training up, and sustainment training requirements for soldiers in this MOS.

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

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

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

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

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

- **Subject Area Column**. This column lists the subject area number and title in the same order as Section I, Part One of the MOS Training Plan.
- Task Number Column. This column lists the task numbers for all tasks included in the subject area.
- Title Column. This column lists the task title for each task in the subject area.
- **Training Location Column**. This column identifies the training location where the task is first trained to soldier training publications standards. If the task is first trained to standard in the unit, the word "Unit" will be in this column. If the task is first trained to standard in the training base, it will identify, by brevity code (ANCOC, BNCOC, and so on), the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.

BNCOC	Basic NCO Course
BTC	Basic Technical Course
ANCOC	Advanced NCO Course
UNIT	Trained in the Unit
AIT	Advanced Individual Training

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

Figure 2-2. Sustainment Training Frequency Codes

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

#### 2-2. Subject Area Codes.

#### Skill Level 1

- 1 ENGINE
- 2 ENGINE LUBRICATION SYSTEM
- 3 FUEL SYSTEM
- 5 COOLING SYSTEM
- 6 ELECTRICAL SYSTEM
- 9 TRANSMISSION
- 10 TRANSFER
- 11 PROPELLER SHAFTS
- 12 AXLES
- 13 BRAKES
- 14 WHEELS AND HUBS
- 15 STEERING
- 18 HOIST, WINCH, AND POWER TAKE OFF
- 20 CENTRAL TIRE INFLATION SYSTEM (CTIS)
- 21 GENERAL MAINTENANCE TASKS

#### Skill Level 3

- 1 ENGINE
- 2 ENGINE LUBRICATION SYSTEM
- 3 FUEL SYSTEM
- 5 COOLING SYSTEM
- 6 ELECTRICAL SYSTEM
- 9 TRANSMISSION
- 13 BRAKES
- 15 STEERING
- 16 SPRINGS AND SHOCKS
- 18 HOIST, WINCH, AND POWER TAKE OFF
- 20 CENTRAL TIRE INFLATION SYSTEM (CTIS)
- 21 GENERAL MAINTENANCE TASKS
- 22 RECOVERY (ASI H8 Tasks ONLY)
- 23 COMMON LOGISTIC TASKS

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2-3. Duty Position Training Requirements.

Skill Level	Duty Position	Subject Area	Cross Train	Train Up/Merger
SL 1/2	Wheeled Vehicle Mechanic	1-21		Wheeled Vehicle Mechanic
			N/A	
	*Recovery Vehicle Operator	22		*Recovery Vehicle Operator
	* (ASI H8)			
SL 3	Senior Wheeled Vehicle Mechanic	23	N/A	Senior Mechanic Motor Sergeant
	Maintenance/Recovery Supervisor/Motor Sergeant	25		

#### 2-4. Critical Tasks List.

#### MOS TRAINING PLAN 63B13

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
	Skill Level 1			
Subject Area 1. EN	IGINE			
091-63B-1300	Service Engine Assembly on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1344	Perform Internal/External Timing on a Combustion Ignition Engine	AIT	SA	1-2
091-63B-1349	Replace Cylinder Head on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1353	Replace Diesel Power Plant on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 2. EN	IGINE LUBRICATION SYSTEM			
091-63B-1348	Replace Rear Main Oil Seal on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1354	Replace Input/Output Oil Seal on a Wheeled Vehicle	UNIT	SA	1-2
Subject Area 3. FL	IEL SYSTEM			
091-63B-1302	Correct Malfunction of Fuel Pump on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1301	Troubleshoot Fuel System Malfunctions on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1303	Replace Fuel Fitting and Lines on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1304	Troubleshoot Glow Plug System on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1305	Correct Malfunction of Glow Plug System on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1350	Repair Fuel Injection System on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 5. CC	DOLING SYSTEM			
091-63B-1306	Troubleshoot Cooling System Malfunctions on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1307	Replace Radiator on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1308	Correct Malfunction of Fan and Drive on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1358	Replace Water Pump on a Wheeled Vehicle	UNIT	SA	1-2
Subject Area 6. EL	ECTRICAL SYSTEM			
091-63B-1309	Troubleshoot Charging System Malfunction on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1310	Correct Malfunction of Alternator on a Wheeled Vehicle	AIT	AN	1-2
091-63B-1311	Troubleshoot Starting System Malfunction on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1312	Troubleshoot Electrical System Malfunctions on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1313	Correct Malfunction of Sending Units and Warning Switches on a Wheeled Vehicle	AIT	AN	1-2
091-63B-1314	Correct Malfunction of Batteries on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1315	Repair Engine Wiring Harness on a Wheeled Vehicle	AIT	AN	1-2

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
091-63B-1337	Correct Malfunction of 100 AMP Alternator on a Wheeled Vehicle	UNIT	AN	1-2
091-63B-1347	Repair Electrical Interface Systems on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1359	Repair Electrical Systems on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 9. TRA	ANSMISSION			
091-63B-1316	Troubleshoot Transmission Malfunctions on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1317	Service Transmission Assembly on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1352	Replace Transmission on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1355	Replace Clutch Assembly on a Wheeled Vehicle	UNIT	SA	1-2
Subject Area 10. TR	ANSFER			
091-63B-1318	Troubleshoot Transfer Malfunctions on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1356	Repair Power Take Off on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1360	Replace Transfer on a Wheeled Vehicle	AIT	AN	1-2
Subject Area 11. PR	OPELLER SHAFTS			
091-63B-1319	Correct Malfunction of Drive Line Assembly	AIT	SA	1-2
Subject Area 12. AX	(LES	II		1
091-63B-1320	Troubleshoot Axle Malfunctions on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1321	Replace Front Axle Spindle on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1351	Replace Differential on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 13. BF	RAKES			
091-63B-1323	Troubleshoot Brake System Malfunctions	AIT	SA	1-2
091-63B-1324	Replace Brake Lines and Fittings on a Wheeled Vehicle	AIT	AN	1-2
091-63B-1325	Replace Hand Brake Shoes on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1326	Replace Disk Brake Components on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1327	Replace Master Cylinder on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1328	Replace Air Hydraulic Cylinder on a Wheeled Vehicle	UNIT	AN	1-2
091-63B-1329	Replace Treadle Valve on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1330	Replace Hydro-Boost on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1331	Replace Air Compressor and Belts on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1332	Inspect Air Brake Control Valves on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1339	Replace Air Lines and Fittings on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1340	Correct Malfunction of Air Dryer with Filter on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1343	Replace Service Brake Shoes on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 14. W	HEELS AND HUBS			
091-63B-1322	Correct Malfunction of Knuckle and Geared Hub on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1333	Correct Malfunction of Wheel and Tire Assembly on a Wheeled Vehicle	UNIT	SA	1-2

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 15. ST	EERING			
091-63B-1334	Troubleshoot Steering System Malfunctions on a Wheeled Vehicle	AIT	SA	1-2
091-63B-1335	Correct Malfunction of Steering System	AIT	SA	1-2
091-63B-1345	Adjust Steering System on a Wheeled Vehicle	AIT	SA	1-2
Subject Area 18. HC	DIST, WINCH, AND POWER TAKE OFF			
091-63B-1336	Troubleshoot Winch Malfunction on a Wheeled Vehicle	UNIT	AN	1-2
091-63B-1357	Repair Hydraulic Winch Motor on a Wheeled Vehicle	UNIT	SA	1-2
Subject Area 20. CE	NTRAL TIRE INFLATION SYSTEM (CTIS)			
091-63B-1338	Troubleshoot Central Tire Inflation System	AIT	SA	1-2
091-63B-1341	Replace CTIS Pressure Switch on a Wheeled Vehicle	UNIT	SA	1-2
091-63B-1342	Correct Malfunction of CTIS Front and Rear Air Seals on a Wheeled Vehicle	AIT	AN	1-2
Subject Area 21. GE	ENERAL MAINTENANCE TASKS			•
091-63B-1346	Repair Boom Extensions on a Wheeled Vehicle	AIT	SA	1-2
	Skill Level 3			
Subject Area 1. ENG	GINE			
091-63B-3402	Perform Diagnostic Procedures on Wheeled Vehicle's Diesel Engine	BNCOC	AN	3
Subject Area 2. ENC	SINE LUBRICATION SYSTEM			
091-63B-3419	Replace Oil Pump	UNIT	AN	3
091-63B-3420	Replace Manifold, Oil Transfer	UNIT	AN	3
Subject Area 3. FUE	EL SYSTEM			
091-63B-3400	Perform Diagnostic Procedures on Wheeled Vehicle's Fuel System	BNCOC	AN	3
091-63B-3417	Perform Diagnostic Procedures on Wheeled Vehicle's Fuel Injection System	BNCOC	AN	3
Subject Area 5. CO	DLING SYSTEM			
091-63B-3403	Perform Diagnostic Procedures on Wheeled Vehicle's Cooling System	BNCOC	AN	3
Subject Area 6. ELE	CTRICAL SYSTEM			•
091-63B-3401	Perform Diagnostic Procedures On Wheeled Vehicle's Electrical System	BNCOC	AN	3
091-63B-3422	Perform Diagnostics Electrical Interface System	BNCOC	AN	3
Subject Area 9. TRA	ANSMISSION			
091-63B-3404	Perform Diagnostic Procedures on Wheeled Vehicle's Standard Transmission (ARNG/USAR)	BNCOC	AN	3
091-63B-3418	Perform Diagnostic Procedures on Automatic Transmissions	BNCOC	AN	3

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 13. B	RAKES			
091-63B-3405	Perform Diagnostic Procedures on Wheeled Vehicle's Brake System	BNCOC	AN	3
091-63B-3411	Perform Diagnostic Procedures on an M1070 Brake System	BNCOC	AN	3
Subject Area 15. S	TEERING			
091-63B-3406	Perform Diagnostic Procedures on Wheeled Vehicle's Steering System	BNCOC	AN	3
091-63B-3413	Perform Diagnostic Procedures on M1000 Steering System	BNCOC	AN	3
Subject Area 16. S	PRINGS AND SHOCKS			
091-63B-3412	Perform Diagnostic Procedures on an M1000 Suspension System	BNCOC	AN	3
Subject Area 18. H	OIST, WINCH, AND POWER TAKE OFF			
091-63B-3409	Perform Diagnostic Procedures on Wheeled Vehicle's Winch System	BNCOC	AN	3
Subject Area 20. C	ENTRAL TIRE INFLATION SYSTEM (CTIS)			
091-63B-3414	Perform Diagnostic Procedures on Wheeled Vehicle's Central Tire Inflation System	BNCOC	AN	3
Subject Area 21. G	ENERAL MAINTENANCE TASKS			
091-63B-3407	Perform Diagnostic Procedures on Vehicle's Hydraulic System	BNCOC	AN	3
091-63B-3410	Perform Diagnostic Procedures on Wheeled Vehicle's Air System	BNCOC	AN	3
091-63B-3421	Perform Diagnostic Procedures on Wheeled Vehicle's Engine Air Induction System	BNCOC	AN	3
Subject Area 22. R	ECOVERY (ASI H8 Tasks ONLY)			
091-63B-3408	Perform Battlefield Damage Assessment and Repair (BDAR) on Wheeled Vehicles	BNCOC	AN	3
091-63B-3415	Plan Recovery Operations	BNCOC	AN	3
091-63B-3416	Operate Oxyacetylene Equipment	BNCOC	AN	3
091-63B-3423	Perform Battlefield Damage Assessment on Fuel System	BNCOC	AN	3
091-63B-3424	Perform Battlefield Damage Assessment on Electrical System	BNCOC	AN	3
091-63B-3425	Perform Battlefield Damage Assessment on Power Train/Steering System	BNCOC	AN	3
091-63B-3426	Perform Battlefield Damage Assessment on Hydraulic Distribution System	BNCOC	AN	3
091-63B-3427	Perform Battlefield Damage Assessment on Air/Hydraulic Brake System	BNCOC	AN	3

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 23. C	COMMON LOGISTIC TASKS			
091-CLT-3001	Manage a Shop Safety Program	BNCOC	AN	3
091-CLT-3002	Maintain a Publications Library	BNCOC	AN	3
091-CLT-3003	Establish Maintenance Facilities	BNCOC	AN	3
091-CLT-3004	Assist in Preparing a Standing Operating Procedure	BNCOC	AN	3
091-CLT-3005	Manage Tool Control Procedures	BNCOC	AN	3
091-CLT-3006	Manage Key Control Procedures	BNCOC	AN	3
091-CLT-3007	Manage the TMDE Calibration Program	BNCOC	AN	3
091-CLT-3008	Recon Terrain/Route	BNCOC	AN	3
091-CLT-3009	Supervise Maintenance Operations	BNCOC	AN	3
091-CLT-3010	Interpret Maintenance Operational Overlay	BNCOC	AN	3
091-CLT-3013	Manage the Unit Level Logistics System (ULLS)	BNCOC	AN	3
091-CLT-3014	Manage the Unit Army Oil Analysis Program (AOAP)	BNCOC	AN	3
Subject Area 25. COMMON LOGISTIC TASKS				
091-63B-3428	Perform Classification Inspections on Tactical Vehicles	UNIT	AN	3

#### **CHAPTER 3**

#### **MOS/Skill Level Tasks**

#### Skill Level 1

#### Subject Area 1: ENGINE

# Service Engine Assembly on a Wheeled Vehicle 091-63B-1300

**Conditions:** In a field or garrison environment given a representative wheeled vehicle (M998 series/M939 series), required materials, general mechanic's tool kit, and applicable technical manuals (TM(s)).

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Serviced engine assembly on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used the applicable publications.		
2. Followed prescribed safety procedures.		
3. Practiced maintenance discipline.		
4. Checked for leaks.		
5. Checked for proper torque of engine mounting bolts.		
6. Serviced breather, if applicable.		
7. Changed oil, if required, by service or the Army Oil Analysis Program (AOAP).		
<ol> <li>Annotated The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
9. Maintained tools and equipment.		

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

#### References

Required			
LO 9-2320-272-12			
TM 9-2320-272-10			
TM 9-2320-272-24-1			
TM 9-2320-272-24-2			
TM 9-2320-272-24-3			
TM 9-2320-272-24-4			
TM 9-2320-272-24P-1			
TM 9-2320-272-24P-2			

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

Related

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-24P-1 TM 9-2320-280-24P-2 Related

### Perform Internal/External Timing on a Combustion Ignition Engine 091-63B-1344

**Conditions:** In a field or garrison environment given a wheel vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision/assistance, and a DA Form 2404 (Equipment Inspection and Maintenance Worksheet) stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Perform internal/external timing on a combustion ignition engine in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Practiced shop safety and maintenance discipline.		
4. Performed internal and external timing per TM procedures.		
<ol><li>Performed a final operational test to verify timing on combustion ignition engine to specifications.</li></ol>		
<ol><li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li></ol>		
7. Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-2 TM 9-2320-280-34 TM 9-2320-365-34-1 TM 9-2815-237-34 TM 9-8000 Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-243

# Replace Cylinder Head on a Wheeled Vehicle 091-63B-1349

**Conditions:** In a field or garrison environment, given a M998 with a 6.5 Liter engine, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision/assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replace cylinder head on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed cylinder head assembly.		
5.	Inspected cylinder head assembly.		
6.	Installed cylinder head assembly and torqued fasteners to TM specifications.		
7.	Adjusted the intake and exhaust valves.		
8.	Performed a final operational check to verify rear main oil seal is replaced to specifications.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

Related

#### Replace Diesel Power Plant on a Wheeled Vehicle 091-63B-1353

**Conditions:** In a field or garrison environment, given a Family of Medium Tactical Vehicles (FMTV) series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision/assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replace diesel power plant on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Practiced shop safety and maintenance discipline.		
4. Disconnected all applicable fuel, oil, air, and coolant lines.		
5. Disconnected all applicable electrical components.		
6. Separated diesel power plant from transmission.		
7. Removed diesel power plant.		
8. Inspected diesel power plant.		
9. Installed diesel power plant.		
10. Connected all applicable fuel, oil, air, and coolant lines.		
11. Connected all applicable electrical components.		
<ol> <li>Performed a final operational check to verify cylinder head is replaced to specifications.</li> </ol>		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
14. Maintained tools and equipment.		

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

#### References

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 Related TM 9-8000

#### Subject Area 2: ENGINE LUBRICATION SYSTEM

#### Replace Rear Main Oil Seal on a Wheeled Vehicle 091-63B-1348

**Conditions:** In a field or garrison environment, given a Family of Medium Tactical Vehicles (FMTV) series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision/assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Repaired rear main oil seal on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Practiced shop safety and maintenance discipline.		
4. Removed rear main oil seal.		
5. Cleaned oil seal housing.		
6. Inspected oil seal housing.		
7. Installed rear oil seal.		
<ol> <li>Performed a final operational check to verify rear main oil seal is replaced to specifications.</li> </ol>		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
10. Maintained tools and equipment.		

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

#### References

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 Related TM 9-8000

# Replace Input/Output Oil Seal on a Wheeled Vehicle 091-63B-1354

**Conditions:** In a field or garrison environment, given a M998 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision/assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The input/output oil seal must be replaced on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed oil seal.		
5.	Cleaned seal housing.		
6.	Installed oil seal.		
7.	Checked for leaks.		
8.	Verified fault was corrected.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-24P-1 TM 9-2320-280-24P-2 TM 9-2320-280-34 Related TM 9-8000

#### Subject Area 3: FUEL SYSTEM

#### Correct Malfunction of Fuel Pump on a Wheeled Vehicle 091-63B-1302

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of fuel pump on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Described how systems and components operate and function.		
6.	Inspected systems and components.		
7.	Performed troubleshooting of systems and components.		
8.	Replaced defective components(s).		
9.	Repaired defective component(s).		
10.	Adjusted systems and components.		
11.	Performed required preventive maintenance checks and services (PMCS).		
12.	Verified fault was corrected.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 FM 4-30.3 TM 9-243 TM 9-8000

# Troubleshoot Fuel System Malfunctions on a Wheeled Vehicle 091-63B-1301

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics on fuel system malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publication	ons		
2. Selected and used correct tools and te equipment (TMDE).	st, measurement, and diagnostic		
3. Followed prescribed safety procedures			
4. Practiced maintenance discipline.			
5. Checked fuel level.			
6. Checked for fuel contamination.			
7. Checked for leaking fuel tank.			
8. Checked for leaking fuel lines.			
9. Checked for proper fuel pressure.			
10. Checked for proper fuel to injector.			
11. Inspected injector pump.			
12. Verified fault was corrected.			
13. Completed The Army Maintenance Ma required.	nagement System (TAMMS) forms, as		
14. Maintained tools and equipment.	-		

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

#### References

Required	Related
TM 9-2320-279-10-1	AR 385-10
TM 9-2320-279-10-2	AR 750-1
TM 9-2320-279-20-1	AR 750-43
TM 9-2320-279-20-3	DA PAM 738-750
	FM 4-30.3
	TM 9-243
	TM 9-8000

# Replace Fuel Fitting and Lines on a Wheeled Vehicle 091-63B-1303

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced fuel fittings and lines on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Described how systems and components operate and function.		
6.	Inspected systems and components.		
7.	Performed troubleshooting of systems and components.		
8.	Replaced defective component(s).		
9.	Repaired defective component(s).		
10.	Adjusted systems and component(s).		
11.	Performed required preventive maintenance checks and services (PMCS).		
12.	Verified fault was corrected.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14.	Maintained tools and equipment.		

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

#### References

Required	Related		
TM 9-2320-279-10-1	AR 385-10		
TM 9-2320-279-10-2	AR 750-1		
TM 9-2320-279-20-1	AR 750-43		
TM 9-2320-279-20-2	DA PAM 738-750		
TM 9-2320-279-20-3	TM 9-243		
TM 9-2320-279-24P-1	TM 9-8000		

## Troubleshoot Glow Plug System on a Wheeled Vehicle 091-63B-1304

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics on the glow plug system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Ran battery test and checked glow plug circuit connections.		
6.	Checked for 75-125 amps with rotary switch in run position.		
7.	Checked glow plug cycle.		
8.	Checked current with glow plug controller disconnected.		
9.	Measured voltage at socket 6 of glow plug controller.		
10.	Verified fault had been corrected.		
11.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
12.	Maintained tools and equipment.		

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

References	
Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
TM 9-2320-280-24P-1	TM 9-243
TM 9-2320-280-24P-2	TM 9-8000

# Correct Malfunction of Glow Plug System on a Wheeled Vehicle 091-63B-1305

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of glow plug system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Ran battery test and checked glow plug circuit connections.		
6.	Checked for 75-125 amps in rotary switch in run position.		
7.	Checked glow plug cycle.		
8.	Checked current with glow plug controller disconnected.		
9.	Measured voltage at socket 6 of glow plug controller.		
10.	Verified fault had been corrected.		
11.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
12.	Maintained tools and equipment.		

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

References	
Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
	DA PAM 738-750
	TM 11-6625-3052-14
	TM 9-243
	TM 9-8000

## Repair Fuel Injection System on a Wheeled Vehicle 091-63B-1350

**Conditions:** In a field or garrison environment given a wheeled vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Repair distributor type fuel injection system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Inspected system components for serviceability. a. Bleed system. b. Check for leaks.		
5.	Replaced defective components.		
6.	Set timing of injector pump, if injector pump is replaced.		
7.	Performed a final operational check to verify cylinder head is replaced to specifications.		
8.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
9.	Maintained tools and equipment.		

Required	Related
TM 9-2320-280-10	TM 9-2320-272-24-1
TM 9-2320-280-20-1	TM 9-2320-272-24-2
TM 9-2320-280-20-2	TM 9-2320-272-24-3
TM 9-2320-280-20-3	TM 9-2320-272-24-4
TM 9-2320-280-34	TM 9-2320-272-24P-1
TM 9-2815-224-34&P	TM 9-2320-272-24P-2
	TM 9-2320-279-10-1
	TM 9-2320-279-10-2
	TM 9-2320-279-20-1
	TM 9-2320-279-20-2
	TM 9-2320-279-20-3
	TM 9-2320-279-24P-1
	TM 9-2320-279-34-1

### References Required

## Related

TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 TM 9-8000

### Subject Area 5: COOLING SYSTEM

## Troubleshoot Cooling System Malfunctions on a Wheeled Vehicle 091-63B-1306

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics on the cooling system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked coolant level and mixture.		
6.	Checked fan belts.		
7.	Inspected radiator cap, hoses, surge tank, radiator, oil cooler, and fittings for damage, blockage, or large leaks.		
8.	Checked thermostat.		
9.	Checked fan for proper operation.		
10.	Checked head gasket for leaks.		
11.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
12.	Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000
TM 9-2320-365-24P	

# Replace Radiator on a Wheeled Vehicle 091-63B-1307

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, and applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced radiator on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Drained cooling system by opening drain cocks on radiator and engine.		
5.	Disconnected lines and hoses to radiator.		
6.	Removed locknuts and tilted radiator away from engine while removing.		
7.	Ensured drain cocks were closed on radiator and engine.		
8.	Installed radiator and tightened locknuts.		
9.	Connected or replaced lines and hoses to radiator.		
10.	Filled and checked antifreeze level and mixture.		
11.	Verified fault had been corrected.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
13.	Maintained tools and equipment.		

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

#### References

Required		
TM 9-2320-365-10		
TM 9-2320-365-20-1		
TM 9-2320-365-20-2		
TM 9-2320-365-20-3		
TM 9-2320-365-20-4		
TM 9-2320-365-20-5		
TM 9-2320-365-24P		

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

## Correct Malfunction of Fan and Drive on a Wheeled Vehicle 091-63B-1308

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of fan and drive on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	<ul> <li>Corrected malfunction of fan and fan drive.</li> <li>a. Removed radiator and shroud.</li> <li>b. Marked position of blade.</li> <li>c. Removed fan drive assembly.</li> <li>d. Removed fan and fan drive.</li> <li>e. Aligned fan blade onto fan drive and tightened bolts to correct torque specifications.</li> <li>f. Installed fan drive assembly to water pump.</li> <li>g. Installed radiator and shroud.</li> <li>h. Connected any lines and hoses.</li> </ul>		
6.	<ul> <li>Corrected malfunction of drive belts.</li> <li>a. Checked condition of drive belts.</li> <li>b. Loosened adjustment and bracket belts.</li> <li>c. Removed belts.</li> <li>d. Installed new belts.</li> <li>e. Pretightened bolts.</li> <li>f. Adjusted belt tension using belt tension gauge.</li> <li>g. Torqued bolts to specified ft-lb.</li> </ul>		
7.	Verified fault had been corrected.		
8.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
9.	Maintained tools and equipment.		

### References

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P

#### Related

AR 385-10 AR 750-10 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

## Replace Water Pump on a Wheeled Vehicle 091-63B-1358

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle or M998, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The water pump must be replaced on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed water pump.		
5.	Cleaned mounting surfaces.		
6.	Installed water pump gasket.		
7.	Installed water pump.		
8.	Performed a final operational check to verify cylinder head is replaced to specifications.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 Related TM 9-2320-280-10 TM 9-2320-280-24P-2 TM 9-8000

### Subject Area 6: ELECTRICAL SYSTEM

## Troubleshoot Charging System Malfunction on a Wheeled Vehicle 091-63B-1309

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics of charging system malfunction on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		GO	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked condition of belts.		
6.	Checked all electrical connections.		
7.	Checked protective control box.		
8.	Checked voltage at alternator.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

Required	Related
TM 9-2320-279-10-1	AR 385-10
TM 9-2320-279-10-2	AR 750-1
TM 9-2320-279-20-1	AR 750-43
TM 9-2320-279-20-2	DA PAM 738-750
TM 9-2320-279-20-3	TM 9-243
TM 9-2320-279-24P-1	TM 9-8000

## Correct Malfunction of Alternator on a Wheeled Vehicle 091-63B-1310

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of alternator on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Performed diagnostic procedures to locate charging system malfunctions.		
6.	Adjusted alternator to 28.5 volts.		
7.	Adjusted voltage regulator.		
8.	Replaced voltage regulator.		
9.	Replaced alternator.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

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

Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000

# Troubleshoot Starting System Malfunction on a Wheeled Vehicle 091-63B-1311

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics on starting system malfunction on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
<ul> <li>5. Troubleshoot starting system malfunction.</li> <li>a. Performed diagnostic procedures to locate charging system malfunctions.</li> <li>b. Adjusted alternator to 28.5 volts.</li> <li>c. Replaced alternator.</li> <li>d. Adjusted belt tension.</li> </ul>		
<ul> <li>6. Replaced neutral safety switch.</li> <li>a. Tagged all leads.</li> <li>b. Removed neutral safety switch.</li> <li>c. Adjusted switch or replaced switch, as applicable.</li> </ul>		
7. Verified fault had been corrected.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
9. Maintained tools and equipment.		

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

Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
	TM 9-243
	TM 9-8000

# Troubleshoot Electrical System Malfunctions on a Wheeled Vehicle 091-63B-1312

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostics of electrical system malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
5. Disconnected negative battery cable.		
6. Checked light bulbs.		
7. Checked for voltage at light socket.		
8. Checked ground.		
9. Checked light switch.		
10. Checked wires for breaks.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
12. Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
	TM 9-243
	TM 9-8000

# Correct Malfunction of Sending Units and Warning Switches on a Wheeled Vehicle 091-63B-1313

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of sending units and warning switches on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
<ul> <li>5. Troubleshoot electrical gauges.</li> <li>a. Visually inspected all wires leading to electrical gauges.</li> <li>b. Checked for voltage at gauge.</li> <li>c. Checked resistance at gauge.</li> <li>d. Replaced defective gauge or repaired wire.</li> </ul>		
<ul> <li>6. Corrected malfunction of sending units and warning switches.</li> <li>a. Checked oil pressure gauge and warning light circuits for continuity.</li> <li>b. Tested oil pressure sending unit and gauge.</li> </ul>		
7. Verified fault had been corrected.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
9. Maintained tools and equipment.		

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

Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000

## Correct Malfunction of Batteries on a Wheeled Vehicle 091-63B-1314

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of batteries on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked battery terminals.		
6.	Conducted specific gravity test on battery cells.		
7.	Disconnected negative battery cable first.		
8.	Installed new batteries.		
9.	Verified fault had been corrected.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

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

Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-243	DA PAM 738-750
TM 9-6140-200-14	TM 9-8000

## Repair Engine Wiring Harness on a Wheeled Vehicle 091-63B-1315

**Conditions:** In a field or garrison environment given an M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Repaired engine wiring harness on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Visually inspected wiring harness.		
6.	Checked for voltage at component.		
7.	Checked ground.		
8.	Repaired wire as required.		
9.	Verified fault had been corrected.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

References				
Required	Related			
TM 9-2320-279-10-1	AR 385-10			
TM 9-2320-279-10-2	AR 750-1			
TM 9-2320-279-20-1	AR 750-43			
TM 9-2320-279-20-2	DA PAM 738-750			
TM 9-2320-279-20-3	TM 9-243			
	TM 9-8000			

## Correct Malfunction of 100 AMP Alternator on a Wheeled Vehicle 091-63B-1337

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of 100 amp alternator on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
5. Checked for loose, broken, or missing alternator belts.		
6. Tested alternator circuit 568 for proper voltage.		
7. Repaired or replaced faulty wires.		
8. Replaced alternator.		
9. Verified fault had been corrected.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
11. Maintained tools and equipment.		

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

Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
	TM 9-243
	TM 9-8000

# Repair Electrical Interface Systems on a Wheeled Vehicle 091-63B-1347

**Conditions:** In a field or garrison environment given a M984A1 vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Repaired the electrical interface system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Pe	erformance Measures	<u>GO</u>	<u>NO GO</u>
	1. Selected and used applicable publications.		
	<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
	<ol><li>Practiced shop safety and maintenance discipline.</li></ol>		
	4. Rough adjusted crane electrical interface.		
	5. Repaired boom angle switches.		
	6. Repaired crane overload switches.		
	<ul> <li>7. Adjusted crane electrical interface.</li> <li>a. Perform 7,300 pound weight adjustment.</li> <li>b. Perform 9,700 pound weight adjustment.</li> <li>c. Perform 14,200 pound weight adjustment.</li> <li>d. Perform 16,500 pound weight adjustment.</li> </ul>		
	<ol> <li>Performed a final operational check to verify electrical interface system is repaired to specifications.</li> </ol>		
	<ol><li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li></ol>		
1	0. Maintained tools and equipment.		

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

#### References

Required TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 Related TM 9-8000

### Repair Electrical Systems on a Wheeled Vehicle 091-63B-1359

**Conditions:** In a field or garrison environment given a M998 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The electrical systems must be repaired on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Checked fuse box and fusible links.		
5.	Located faults by testing circuits for voltage and continuity.		
6.	Repaired cab and engine wiring harness.		
7.	Inspected and replaced components or parts as necessary.		
8.	Performed a final operational check to verify cylinder head is replaced to specifications.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-24P-1 TM 9-2320-280-24P-2 TM 9-2320-280-34 Related TM 9-8000

### Subject Area 9: TRANSMISSION

# Troubleshoot Transmission Malfunctions on a Wheeled Vehicle 091-63B-1316

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on the transmission malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>G0</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
5. Checked fluid level.		
6. Checked for bent or broken linkage.		
7. Adjusted linkage.		
8. Verified fault had been corrected.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
10. Maintained tools and equipment.		

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

Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
TM 9-2320-280-24P-1	TM 9-243
	TM 9-8000

## Service Transmission Assembly on a Wheeled Vehicle 091-63B-1317

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Serviced the transmission assembly on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Set vehicle parking brake.		
6.	Verified vehicle was at operating temperature.		
7.	Inspected oil for grit, foaminess, or milkiness.		
8.	Removed and discarded filter.		
9.	Installed new filter.		
10.	Torqued transmission pan bolts to TM specifications.		
11.	Checked for leaks.		
12.	Verified fault had been corrected.		
13.	Verified vehicle was fully mission capable.		
14.	Completed The Army Maintenance Management System (TAMMS) forms as, required.		
15.	Maintained tools and equipment.		

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

#### References

Required
TM 9-2320-280-10
TM 9-2320-280-20-1
TM 9-2320-280-20-2
TM 9-2320-280-20-3
TM 9-2320-280-24P-1

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

# Replace Transmission on a Wheeled Vehicle 091-63B-1352

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replace transmission on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed propeller shaft.		
5.	Removed air lines, hydraulic lines, and linkages.		
6.	Separated transmission from power plant.		
7.	Removed transmission assembly.		
8.	Separated transmission assembly.		
9.	Inspected transmission assembly.		
10.	Replaced seals, as needed.		
11.	Installed transmission assembly.		
12.	Connected propeller assembly.		
13.	Connected air lines, hydraulic lines, and linkages.		
14.	Performed a final operational check to verify cylinder head is replaced to specifications.		
15.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
16.	Maintained tools and equipment.		

## References

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 **Related** TM 9-8000

# Replace Clutch Assembly on a Wheeled Vehicle 091-63B-1355

**Conditions:** In a field or garrison environment given a M998 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The clutch disk must be replaced on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed clutch disk.		
5.	Inspected clutch housing, controls, and linkage.		
6.	Installed clutch disk.		
7.	Adjusted clutch controls and linkage.		
8.	Verified fault was corrected.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-24P-1 TM 9-2320-280-24P-2 TM 9-2320-280-34 Related TM 9-8000

### Subject Area 10: TRANSFER

# Troubleshoot Transfer Malfunctions on a Wheeled Vehicle 091-63B-1318

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures to locate transfer malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Inspected transfer assembly and components.		
6.	Performed troubleshooting of transfer assembly.		
7.	Replaced defective components of the transfer assembly, as needed.		
8.	Verified fault had been corrected.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

References				
Required	Related			
TM 9-2320-365-10	AR 385-10			
TM 9-2320-365-20-1	AR 750-1			
TM 9-2320-365-20-2	AR 750-43			
TM 9-2320-365-20-3	DA PAM 738-750			
TM 9-2320-365-20-4	TM 9-243			
TM 9-2320-365-20-5	TM 9-8000			
TM 9-2320-365-24P				

# Repair Power Take Off on a Wheeled Vehicle 091-63B-1356

**Conditions:** In a field or garrison environment given a M977 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The power take off (PTO) must be repaired on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>	c	
3. Practiced shop safety and maintenance discipline.		
4. Removed external components from PTO.		
5. Tagged shims for installation.		
6. Removed internal components.		
7. Marked position of shifter fork for installation.		
8. Inspected components in accordance with applicable TM.		
9. Installed internal components.		
10. Set PTO transfer shaft end play.		
11. Ensured clutch collar and shifter are properly installed.		
12. Ensured PTO shifter shaft will move in two positions.		
13. Installed external components.		
14. Completed The Army Maintenance Management System (TAMMS) for required.	ms, as ——	
15. Maintained tools and equipment.		

## References

Required TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-24P-1 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 **Related** TM 9-8000

# Replace Transfer on a Wheeled Vehicle 091-63B-1360

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The transfer must be replaced on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Practiced shop safety and maintenance discipline.		
4. Disconnected control linkage.		
5. Removed propeller shaft.		
6. Removed transfer assembly.		
7. Replaced oil seals.		
8. Replaced transfer assembly.		
9. Connected control linkages.		
10. Installed propeller shaft.		
<ol> <li>Performed a final operational check to verify cylinder head is replaced to specifications.</li> </ol>		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
13. Maintained tools and equipment.		

## References

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P TM 9-2320-365-34-1 **Related** TM 9-8000

#### Subject Area 11: PROPELLER SHAFTS

### Correct Malfunction of Drive Line Assembly 091-63B-1319

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Correct malfunction of drive line assembly on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Replaced propeller shafts. a. Jacked up front wheels to release sprig. b. Marked propeller shaft flange position for installation. c. Loosened cap and slid propeller shaft away from flange.		
6.	Replaced universal joints. a. Removed C-rings from spider cross. b. Installed new U-joints.		
7.	Installed propeller shaft and torqued bolts to specified torque.		
8.	Verified fault had been corrected.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
TM 9-2320-280-24P-1	TM 9-243
TM 9-2320-280-24P-2	TM 9-8000

### Subject Area 12: AXLES

## Troubleshoot Axle Malfunctions on a Wheeled Vehicle 091-63B-1320

**Conditions:** In a field or garrison environment given Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures to locate axle malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked if front wheel drive was engaged.		
6.	Checked for loose lug nuts.		
7.	Checked lubrication level in differentials.		
8.	Checked for damaged wheel bearings.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-2320-365-24P
TM 9-2320-365-20-5	TM 9-243
	TM 9-8000

# Replace Front Axle Spindle on a Wheeled Vehicle 091-63B-1321

**Conditions:** In a field or garrison environment given Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the front axle spindle on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Removed caliper.		
6.	Removed locking hub.		
7.	Removed outer adjusting nut, adjusting lock, and inner adjusting nut.		
8.	Removed outer wheel bearing, rotor, seal, and inner wheel bearing.		
9.	Removed nuts, splash shield, and caliper bracket from spindle.		
10.	Installed components in reverse order and torqued fasteners to TM specifications.		
11.	Verified fault had been corrected.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
13.	Maintained tools and equipment.		

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

#### References

Required		
TM 9-2320-365-10		
TM 9-2320-365-20-1		
TM 9-2320-365-20-2		
TM 9-2320-365-20-3		
TM 9-2320-365-20-4		
TM 9-2320-365-20-5		
TM 9-2320-365-24P		

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

## Replace Differential on a Wheeled Vehicle 091-63B-1351

**Conditions:** In a field or garrison environment given a M998 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replace differential on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Removed axle assembly.		
5.	Removed differential.		
6.	Inspected axle and differential.		
7.	Installed differential.		
8.	Inspected axle housing.		
9.	Checked for leaks.		
10.	Performed a final operational check to verify cylinder head is replaced to specifications.		
11.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
12.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 Related TM 9-8000

#### Subject Area 13: BRAKES

## Troubleshoot Brake System Malfunctions 091-63B-1323

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures to locate brake system malfunctions in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked air pressure gauge for correct pounds per square inch (psi).		
6.	Checked all lines and hoses for leaks.		
7.	Checked for proper mechanical adjustments.		
8.	Checked operation of air brake chambers.		
9.	Removed brake drum or brake caliper and pads on disc system.		
10.	Checked all moving brake parts for binding or damage.		
11.	Inspected brake mechanisms.		
12.	Correctly reinstall removed parts.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14.	Maintained tools and equipment.		

References	
Required	Related
LO 9-2320-279-12	AR 385-10
TM 9-2320-279-10-1	AR 750-1
TM 9-2320-279-10-2	AR 750-43
TM 9-2320-279-20-1	DA PAM 738-750
TM 9-2320-279-20-2	TM 9-243
TM 9-2320-279-20-3	TM 9-8000

## Replace Brake Lines and Fittings on a Wheeled Vehicle 091-63B-1324

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the brake lines and fittings on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Performed diagnostic procedures to determine fault.		
3.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
4.	Followed prescribed safety procedures.		
5.	Practiced maintenance discipline.		
6.	Set parking brake.		
7.	Drained air pressure.		
8.	Used a line wrench to disconnect defective brake line from fitting.		
9.	Drained fluid into container.		
10.	Removed defective fitting.		
11.	Installed new fitting and line.		
12.	Filled and bled brake system.		
13.	Checked for leaks.		
14.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
15.	Maintained tools and equipment.		

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

Required	Related
TM 9-2320-279-10-1	AR 385-10
TM 9-2320-279-10-2	AR 750-1
TM 9-2320-279-20-1	AR 750-43
TM 9-2320-279-20-2	DA PAM 738-750
TM 9-2320-279-20-3	TM 9-243
TM 9-2320-279-24P-1	TM 9-8000

# Replace Hand Brake Shoes on a Wheeled Vehicle 091-63B-1325

**Conditions:** In a field or garrison environment given a M1083 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 5988-E (Equipment Inspection Maintenance Worksheet) stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the hand brake shoes on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Performed diagnostic procedures to determine fault.		
3.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
4.	Followed prescribed safety procedures.		
5.	Practiced maintenance discipline.		
6.	Chocked vehicle wheels.		
7.	Removed propeller shaft.		
8.	Removed transfer output shaft and park brake drum.		
9.	Removed springs.		
10.	Removed parking brake cable.		
11.	Removed parking brake shoes.		
12.	Installed brake shoes in reverse order.		
13.	Adjusted parking brake.		
14.	Replaced propeller shaft and torqued fasteners to TM specifications.		
15.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
16.	Maintained tools and equipment.		

### References Required TM 9-2320-366-20-4

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-8000

# Replace Disk Brake Components on a Wheeled Vehicle 091-63B-1326

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the disk brake components on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Supported caliper to prevent damage to brake lines.		
6.	Removed brake pads.		
7.	Cleaned brake caliper.		
8.	Inspected and/or replaced caliper, caliper piston, dust boot, rotor, and pads as needed.		
9.	Positioned pads to adapter.		
10.	Installed yoke and caliper.		
11.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
12.	Maintained tools and equipment.		

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

#### References

**Required** TM 9-2320-280-10 TM 9-2320-280-20-2 Related

## Replace Master Cylinder on a Wheeled Vehicle 091-63B-1327

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the master cylinder on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Removed and plugged all lines.		
6.	Removed master cylinder and drained fluid into a container.		
7.	Installed new master cylinder and torqued bolts to TM specifications.		
8.	Bled system.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

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#### References Required

Requirea	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
	DA PAM 738-750
	TM 9-243
	TM 9-8000

# Replace Air Hydraulic Cylinder on a Wheeled Vehicle 091-63B-1328

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced air hydraulic cylinder on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Drained air reservoirs.		
6.	Removed and plugged all lines.		
7.	Noted position of all brass fittings.		
8.	Removed air-hydraulic cylinder and drained fluid into a container.		
9.	Wrapped fitting with tape and installed onto air-hydraulic cylinder.		
10.	Installed air-hydraulic cylinder.		
11.	Bled system.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
13.	Maintained tools and equipment.		

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

### References

Required		
TM 9-2320-365-10		
TM 9-2320-365-20-1		
TM 9-2320-365-20-2		
TM 9-2320-365-20-3		
TM 9-2320-365-20-4		
TM 9-2320-365-20-5		
TM 9-2320-365-24P		

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

# Replace Treadle Valve on a Wheeled Vehicle 091-63B-1329

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the treadle valve on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Drained air reservoirs.		
6.	Removed brake pedal and protective control box.		
7.	Removed all lines and fittings from treadle valve.		
8.	Inspected lines and fittings for damage.		
9.	Removed three studs securing treadle valve to fire wall.		
10.	Installed new treadle valve.		
11.	Wrapped fittings with sealing tape.		
12.	Reconnected all lines and fittings.		
13.	Installed brake pedal and protective control box.		
14.	Charged air system and checked the brakes.		
15.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
16.	Maintained tools and equipment.		

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

# Replace Hydro-Boost on a Wheeled Vehicle 091-63B-1330

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the hydro-boost on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Removed master cylinder.		
6.	Marked and disconnected the high-pressure lines and one return line from hydro- boost.		
7.	Used container to catch brake fluid.		
8.	Removed push rod from bell crank.		
9.	Removed hydro-boost.		
10.	Installed hydro-boost.		
11.	Installed master cylinder.		
12.	Filled and bled system.		
13.	Verified fault had been corrected.		
14.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
15.	Maintained tools and equipment.		

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

References			
Required			
TM 9-2320-280-10			
TM 9-2320-280-20-1			
TM 9-2320-280-20-2			

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

26 January 2005

# Replace Air Compressor and Belts on a Wheeled Vehicle 091-63B-1331

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the air compressor and belts on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Drained air tanks and removed radiator and alternator belts.		
6.	Removed air compressor pulley bolts and used air compressor pulley wrench to loosen belts.		
7.	Removed air line and fuel return line clamp.		
8.	Removed air compressor and discarded gasket.		
9.	Removed air compressor pulley.		
10.	Installed pulley on new air compressor.		
11.	Installed new air compressor.		
12.	Reconnected air line and fuel return line clamp.		
13.	Installed new belts and correctly adjusted tension.		
14.	Reinstalled and properly adjusted alternator belts.		
15.	Reinstalled and filled radiator.		
16.	Verified fault had been corrected.		
17.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
18.	Maintained tools and equipment.		

Required TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-24P

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

# Inspect Air Brake Control Valves on a Wheeled Vehicle 091-63B-1332

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Inspected the air brake control valves on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Listened for leaks while applying parking brake.		
6.	Applied soapy water to lines and fittings and checked for leaks.		
7.	Inspected valve for cracked fittings.		
8.	Verified fault had been corrected.		
9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
10.	Maintained tools and equipment.		

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

### References

Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000
TM 9-2320-365-24P	

# Replace Air Lines and Fittings on a Wheeled Vehicle 091-63B-1339

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series wheel vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced air lines and fittings on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Released air pressure before removing air system components.		
6.	Removed air line and fitting.		
7.	Wrapped all male threads with anti-seize tape.		
8.	Installed new line and fitting.		
9.	Verified fault had been corrected.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

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

#### References

Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000
TM 9-2320-365-24P	

## Correct Malfunction of Air Dryer with Filter on a Wheeled Vehicle 091-63B-1340

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of air dryer with filter on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	formance Measures	<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Released air pressure before removing air system components.		
6.	Disconnected battery ground cable.		
7.	Removed air lines from pressure switch.		
8.	Disconnected pressure switch from wiring harness.		
9.	Wrapped fittings with sealing tape.		
10.	Installed lines and connected wiring harness.		
11.	Tied lines back with new plastic tie downs.		
12.	Verified fault had been corrected.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14.	Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000
TM 9-2320-365-24P	

# Replace Service Brake Shoes on a Wheeled Vehicle 091-63B-1343

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced the service brake shoes on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Caged brakes.		
6.	Removed hub and drum assembly.		
7.	Removed springs and brake components.		
8.	Removed brake shoes.		
9.	Installed new brake shoes.		
10.	Installed springs and brake components.		
11.	Installed hub and drum assembly.		
12.	Performed brake adjustment.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14.	Maintained tools and equipment.		

References Required TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-20-1	<b>Related</b> AR 385-10 AR 750-1 AR 750-43
TM 9-2320-279-20-2	DA PAM 738-750
TM 9-2320-279-20-3	TM 9-243
TM 9-2320-279-24P-1	TM 9-8000

### Subject Area 14: WHEELS AND HUBS

# Correct Malfunction of Knuckle and Geared Hub on a Wheeled Vehicle 091-63B-1322

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected the malfunction of knuckle and geared hub on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1. \$	Selected and used applicable publications.		
	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5. (	Corrected malfunction of knuckle and geared hub. a. Removed tire and supported vehicle. b. Removed steering arm cover from geared hub. c. Bent tab on lock washer away from locknut. d. Used locknut wrench to remove locknut and washer from spindle.		
6. /	<ul> <li>Adjusted geared hub spindle bearing.</li> <li>a. Removed drain plug from geared hub and drained fluid into container.</li> <li>b. Removed vent line.</li> <li>c. Removed tie rod end using a puller.</li> <li>d. Removed half shaft.</li> <li>e. Supported geared hub and removed upper and lower ball joints.</li> <li>f. Removed geared hub.</li> <li>g. Supported geared hub during installation.</li> <li>h. Installed ball joints and torqued cap screws to proper specification.</li> <li>i. Installed half shaft.</li> <li>k. Applied sealing compound to retaining cap screw and tightened to proper specification.</li> <li>n. Installed cap screws to rotor and tightened to proper specification.</li> <li>m. Installed lock washer and locknut on spindle and tightened to proper specification and seated bearing.</li> <li>n. Loosened and retightened locknut to 25 foot-pound and bent tab on lock washer.</li> </ul>		
	o. Installed steering arm cover.		
	p. Installed tire.		

7. Verified fault had been corrected.

Performance Measures		NO GO
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
9. Maintained tools and equipment.		

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

## References

Related
AR 385-10
AR 750-1
AR 750-43
DA PAM 738-750
TM 9-243
TM 9-8000

# Correct Malfunction of Wheel and Tire Assembly on a Wheeled Vehicle 091-63B-1333

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of wheel and tire assembly on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked for leaks by applying soapy water on the tire and valve stem.		
6.	Checked tire wear by using tire depth gauge.		
7.	Replaced worn tire or repaired inner tube.		
8.	Used tire cage when inflating tire.		
9.	Verified fault had been corrected.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

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

### References

Required	Related
TM 9-2320-280-10	AR 385-10
TM 9-2320-280-20-1	AR 750-1
TM 9-2320-280-20-2	AR 750-43
TM 9-2320-280-20-3	DA PAM 738-750
	TM 9-243
	TM 9-8000

### Subject Area 15: STEERING

# Troubleshoot Steering System Malfunctions on a Wheeled Vehicle 091-63B-1334

**Conditions:** In a field or garrison environment given a M977 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures to locate steering system malfunctions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked tire pressure.		
6.	Checked hydraulic fluid level.		
7.	Checked hoses and fittings for leaks.		
8.	Checked all steering linkage.		
9.	Checked steering gear box for loose mounting or damage.		
10.	Checked suspension system.		
11.	Checked wheel bearings.		
12.	Checked lug nuts.		
13.	Checked leaf springs.		
14.	Verified fault was corrected.		
15.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
16.	Maintained tools and equipment.		

Required TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-24P-1

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

## Correct Malfunction of Steering System 091-63B-1335

**Conditions:** In a field or garrison environment given a M998 series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of steering system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures			<u>GO</u>	<u>NO GO</u>
	1.	Selected and used applicable publications.		
	2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
	3.	Followed prescribed safety procedures.		
	4.	Practiced maintenance discipline.		
	5.	<ul><li>Replaced power steering lines and fittings.</li><li>a. Removed steering cylinder stone shield.</li><li>b. Tagged all lines.</li><li>c. Used container to catch fluid.</li><li>d. Removed lines and fittings.</li></ul>		
	6.	<ul><li>Replaced power assist cylinder.</li><li>a. Removed cylinder.</li><li>b. Disassembled socket assembly.</li><li>c. Installed components in reverse order.</li><li>d. Refilled system and checked for leaks.</li></ul>		
	7.	<ul> <li>Corrected malfunction of tie rod assembly.</li> <li>a. Set parking brake.</li> <li>b. Raised vehicle off the ground and properly supported.</li> <li>c. Removed cotter pin.</li> <li>d. Removed tie rod using puller.</li> <li>e. Installed new tie rod in reverse order and torqued to proper torque.</li> <li>f. Installed new cotter pin.</li> <li>g. Lowered vehicle.</li> <li>h. Lubed vehicle.</li> <li>i. Conducted front end alignment.</li> </ul>		
	8.	Verified fault was corrected.		
	9.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
	10.	Maintained tools and equipment.		

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-24P-1 TM 9-2320-280-24P-2

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

## Adjust Steering System on a Wheeled Vehicle 091-63B-1345

**Conditions:** In a field or garrison environment given a M998 series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Adjusted steering system on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Positioned steering wheel to halfway point.		
5.	Adjusted sector shaft screw in accordance with applicable TMs.		
6.	Rotated steering wheel in both directions and checked for pulsation.		
7.	Adjusted worm screw in accordance with applicable TMs.		
8.	Rotated steering wheel in both directions and checked for pulsation.		
9.	Performed a final operational check to verify steering system is adjusted to specifications.		
10.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
11.	Maintained tools and equipment.		

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

#### References

Required TM 9-2320-280-10 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 Related TM 9-8000

### Subject Area 18: HOIST, WINCH, AND POWER TAKE OFF

# Troubleshoot Winch Malfunction on a Wheeled Vehicle 091-63B-1336

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures of the winch malfunction on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Practiced maintenance discipline.		
5.	Checked reservoir for proper oil level.		
6.	Checked if power take off (PTO) engages.		
7.	Checked PTO linkage for brakes or adjustment.		
8.	Checked drum clutch.		
9.	Checked drum lock.		
10.	Checked winch control cable for damage.		
11.	Checked oil lines for damage.		
12.	Checked oil return line oil filter for leaks.		
13.	Checked if bypass was indicated on hydraulic oil tank filter.		
14.	Checked pump for leaks or overheating.		
15.	Checked winch motor for leaks.		
16.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
17.	Maintained tools and equipment.		

Required FM 9-43-2 TC 43-35 TM 9-2320-365-10 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5

#### Related

AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-2320-279-10-1 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-243 TM 9-8000

# Repair Hydraulic Winch Motor on a Wheeled Vehicle 091-63B-1357

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The hydraulic winch motor must be repaired on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Practiced shop safety and maintenance discipline.		
4.	Inspected parts and components.		
5.	Replaced parts and components.		
6.	Performed a final operational check to verify cylinder head is replaced to specifications.		
7.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
8.	Maintained tools and equipment.		

References	
Required	Related
TM 9-2320-365-10	LO 9-2320-279-12
TM 9-2320-365-20-1	TM 9-2320-279-10-1
TM 9-2320-365-20-2	TM 9-2320-279-10-2
TM 9-2320-365-20-3	TM 9-2320-279-20-1
TM 9-2320-365-20-4	TM 9-2320-279-20-2
TM 9-2320-365-20-5	TM 9-2320-279-20-3
TM 9-2320-365-24P	TM 9-2320-279-24P-1
TM 9-2320-365-34-1	TM 9-2320-279-34-1
	TM 9-2320-279-34-2
	TM 9-2320-279-34-3
	TM 9-8000

### Subject Area 20: CENTRAL TIRE INFLATION SYSTEM (CTIS)

# Troubleshoot Central Tire Inflation System 091-63B-1338

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on the Central Tire Inflation System (CTIS) on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>NO GO</u>
1. Selected and used applicable publications.		
2. Selected and used correct tools and test, measurement, equipment (TMDE).	and diagnostic ——	
3. Followed prescribed safety procedures.		
4. Released air pressure before removing air system compo	onents. —	
5. Followed troubleshooting procedures outlined in vehicle	тм. —	
<ol> <li>Completed The Army Maintenance Management System required.</li> </ol>	n (TAMMS) forms, as	
7. Maintained tools and equipment.		

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

#### References

Related AR 385-10 AR 750-1 AR 750-43 DA PAM 738-750 TM 9-243 TM 9-8000

# Replace CTIS Pressure Switch on a Wheeled Vehicle 091-63B-1341

**Conditions:** In a field or garrison environment given a FMTV series vehicle, required materials, general mechanic's tool kit, applicable TM(s), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Replaced Central Tire Inflation System (CTIS) pressure switch on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1	. Selected and used applicable publications.		
2	. Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3	. Followed prescribed safety procedures.		
4	. Practiced maintenance discipline.		
5	. Released air pressure before removing air system components.		
6	. Disconnected battery ground cable.		
7	. Removed air lines from pressure switch.		
8	. Disconnected pressure switch from wiring harness.		
9	. Wrapped fittings with sealing tape.		
10	. Installed lines and connected wiring harness.		
11	. Tied lines back with new plastic tie downs.		
12	. Verified fault had been corrected.		
13	. Completed The Army Maintenance Management System (TAMMS) forms, as required.		
14	. Maintained tools and equipment.		

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

## References

Related
AR 385-10
AR 750-1
AR 750-43
DA PAM 738-750
TM 9-243
TM 9-8000

# Correct Malfunction of CTIS Front and Rear Air Seals on a Wheeled Vehicle 091-63B-1342

**Conditions:** In a field or garrison environment given a Family of Medium Tactical Vehicles (FMTV) series vehicle, required materials, general mechanic's tool kit, applicable technical manuals (TM(s)), and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Corrected malfunction of Central Tire Inflation System (CTIS) front and rear air seals on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
<ol><li>Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).</li></ol>		
3. Followed prescribed safety procedures.		
4. Practiced maintenance discipline.		
5. Released air pressure before removing air system components.		
6. Removed malfunctioning wheel valve.		
7. Ensured compressed air source did not exceed 30 pounds per square inch (psi).		
8. Inspected wheel valve assembly for cracks, leaks, or stripped threads.		
9. Checked air lines for damage, crimps, or leaks.		
10. Verified fault had been corrected.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		
12. Maintained tools and equipment.		

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

### References

Required	Related
TM 9-2320-365-10	AR 385-10
TM 9-2320-365-20-1	AR 750-1
TM 9-2320-365-20-2	AR 750-43
TM 9-2320-365-20-3	DA PAM 738-750
TM 9-2320-365-20-4	TM 9-243
TM 9-2320-365-20-5	TM 9-8000
TM 9-2320-365-24P	

### Subject Area 21: GENERAL MAINTENANCE TASKS

## Repair Boom Extensions on a Wheeled Vehicle 091-63B-1346

**Conditions:** In a field or garrison environment given a M984A1 vehicle, repair parts, general mechanic's tool kit, A31 tool set, applicable technical manuals (TM(s)), additional tools and equipment as indicated in TMs, supervision and assistance, and a DA Form 2404 stating the problem.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Repaired the boom extensions on a wheeled vehicle in accordance with the applicable technical publications, procedures, and specifications. When this task was completed, the vehicle was fully mission capable or maintenance actions, required to be performed by other than 63B personnel, were identified.

Performance Measures		<u>G0</u>	<u>NO GO</u>
1.	Selected and used applicable publications.		
2.	Selected and used correct tools and test, measurement, and diagnostic equipment (TMDE).		
3.	Followed prescribed safety procedures.		
4.	Troubleshoot the M984A1 hydraulic pump flow output. a. Measure crane/winch hydraulic pump flow output. b. Measure high pressure filter input flow. c. Adjust main relief calve pressure.		
5.	Removed extension number 1 and wear pads.		
6.	Removed extension number 2 and wear pads.		
7.	Removed extension number 1 and 2 cylinders and wear pads.		
8.	Installed extension number 1 and 2 cylinders and wear pads into extension number 2.		
9.	Installed extension number 1 and 2 cylinders and wear pads into extension number 1.		
10.	Installed extension assembly into the boom.		
11.	Performed a final operational check to verify boom extensions are repaired to specifications.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
13.	Maintained tools and equipment.		

**Required** TM 9-2320-279-10-1 TM 9-2320-279-10-2 TM 9-2320-279-34-3 Related TM 9-8000

#### Skill Level 3

#### Subject Area 1: ENGINE

## Perform Diagnostic Procedures on Wheeled Vehicle's Diesel Engine 091-63B-3402

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures of diesel engine in accordance with technical publications, procedures, and specifications. When this task was completed, the diesel engine was fully functional.

Performance Measures		<u>NO GO</u>
<ol> <li>Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.</li> </ol>		
2. Determined maintenance action to be performed.		
3. Verified task was within shop capability/authorization.		
<ol> <li>Verified proper tools were available to inspect, repair/replace, test, and adjust system components.</li> </ol>		
<ol><li>Diagnosed engine fault(s) and determined maintenance action(s) to be performed.</li></ol>		
6. Verified repair parts were identified and requisitioned as required.		
7. Verified applicable publications were available.		
<ol> <li>Repaired/replaced or adjusted engine components as necessary to correct malfunction.</li> </ol>		
9. Ensured task was performed to standards.		
10. Followed all safety precautions.		
11. Performed final inspection to ensure system was fully mission capable.		
<ol> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ol>		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3

Required TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

### Subject Area 2: ENGINE LUBRICATION SYSTEM

## Replace Oil Pump 091-63B-3419

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The oil pump must be replaced in accordance with applicable technical manual (TM) procedures and specifications. When this task is completed, the equipment or end item will be fully mission capable or required maintenance actions to be performed by other than 63B personnel will be identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Reviewed work request.		
2. Performed initial inspection.		
3. Determined maintenance action to be performed.		
4. Ensured task is within shop capability/authorization.		
5. Ensured proper tools are available to perform this task.		
6. Ensured parts are identified and requisitioned as required.		
7. Ensured applicable publications are available.		
8. Assigned personnel to perform task.		
9. Ensured all safety precautions are followed.		
10. Provided assistance as necessary.		
11. Ensured task is performed to acceptable standards.		
12. Conducted an in-process inspection.		
13. Performed a final inspection.		
14. Critiqued personnel on performance of the task.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1

Required TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

# Replace Manifold, Oil Transfer 091-63B-3420

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The manifold must be replaced in accordance with applicable technical manual (TM) procedures and specifications. When this task is completed, the equipment or end item will be fully mission capable or required maintenance actions to be performed by other than 63B personnel will be identified.

Performance Measures		<u>NO GO</u>
1. Reviewed work request.		
2. Performed initial inspection.		
3. Determined maintenance action to be performed.		
4. Ensured task is within shop capability/authorization.		
5. Ensured proper tools are available to perform this task.		
6. Ensured parts are identified and requisitioned as required.		
7. Ensured applicable publications are available.		
8. Assigned personnel to perform task.		
9. Ensured all safety precautions are followed.		
10. Provided assistance as necessary.		
11. Ensured task is performed to acceptable standards.		
12. Conducted an in-process inspection.		
13. Performed a final inspection.		
14. Critiqued personnel on performance of the task.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3

Required TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

#### Subject Area 3: FUEL SYSTEM

## Perform Diagnostic Procedures on Wheeled Vehicle's Fuel System 091-63B-3400

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on a wheeled vehicle's fuel system in accordance with technical publications, procedures, and specifications. When this task was completed, the fuel system was fully functional.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1	. Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2	. Determined maintenance action to be performed.		
3	. Verified task was within shop capability/authorization.		
4	. Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5	. Performed initial inspection.		
6	. Verified repair parts were identified and requisitioned, as required.		
7	. Verified applicable publications were available.		
8	. Diagnosed fuel system fault(s) and determined maintenance action to be performed.		
9	. Ensured task was performed to acceptable standards.		
10	. Followed all safety precautions.		
11	. Performed a final inspection to ensure the fuel system was fully mission capable.		
12	. Followed The Army Maintenance Management System (TAMMS) procedures.		
13	. Completed TAMMS forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1

Required TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

# Perform Diagnostic Procedures on Wheeled Vehicle's Fuel Injection System 091-63B-3417

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** You must accurately identify the source of all malfunctions and apply the proper troubleshooting procedures. You must correct all malfunctions under the chief engineer's supervision and your level of maintenance. You must record all other malfunctions above your level of maintenance on DA Form 2404.

#### Performance Measures

1. Applied the following troubleshooting procedures until the malfunction had been isolated.



- a. If the system indicated a lack of fuel, checked the following:
  - (1) Fuel level in day tank.
  - (2) Fuel supply valve position (open or closed).
  - (3) Fuel system to ensure it is primed.
  - (4) Fuel strainers for clogs (if applicable).
  - (5) Fuel filters for clogs or metal particles.
  - (6) Fuel pump and tank for loose or cracked lines.
  - (7) Lines for restrictions.
  - (8) Injector rack or control level to ensure it is in full fuel position.
  - (9) Fuel pump relief valve for operability (if applicable).
  - (10) Fuel pump to ensure it is rotating.
  - (11) Fuel injector nozzle tips or cups for clogs.
- b. If the system indicated sufficient fuel, checked the following:
  - (1) Fuel supply to see if it is adequate.
  - (2) Fuel supply valve to ensure it is open.
  - (3) Fuel system to ensure it is primed.
  - (4) Fuel strainers for clogs (if applicable).
  - (5) Fuel filter for clogs or metal.
  - (6) Fuel tank for loose or cracker lines.
  - (7) Lines for restrictions.

#### **Performance Measures**

GO NO GO

(8) Return system for proper sized lines, restricted fitting, overflow value, or other devices used to prevent air pockets.

- (9) Fuel to determine contamination.
- (10) Fuel injectors to determine if it is contaminated.
- (11) Fuel pump relief valve to see if it is faulty (if applicable).
- (12) Fuel pump to ensure it is rotating.
- (13) Diameter of fuel suction to ensure it is the proper size.
- (14) Balance orifice for proper size.
- (15) Fuel oil for recommended grade.
- (16) Fuel pump for proper operation.
- c. If symptom indicated inoperative fuel pump, checked the following:
  - (1) Fuel pump for revolutions per minute (RPM) versus flow.
  - (2) Governor control.
  - (3) Throttle leakage and travel (if applicable).
  - (4) Idle speed.
  - (5) Calibrated rail against manufacturer's specifications.
  - (6) Automatic frequency control/equivalent full charge (AFC/EFC) plunger for proper operation.
- 2. Performed authorized repairs (if applicable).

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

#### References Required Related TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1

Required TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Subject Area 5: COOLING SYSTEM

## Perform Diagnostic Procedures on Wheeled Vehicle's Cooling System 091-63B-3403

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures to locate malfunction(s) of vehicle's cooling system in accordance with technical publications, procedures, and specifications. When this task was completed, the cooling system was fully functional.

Pe	formance Measures	<u>GO</u>	<u>NO GO</u>
1	. Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2	. Diagnosed system to verify/identify fault(s).		
3	. Determined maintenance action to be performed.		
4	. Verified task was written within shop capability/authorization.		
5	<ul> <li>Verified proper tools were available to inspect, repair/replace, test, and adjust system components.</li> </ul>		
6	. Verified repair parts were identified and requisitioned as required.		
7	. Verified applicable publication(s) were available.		
8	. Repaired/replaced or adjusted system components as required.		
g	. Performed preventive maintenance checks and services (PMCS).		
10	. Followed all safety precautions.		
11	. Performed task to acceptable standards.		
12	. Tested system to ensure vehicle was fully mission capable.		
13	<ul> <li>Completed The Army Maintenance Management System (TAMMS) forms, as required.</li> </ul>		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1

Required TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Subject Area 6: ELECTRICAL SYSTEM

## Perform Diagnostic Procedures On Wheeled Vehicle's Electrical System 091-63B-3401

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on vehicle's electrical system in accordance with technical publications, procedures, and specifications. When this task was completed, the electrical system was fully functional.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Determined maintenance action to be performed.		
3.	Verified task was within shop capability/authorization.		
4.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5.	Performed initial inspection.		
6.	Verified repair parts were identified and requisitioned, as required.		
7.	Verified applicable publications were available.		
8.	Repaired/replaced or adjusted malfunctioning components.		
9.	Followed all safety precautions.		
10.	Performed preventive maintenance checks and services (PMCS).		
11.	Verified system operated correctly.		
12.	Completed task to acceptable standards.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 10-3930-660-20 TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-272-24-4 TM 9-2320-273-20 TM 9-2320-273-34 TM 9-2320-279-20-3

Required TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-2 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-2 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Perform Diagnostics Electrical Interface System 091-63B-3422

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The electrical system must be inspected, tested, and repaired in accordance with applicable technical publication and procedures. When this task was completed, the electrical system was fully mission capable.

Performance Measures		<u>NO GO</u>
1. Reviewed work request.		
2. Ensured task is within shop capability/authorization.		
3. Ensured applicable technical publications are available.		
<ol> <li>Ensured proper tools are available to inspect, repair/replace, and test the electrical interface system.</li> </ol>		
5. Performed initial inspection.		
<ol><li>Diagnosed electrical interface system fault(s) and determined maintenance action to be performed.</li></ol>		
a. Beam angle switches.		
b. Crane overload switches.		
7. Identified repair parts and requisition, as required.		
8. Assigned personnel to perform task.		
9. Ensured all safety precautions and procedures are followed.		
10. Provided assistance when necessary.		
11. Ensured task is performed to acceptable standards.		
12. Conducted an in-process inspection.		
<ol> <li>Performed a final inspection to ensure the electrical interface system is fully mission capable.</li> </ol>		
14. Critiqued personnel on performance of the task.		
15. Ensured maintenance forms are completed, as required.		
16. Ensured tools and equipment are properly maintained.		

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

Required TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

### Subject Area 9: TRANSMISSION

## Perform Diagnostic Procedures on Wheeled Vehicle's Standard Transmission (ARNG/USAR) 091-63B-3404

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The transmission assembly must be diagnosed in accordance with technical publications, procedures, and specifications. When this task is completed, the transmission will be fully functional.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Assigned personnel to perform task.		
2. Verified applicable publications are available.		
<ol><li>Determined maintenance fault through troubleshooting procedures listing in applicable technical manual (TM).</li></ol>		
4. Verified repair parts, if required.		
5. Verified all safety precautions are followed.		
6. Verified TMDE is used correctly.		
7. Provided assistance, if necessary.		
8. Verified task is performed to standards.		

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

References

Required TM 9-2320-260-20 TM 9-2320-361-20 TM 9-2320-363-20-1 TM 9-2320-363-20-2

## Perform Diagnostic Procedures on Automatic Transmissions 091-63B-3418

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on track vehicle's transmission in accordance with technical publications, procedures, and specifications. When this task was completed, the transmission was fully functional.

Perf	ormance Measures	<u>G0</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed transmission to determine problem or malfunction(s).		
3.	Determined maintenance action to be performed.		
4.	Verified task was within shop capability/authorization.		
5.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
6.	Verified repair parts were identified and requisitioned, as required.		
7.	Verified applicable publications were available.		
8.	Repaired/replaced or adjusted transmission or its components.		
9.	Tested transmission to ensure vehicle was fully mission capable.		
10.	Followed all safety precautions.		
11.	Performed task to acceptable standards.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

References	
Required	Related
TM 9-2320-272-24-1	
TM 9-2320-272-24-2	
TM 9-2320-272-24-3	
TM 9-2320-273-34	
TM 9-2320-279-20-1	
TM 9-2320-279-20-2	
TM 9-2320-279-20-3	
TM 9-2320-279-34-1	
TM 9-2320-279-34-2	
TM 9-2320-279-34-3	
TM 9-2320-280-20-1	
TM 9-2320-280-20-2	

Required TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

#### Subject Area 13: BRAKES

## Perform Diagnostic Procedures on Wheeled Vehicle's Brake System 091-63B-3405

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on a light vehicle's brake system in accordance with technical publications, procedures, and specifications. When this task was completed, the brake system was fully functional.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed brake system to determine malfunction of system or components.		
3.	Determined maintenance action to be performed.		
4.	Verified task was within shop capability/authorization.		
5.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
6.	Verified repair parts were identified and requisitioned, as required.		
7.	Verified applicable publications were available.		
8.	Repaired/replaced or adjusted brake system components as necessary to correct malfunction.		
9.	Tested brake system to ensure vehicle was fully mission capable.		
10.	Followed all safety precautions.		
11.	Performed task to acceptable standards.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1

Required TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

# Perform Diagnostic Procedures on an M1070 Brake System 091-63B-3411

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on M1074 trailer brake in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the trailer brake was fully functional.

Perf	ormance Measures	<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Performed diagnostic procedures on M1074 trailer brake components to determine maintenance action to be performed.		
3.	Verified task was within shop capability/authorization.		
4.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5.	Verified repair parts were identified and requisitioned, as required.		
6.	Verified applicable publications were available.		
7.	Repaired/replaced or adjusted M1074 trailer brake components as required to correct malfunction(s).		
8.	Tested trailer brake to ensure equipment was fully mission capable.		
9.	Verified all safety precautions were followed.		
10.	Used TMDE correctly.		
11.	Followed all environmental regulations, practices, and policies.		
12.	Verified that The Army Maintenance Management System (TAMMS) forms were completed, as required.		

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

References

**Required** TM 9-2320-360-20-1 TM 9-2320-360-20-2

## Subject Area 15: STEERING

## Perform Diagnostic Procedures on Wheeled Vehicle's Steering System 091-63B-3406

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on wheel vehicle's steering system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the steering system was fully functional.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed steering system to determine system problems.		
3.	Determined maintenance action to be performed.		
4.	Verified task was within shop capability/authorization.		
5.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
6.	Verified repair parts were identified and requisitioned, as required.		
7.	Verified applicable publications were available.		
8.	Repaired/replaced or adjusted steering system components as needed to correct malfunction(s).		
9.	Tested steering system to ensure vehicle was fully mission capable.		
10.	Followed all safety precautions.		
11.	Used TMDE correctly.		
12.	Performed task to acceptable standards.		
13.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3

Required TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Perform Diagnostic Procedures on M1000 Steering System 091-63B-3413

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), M1000 trailer, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on M1000 steering system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the steering system was fully functional.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed M1000 steering system components to determine maintenance action to be performed.		
3.	Verified task was within shop capability/authorization.		
4.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5.	Verified repair parts were identified and requisitioned, as required.		
6.	Verified applicable publications were available.		
7.	Repaired/replaced or adjusted M1000 steering system components as necessary.		
8.	Tested M1000 steering system to ensure vehicle was fully mission capable.		
9.	Followed all safety precautions.		
10.	Used TMDE correctly.		
11.	Followed all environmental regulations, practices, and policies.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

References Required TM 9-2330-381-14

#### Subject Area 16: SPRINGS AND SHOCKS

## Perform Diagnostic Procedures on an M1000 Suspension System 091-63B-3412

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), M1000 trailer, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on M1000 suspension system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the suspension system was fully functional.

Perf	formance Measures	<u>G0</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed M1000 suspension system to determine maintenance action to be performed.		
3.	Verified task was within shop capability/authorization.		
4.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5.	Verified repair parts were identified and requisitioned, as required.		
6.	Verified applicable publications were available.		
7.	Repaired/replaced or adjusted M1000 suspension system components as needed to correct malfunction(s).		
8.	Tested M1000 suspension system to ensure equipment was fully mission capable.		
9.	Followed all safety precautions.		
10.	Used TMDE correctly.		
11.	Followed all environmental regulations, practices, and policies.		
12.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

References Required TM 9-2330-381-14

### Subject Area 18: HOIST, WINCH, AND POWER TAKE OFF

## Perform Diagnostic Procedures on Wheeled Vehicle's Winch System 091-63B-3409

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on vehicle's winch system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the winch assembly was fully functional.

Pe	erf	ormance Measures	<u>GO</u>	<u>NO GO</u>
	1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
	2.	Performed troubleshooting of vehicle winch system to determine maintenance action to be performed.		
	3.	Verified task was written within shop capability/authorization.		
	4.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
	5.	Verified repair parts were identified and requisitioned as required.		
	6.	Verified applicable publication(s) were available.		
	7.	Repaired/replaced or adjusted winch system or components as necessary to correct malfunction(s).		
	8.	Followed all safety precautions.		
	9.	Used TMDE correctly.		
1	0.	Tested vehicle winch system to ensure it was fully mission capable.		
1	1.	Performed task to acceptable standards.		
1	2.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		
1	3.	Ensured all environmental policies and procedures were followed.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2

Required TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

### Subject Area 20: CENTRAL TIRE INFLATION SYSTEM (CTIS)

## Perform Diagnostic Procedures on Wheeled Vehicle's Central Tire Inflation System 091-63B-3414

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on wheel vehicle CTIS in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the CTIS was fully functional.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1	. Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2	. Diagnosed vehicle CTIS to determine maintenance action to be performed.		
3	. Verified task was within shop capability/authorization.		
4	. Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5	. Verified repair parts were identified and requisitioned, as required.		
6	. Verified applicable publications were available.		
7	. Replaced/repaired or adjusted CTIS components as necessary to correct system malfunction(s).		
8	. Tested vehicle CTIS to ensure system and vehicle were fully mission capable.		
9	. Followed all safety precautions.		
10	. Used TMDE correctly.		
11	. Followed all environmental regulations, practices, and policies.		
12	. Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1

Required TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

#### Subject Area 21: GENERAL MAINTENANCE TASKS

## Perform Diagnostic Procedures on Vehicle's Hydraulic System 091-63B-3407

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on a vehicle's hydraulic system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the hydraulic system was fully functional.

Performance Measures		<u>GO</u>	<u>NO GO</u>
1.	Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2.	Diagnosed vehicle hydraulic system to determine/verify malfunction(s).		
3.	Determined maintenance action to be performed.		
4.	Verified task was within shop capability/authorization.		
5.	Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
6.	Verified repair parts were identified and requisitioned, as required.		
7.	Verified applicable publications were available.		
8.	Repaired/replaced or adjusted steering system components as needed to correct malfunction(s).		
9.	Tested vehicle hydraulic system to ensure that is was fully mission capable.		
10.	Followed all safety precautions.		
11.	Verified proper TMDE was used correctly.		
12.	Ensured environmental regulations were followed.		
13.	Performed task to acceptable standards.		
14.	Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1

Required TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Perform Diagnostic Procedures on Wheeled Vehicle's Air System 091-63B-3410

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic procedures on wheel vehicle's air induction system in accordance with applicable technical publications, procedures, and specifications. When this task was completed, the air induction system was fully functional.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1	. Verified accuracy of DA Form 2404 or Unit Level Logistics System (ULLS) equivalent.		
2	. Performed diagnostics to determine maintenance action to be performed.		
3	. Verified task was within shop capability/authorization.		
4	. Verified proper tools were available to inspect, repair/replace, test, and adjust system components.		
5	. Verified repair parts were identified and requisitioned, as required.		
6	. Verified applicable publications were available.		
7	. Repaired/replaced or adjusted air induction system components as needed to correct malfunction(s).		
8	. Tested system to ensure vehicle air induction system was fully mission capable.		
9	. Followed all safety precautions.		
10	. Used TMDE correctly.		
11	. Followed all environmental regulations or policies.		
12	Performed task to acceptable standards.		
13	. Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2

Required TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

# Perform Diagnostic Procedures on Wheeled Vehicle's Engine Air Induction System 091-63B-3421

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** The engine air induction system must be maintained and its components replaced or repaired in accordance with the applicable technical publications, procedures, and specifications. When this task is completed, the engine air induction system must be fully mission capable or maintenance actions required to be performed by other than 63B personnel be identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Reviewed work request.		
2. Performed initial inspection.		
3. Determined maintenance action to be performed.		
4. Ensured task is within shop capability/authorization.		
5. Ensured proper tools are available.		
6. Identified and requisitioned repair parts, if required.		
<ol> <li>Ensured The Army Maintenance Management System (TAMMS) procedures are followed.</li> </ol>		
8. Ensured applicable publications are available.		
9. Assigned personnel to perform task.		
10. Ensured all safety precautions are followed.		
11. Provided assistance, if necessary.		
12. Ensured task is performed to acceptable standards.		
13. Conducted an in-process inspection.		
14. Performed a final inspection.		
15. Critiqued personnel on performance of task.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1

Required TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

### Subject Area 22: RECOVERY (ASI H8 Tasks ONLY)

## Perform Battlefield Damage Assessment and Repair (BDAR) on Wheeled Vehicles 091-63B-3408

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed BDAR on wheeled vehicles in accordance with applicable BDAR technical publications, procedures, and specifications. After completion, the vehicle was fully mission capable.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1	. Performed BDAR initial inspection.		
2	. Diagnosed vehicle malfunction to determine maintenance action to be performed.		
3	. Verified task was within shop capability/authorization.		
4	. Verified proper tools were available to perform BDAR action.		
5	. Verified repair parts were identified and requisitioned as required.		
6	. Verified applicable publications were available to perform BDAR maintenance actions.		
7	. Performed BDAR/recovery or repairs needed to correct vehicle malfunction(s).		
8	. Followed all safety precautions.		
9	. Completed The Army Maintenance Management System (TAMMS) forms, as required.		

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

References	
Required	Related
TM 9-2320-272-24-1	
TM 9-2320-272-24-2	
TM 9-2320-272-24-3	
TM 9-2320-273-34	
TM 9-2320-279-20-1	
TM 9-2320-279-20-2	
TM 9-2320-279-20-3	
TM 9-2320-279-34-1	
TM 9-2320-279-34-2	
TM 9-2320-279-34-3	
TM 9-2320-280-20-1	
TM 9-2320-280-20-2	
TM 9-2320-280-20-3	
TM 9-2320-280-34	
TM 9-2320-283-20-1	
TM 9-2320-283-20-3	

Required TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## Plan Recovery Operations 091-63B-3415

**Conditions:** In a field or garrison environment given a representative wheel vehicle (M984 series), required materials, general mechanic's tool kit, and applicable references including FM 5-125, FM 9-43-2, TM 9-2320-279-10-2.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Determined recovery methods, source of effort, and mechanical advantage needed in accordance with references.

Performance Measures	<u>G0</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
2. Reconnoitered area.		
3. Estimated situation.		
4. Calculated ratios.		
5. Obtained resistance.		
6. Verified solution.		
7. Erected rigging.		
8. Rechecked rigging.		

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

References

**Required** FM 5-125 FM 9-43-2 TM 9-2320-279-10-2

## Operate Oxyacetylene Equipment 091-63B-3416

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

Standards: Operated oxyacetylene equipment in accordance with applicable technical publications.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable technical publications.		
2. Followed all required safety procedures.		
3. Installed oxygen regulator and hoses.		
4. Installed acetylene regulator and hoses.		
5. Installed cutting torch.		
6. Adjusted oxygen acetylene working pressures.		
7. Checked for leaks using soap and water.		
8. Selected appropriate cutting tip.		
9. Lit and adjusted torch flame.		
10. Cut low carbon steel.		
11. Shut down, disassembled, and stowed equipment.		
12. Followed all environmental regulations, practices, and policies.		

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

#### References

Required TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-4 TM 9-2320-366-20-5

## Perform Battlefield Damage Assessment on Fuel System 091-63B-3423

**Conditions:** In a field environment given tools, Battlefield Damage Assessment and Repair (BDAR) Kit, damaged wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Supervised the organizational maintenance team or direct support maintenance support team (MST) that identified and performed repairs needed to restore a disabled piece of equipment to the minimum essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover. Completed all required paper work according to DA Pamphlet 738-750, DA Pamphlet 738-751, FM 4-30.3, and FM 9-43-2.

Performance Measures	<u>GO</u>	<u>NO GO</u>
<ol> <li>Briefed the organizational maintenance team or direct support MST on the upcoming mission to assess battlefield damage.</li> </ol>		
a. Identified point of contact at unit/site.		
b. Identified what equipment will be assessed for battlefield damage.		
c. Identified what equipment is needed for the upcoming mission.		
d. Coordinated logistics support.		
e. Planned primary and secondary routes to unit.		
<ul> <li>f. Ensured team received a copy of supported units radio frequencies and call signs.</li> </ul>		
<ol><li>Monitored assigned personnel to the team according to their qualifications and availability to meet the mission needs.</li></ol>		
3. Arranged for transportation to the site.		
4. Ensured that the proper battlefield assessment procedures are followed.		
a. Reviewed the operator/crew assessment and the safety checks made.		
b. Interviewed the operator/crew, if available.		
c. Performed self-test.		
<ul> <li>d. Tested equipment with the organization/direct support maintenance equipment.</li> </ul>		
5. Ensured that MST provided technical assistance to the organizational maintenance team as required.		
<ol><li>Ensured that MST prioritized repairs according to battlefield damage time guidelines.</li></ol>		
7. Ensured that all maintenance forms are filled out correctly.		
8. Ensured a system assessment summary is filled out correctly and turned in.		

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

References
Required
TM 9-2320-272-24-1
TM 9-2320-272-24-2
TM 9-2320-272-24-3
TM 9-2320-273-34
TM 9-2320-279-20-1
TM 9-2320-279-20-2
TM 9-2320-279-20-3
TM 9-2320-279-34-1
TM 9-2320-279-34-2
TM 9-2320-279-34-3
TM 9-2320-280-20-1
TM 9-2320-280-20-2
TM 9-2320-280-20-3
TM 9-2320-280-34
TM 9-2320-283-20-1
TM 9-2320-283-20-3
TM 9-2320-360-20-1
TM 9-2320-360-20-2
TM 9-2320-363-20-1
TM 9-2320-363-20-2
TM 9-2320-364-20-1
TM 9-2320-364-20-2
TM 9-2320-364-20-3
TM 9-2320-364-20-4
TM 9-2320-365-20-1
TM 9-2320-365-20-2
TM 9-2320-365-20-3
TM 9-2320-365-20-4
TM 9-2320-365-20-5
TM 9-2320-365-34-1
TM 9-2320-366-20-1
TM 9-2320-366-20-2
TM 9-2320-366-20-3
TM 9-2320-366-20-4
TM 9-2320-366-20-5
TM 9-2320-366-34-1
TM 9-2320-366-34-3
TM 9-2320-366-34-4

## Perform Battlefield Damage Assessment on Electrical System 091-63B-3424

**Conditions:** In a field environment given tools, Battlefield Damage Assessment and Repair (BDAR) Kit, damaged wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Perform BDAR on electrical system on a track vehicle in accordance with procedures in the appropriate references without causing damage to equipment or injury to personnel.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Briefed the organizational maintenance team or direct support maintenance support team (MST) on the upcoming mission to assess battlefield damage.		
	a. Identified point of contact at unit/site.		
	b. Identified what equipment will be assessed for battlefield damage.		
	c. Identified what equipment is needed for the upcoming mission.		
	d. Coordinated logistics support.		
	e. Planned primary and secondary routes to unit.		
	<li>f. Ensured team received a copy of supported units radio frequencies and call signs.</li>		
2.	Monitored assigned personnel to the team according to their qualifications and availability to meet the mission needs.		
3.	Arranged for transportation to the site.		
4.	Ensured that the proper battlefield assessment procedures are followed.		
	a. Reviewed the operator/crew assessment and the safety checks made.		
	b. Interviewed the operator/crew, if available.		
	c. Performed self-test.		
	<ul> <li>Tested equipment with the organization/direct support maintenance equipment.</li> </ul>		
	Ensured that MST provided technical assistance to the organizational aintenance team as required.		
	Ensured that MST prioritized repairs according to battlefield damage time idelines.		
7.	Ensured that all maintenance forms are filled out correctly.		
8.	Ensured a system assessment summary is filled out correctly and turned in.		

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

References
Required
TM 9-2320-272-24-1
TM 9-2320-272-24-2
TM 9-2320-272-24-3
TM 9-2320-273-34
TM 9-2320-279-20-1
TM 9-2320-279-20-2
TM 9-2320-279-20-3
TM 9-2320-279-34-1
TM 9-2320-279-34-2
TM 9-2320-279-34-3
TM 9-2320-280-20-1
TM 9-2320-280-20-2
TM 9-2320-280-20-3
TM 9-2320-280-34
TM 9-2320-283-20-1
TM 9-2320-283-20-3
TM 9-2320-360-20-1
TM 9-2320-360-20-2
TM 9-2320-363-20-1
TM 9-2320-363-20-2
TM 9-2320-364-20-1
TM 9-2320-364-20-2
TM 9-2320-364-20-3
TM 9-2320-364-20-4
TM 9-2320-365-20-1
TM 9-2320-365-20-2
TM 9-2320-365-20-3
TM 9-2320-365-20-4
TM 9-2320-365-20-5
TM 9-2320-365-34-1
TM 9-2320-366-20-1
TM 9-2320-366-20-2
TM 9-2320-366-20-3
TM 9-2320-366-20-4
TM 9-2320-366-20-5
TM 9-2320-366-34-1
TM 9-2320-366-34-3
TM 9-2320-366-34-4

# Perform Battlefield Damage Assessment on Power Train/Steering System 091-63B-3425

**Conditions:** In a field environment given tools, Battlefield Damage Assessment and Repair (BDAR) Kit, damaged wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Supervised the organizational maintenance team or direct support maintenance support team (MST) that identified and performed repairs needed to restore a disabled piece of equipment to the minimum essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover. Completed all required paper work according to DA Pamphlet 738-750, DA Pamphlet 738-751, FM 4-30.3, and FM 9-43-2.

Performance Measures	<u>GO</u>	<u>NO GO</u>
<ol> <li>Briefed the organizational maintenance team or direct support MST on the upcoming mission to assess battlefield damage.</li> </ol>		
a. Identified point of contact at unit/site.		
b. Identified what equipment will be assessed for battlefield damage.		
c. Identified what equipment is needed for the upcoming mission.		
d. Coordinated logistics support.		
e. Planned primary and secondary routes to unit.		
<ul> <li>f. Ensured team received a copy of supported units radio frequencies and call signs.</li> </ul>		
2. Monitored assigned personnel to the team according to their qualifications and availability to meet the mission needs.		
3. Arranged for transportation to the site.		
4. Ensured that the proper battlefield assessment procedures are followed.		
a. Reviewed the operator/crew assessment and the safety checks made.		
b. Interviewed the operator/crew, if available.		
c. Performed self-test.		
<ul> <li>d. Tested equipment with the organization/direct support maintenance equipment.</li> </ul>		
5. Ensured that MST provided technical assistance to the organizational maintenance team as required.		
<ol><li>Ensured that MST prioritized repairs according to battlefield damage time guidelines.</li></ol>		
7. Ensured that all maintenance forms are filled out correctly.		
8. Ensured a system assessment summary is filled out correctly and turned in.		

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

References
Required
TM 9-2320-272-24-1
TM 9-2320-272-24-2
TM 9-2320-272-24-3
TM 9-2320-273-34
TM 9-2320-279-20-1
TM 9-2320-279-20-2
TM 9-2320-279-20-3
TM 9-2320-279-34-1
TM 9-2320-279-34-2
TM 9-2320-279-34-3
TM 9-2320-280-20-1
TM 9-2320-280-20-2
TM 9-2320-280-20-3
TM 9-2320-280-34
TM 9-2320-283-20-1
TM 9-2320-283-20-3
TM 9-2320-360-20-1
TM 9-2320-360-20-2
TM 9-2320-363-20-1
TM 9-2320-363-20-2
TM 9-2320-364-20-1
TM 9-2320-364-20-2
TM 9-2320-364-20-3
TM 9-2320-364-20-4
TM 9-2320-365-20-1
TM 9-2320-365-20-2
TM 9-2320-365-20-3
TM 9-2320-365-20-4
TM 9-2320-365-20-5
TM 9-2320-365-34-1
TM 9-2320-366-20-1
TM 9-2320-366-20-2
TM 9-2320-366-20-3
TM 9-2320-366-20-4
TM 9-2320-366-20-5
TM 9-2320-366-34-1
TM 9-2320-366-34-3
TM 9-2320-366-34-4

# Perform Battlefield Damage Assessment on Hydraulic Distribution System 091-63B-3426

**Conditions:** In a field environment given tools, Battlefield Damage Assessment and Repair (BDAR) Kit, damaged wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Performed diagnostic on the power distribution system on a track vehicle in accordance with applicable references without causing damage to equipment and injury to personnel. When this task was completed, the vehicle or equipment was fully mission capable or required maintenance actions by other than 63B personnel had been identified.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected and used applicable publications.		
2. Selected and used correct tools and BDAR kit.		
3. Followed prescribed safety procedures.		
4. Performed diagnostic test.		
<ol><li>Performed a final operational check to verify part(s) were replaced to specifications.</li></ol>		
6. Verified fault had been corrected.		
7. Maintained tools and equipment.		
8. Completed DA Forms 5988-E, as required.		

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

References	
Required	Related
TM 9-2320-272-24-1	
TM 9-2320-272-24-2	
TM 9-2320-272-24-3	
TM 9-2320-273-34	
TM 9-2320-279-20-1	
TM 9-2320-279-20-2	
TM 9-2320-279-20-3	
TM 9-2320-279-34-1	
TM 9-2320-279-34-2	
TM 9-2320-279-34-3	
TM 9-2320-280-20-1	
TM 9-2320-280-20-2	
TM 9-2320-280-20-3	
TM 9-2320-280-34	
TM 9-2320-283-20-1	
TM 9-2320-283-20-3	
TM 9-2320-360-20-1	
TM 9-2320-360-20-2	
TM 9-2320-363-20-1	
TM 9-2320-363-20-2	

# References

Required TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4 TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-34-1 TM 9-2320-366-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

# Perform Battlefield Damage Assessment on Air/Hydraulic Brake System 091-63B-3427

**Conditions:** In a field environment given tools, Battlefield Damage Assessment and Repair (BDAR) Kit, damaged wheeled vehicle, and references.

Note: If representative equipment is not available, use applicable equipment and associated references.

**Standards:** Supervised the organizational maintenance team or direct support maintenance support team (MST) that identified and performed repairs needed to restore a disabled piece of equipment to the minimum essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover. Completed all required paper work according to DA Pamphlet 738-750, DA Pamphlet 738-751, FM 4-30.3, and FM 9-43-2.

Pe	erformance Measures	<u>G0</u>	<u>NO GO</u>
	<ol> <li>Briefed the organizational maintenance team or direct support MST on the upcoming mission to assess battlefield damage.</li> </ol>		
	a. Identified point of contact at unit/site.		
	b. Identified what equipment will be assessed for battlefield damage.		
	c. Identified what equipment is needed for the upcoming mission.		
	d. Coordinated logistics support.		
	e. Planned primary and secondary routes to unit.		
	<li>f. Ensured team received a copy of supported units radio frequencies and call signs.</li>		
	<ol> <li>Monitored assigned personnel to the team according to their qualifications and availability to meet the mission needs.</li> </ol>		
	3. Arranged for transportation to the site.		
	4. Ensured that the proper battlefield assessment procedures are followed.		
	a. Reviewed the operator/crew assessment and the safety checks made.		
	b. Interviewed the operator/crew, if available.		
	c. Performed self-test.		
	<ul> <li>d. Tested equipment with the organization/direct support maintenance equipment.</li> </ul>		
	<ol><li>Ensured that MST provided technical assistance to the organizational maintenance team as required.</li></ol>		
	<ol><li>Ensured that MST prioritized repairs according to battlefield damage time guidelines.</li></ol>		
-	7. Ensured that all maintenance forms are filled out correctly.		
8	8. Ensured a system assessment summary is filled out correctly and turned in.		

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

References
Required
TM 9-2320-272-24-1
TM 9-2320-272-24-2
TM 9-2320-272-24-3
TM 9-2320-273-34
TM 9-2320-279-20-1
TM 9-2320-279-20-2
TM 9-2320-279-20-3
TM 9-2320-279-34-1
TM 9-2320-279-34-2
TM 9-2320-279-34-3
TM 9-2320-280-20-1
TM 9-2320-280-20-2
TM 9-2320-280-20-3
TM 9-2320-280-34
TM 9-2320-283-20-1
TM 9-2320-283-20-3
TM 9-2320-360-20-1
TM 9-2320-360-20-2
TM 9-2320-363-20-1
TM 9-2320-363-20-2
TM 9-2320-364-20-1
TM 9-2320-364-20-2
TM 9-2320-364-20-3
TM 9-2320-364-20-4
TM 9-2320-365-20-1
TM 9-2320-365-20-2
TM 9-2320-365-20-3
TM 9-2320-365-20-4
TM 9-2320-365-20-5
TM 9-2320-365-34-1
TM 9-2320-366-20-1
TM 9-2320-366-20-2
TM 9-2320-366-20-3
TM 9-2320-366-20-4
TM 9-2320-366-20-5
TM 9-2320-366-34-1
TM 9-2320-366-34-3
TM 9-2320-366-34-4

# Subject Area 23: COMMON LOGISTIC TASKS

# Manage a Shop Safety Program 091-CLT-3001

**Conditions:** In a field or garrison environment given a maintenance site/facility, maintenance personnel, and applicable references.

**Standards:** Ensured personnel followed all safety procedures so that preventable accidents were avoided and if accidents occurred, that they were properly recorded and reported in accordance with applicable references.

Performance Measu	ires	<u>GO</u>	<u>NO GO</u>
1. Ensured all safe	ty references were on hand.		
	documented goals and requirements for a successful shop safety evention program.		
3. Briefed and regu	larly updated subordinates on shop safety program.		
4. Conducted initia	I safety inspections.		
5. Ensured initial s	afety concerns and violations were corrected.		
6. Conducted sche	duled and unscheduled safety inspections.		
	fety violations, reported the violations as required, and conducted tions to ensure violations were corrected.		
8. Kept necessary	records of safety inspections and accident reports.		
	al safety data sheet (MSDS) were prepared and maintained as cable work areas.		

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

References	
Required	Related
AR 190-13	AR 385-10
AR 220-1	AR 385-40
AR 700-138	AR 385-55
AR 750-1	
DA PAM 738-750	
FM 4-30.3	
TB 43-180	

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# Maintain a Publications Library 091-CLT-3002

**Conditions:** In a field or garrison environment given publications and storage location, local and higher headquarters publications indexes and publications procedures, standing operating procedure (SOP), and applicable forms and references.

**Standards:** Ensured required publications were on hand or ordered, publications were arranged and maintained properly, forms/records were properly maintained, and changes were posted in accordance with applicable references and local procedures.

Per	formance Measures	<u>GO</u>	<u>NO GO</u>
1.	Determined all publications required by the maintenance shop or section.		
2.	Reviewed and updated publications library SOP, as needed.		
3.	Ensured that technical publications on hand/on order were the most current in accordance with DA PAM 25-30.		
4.	Ensured that doctrinal, training, and organizational publications on hand/on order were the most current in accordance with DA PAM 25-30 and local listings.		
5.	Ensured that administrative publications on hand/on order were the most current in accordance with DA PAM 25-30.		
6.	Ensured that local and higher headquarters publications on hand/on order were the most current in accordance with DA PAM 25-30 and local listings.		
7.	Prepared DA Form 4569-1-R (Security Assistance Publication Requisition Code Sheet) in accordance with DA PAM 25-33.		
8.	Prepared the required transmittal form in accordance with DA PAM 25-33.		
9.	Prepared DA Form 17 (Requisition for Publications and Blank Forms) and DA Form 17-1 (Requisition for Publications and Blank Forms (Continuation Sheet) to request local and higher headquarters publications in accordance with DA PAM 25-33 and local/higher headquarters publications requisitioning procedures.		
10.	Ensured that published changes were posted to applicable publications in accordance with DA PAM 25-40 and publication change instructions.		
11.	Removed obsolete, rescinded, or superseded publications from library in accordance with DA PAM 25-40 and publication change instructions.		
12.	Arranged publications in proper order and in a suitable location in accordance with DA PAM 25-40.		
13.	Labeled binders used for storing library publications in accordance with AR 25-400-2 applicable) and DA PAM 25-40.		
14.	Notified personnel to return loaned publications to the library in a timely manner in accordance with SOP.		
15.	Updated Army Publishing Directorate (APD), local, and higher headquarters publications accounts, as required, in accordance with DA PAM 25-33 and local or higher headquarters publications account instructions.		

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

#### References

Required AR 25-400-2 DA PAM 25-30 DA PAM 25-33 DA PAM 25-40 DA FORM 17 DA FORM 17-1 DA FORM 4569-1-R Related AR 25-11

# Establish Maintenance Facilities 091-CLT-3003

**Conditions:** In a field or garrison environment given a maintenance site, maintenance personnel, applicable equipment, maintenance shop/section standing operating procedure (SOP), and applicable references.

**Standards:** Set up a maintenance shop facility suitable for accomplishing necessary maintenance functions in accordance with applicable references.

Performance Measures		<u>NO GO</u>
1. Ensured applicable references and publications were available.		
<ol><li>Identified commander's maintenance requirements for the accomplishment of the unit's mission.</li></ol>		
3. Set up the maintenance facility in accordance with SOP.		

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

References Required FM 4-30.3

# Assist in Preparing a Standing Operating Procedure 091-CLT-3004

**Conditions:** In a field or garrison environment, given FM 4-30.3, higher headquarters standing operating procedure (SOP), and commander's guidance.

**Standards:** Prepared a draft copy of a maintenance shop/section internal or external SOP for supervisor's review, comment, and approval in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured applicable publications were available.		
2. Ensured unit policies and commander's guidance were followed.		
3. Ensured shop operation policies were adequately addressed.		
4. Updated the shop SOP, as required.		

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

References Required FM 4-30.3

# Manage Tool Control Procedures 091-CLT-3005

**Conditions:** In a field or garrison environment, given applicable supply catalog(s), applicable references, and hand receipt forms.

Standards: Managed tool control procedures in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured applicable references were available.		
2. Established policies and procedures for the control of tools.		
<ol><li>Ensured all DA Form 2062s (Hand Receipt/Annex Number) were properly filled out and updated.</li></ol>		
<ol> <li>Ensured tools and equipment were inventoried in accordance with applicable references.</li> </ol>		
5. Ensured tool shortages were annotated on a shortage annex.		
6. Ensured subordinates applied property accountability procedures.		

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

## References

Related DA PAM 738-750

Required AR 190-13 AR 220-1 AR 385-10 AR 385-40 AR 700-138 AR 750-1 DA PAM 710-2-1 FM 1-02 FM 4-30.3 DA FORM 2062

# Manage Key Control Procedures 091-CLT-3006

**Conditions:** In a field or garrison environment given keys, key control rosters, key boxes/cabinets, and applicable publications.

Standards: Managed key control procedures in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured necessary publications were available.		
2. Established key control policies and procedures.		
3. Established key control access rosters.		
<ol> <li>Ensured personnel were aware of their responsibilities for the security and accountability of keys.</li> </ol>		
5. Ensured key control access rosters were properly maintained and adhered to.		

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

References Required AR 190-13 AR 190-51

# Manage the TMDE Calibration Program 091-CLT-3007

**Conditions:** In a field or garrison environment given test, measurement, and diagnostic equipment (TMDE), maintenance personnel, and applicable references.

Standards: Managed the TMDE calibration program in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured necessary publications were available.		
2. Reviewed and updated TMDE computer printout list.		
<ol><li>Ensured preventive maintenance checks and services (PMCS) and inventory of all TMDE and auxiliary equipment are conducted, as required.</li></ol>		
<ol> <li>Ensured TMDE was turned in for calibration in accordance with computer printouts.</li> </ol>		

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

References

**Required** AR 750-43 TB 43-180

# Recon Terrain/Route 091-CLT-3008

**Conditions:** In a field environment given a maintenance situation/operations order (OPORD), operational overlay, grid coordinates of destination, vehicle with personnel, and applicable references.

**Standards:** Performed a route/terrain reconnaissance and selected the most appropriate route to follow or the most appropriate location to set up a maintenance site in accordance with maintenance situation/OPORD and applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured necessary equipment and publications were available.		
2. Conducted a map reconnaissance of the terrain and route.		
3. Selected personnel for reconnaissance team.		
<ol> <li>Conducted a route reconnaissance to determine best access to destination and to ensure safety of personnel and equipment.</li> </ol>		
<ol><li>Reconned terrain to determine suitability for maintenance site use, to determine best avenues of entry and exit, and to ensure safety of personnel and equipment.</li></ol>		
6. Reported findings and conclusions to supervisors.		

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

References Required FM 4-30.3 FM 5-170

# Supervise Maintenance Operations 091-CLT-3009

**Conditions:** In a field or garrison environment given maintenance personnel, equipment, maintenance facility/site, standing operating procedures (SOPs), and applicable references.

**Standards:** Established and maintained an effective maintenance shop operation in accordance with SOPs and applicable references.

#### **Performance Measures**

- 1. Ensured unit maintenance procedures are in accordance with AR 750-1, DA PAM 750-35, and local major command (MACOM) policies.
  - a. Review unit SOPs for maintenance.
  - b. Inform unit personnel of changes in policy and new policy that impacts unit SOP.
- 2. Provided technical assistance to unit maintenance activities.
  - a. Inspect unit maintenance operations.
  - b. Identify shortcomings.
  - c. Make recommendations for corrective action.
  - d. Provide training in maintenance procedures.
- 3. Provided maintenance management to units.
  - a. Review reports (materiel condition status report [MCSR] and (Unit Level Logistics System-Ground [ULLS-G]).
  - b. Coordinate with higher-level maintenance activities.
  - c. Direct cross-leveling of maintenance assets/workload.
  - d. Prioritize maintenance efforts of units.

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

Related

#### References

Required AR 385-10 AR 385-40 AR 385-55 AR 600-55 AR 700-138 AR 700-4 AR 710-2 AR 725-50 AR 735-5 AR 750-43 DA PAM 25-30 DA PAM 710-2-1 DA PAM 710-2-2 DA PAM 738-750 DA PAM 750-1 DA PAM 750-35 FM 4-30.3

# Interpret Maintenance Operational Overlay 091-CLT-3010

**Conditions:** In a field or garrison environment given an operational overlay, map, maintenance situation/operations order (OPORD), and applicable references.

**Standards:** Interpreted the maintenance operational overlay by identifying key features and elements of the area of operation in accordance with applicable references.

Performance Measures	GO	<u>NO GO</u>
1. Ensured necessary references and materials were available.		
2. Identified mapping symbols on the operational overlay.		
3. Identified key features of the map and operational overlay.		
<ol> <li>Identified key elements of the area of operation on the map and operational overlay.</li> </ol>		
5. Updated the operational overlay, as necessary.		

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

References

**Required** FM 1-02 FM 4-30.3 FM 5-170

# Manage the Unit Level Logistics System (ULLS) 091-CLT-3013

**Conditions:** In a field or garrison environment given a computer system(s) with Unit Level Logistics System-Ground (ULLS-G) software, database of equipment files, associated Army Materiel Status System (AMSS) software, ULLS operator, and applicable references.

**Standards:** Supervised ULLS-G functions of a unit-level maintenance shop in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured necessary equipment and references were available.		
2. Ensured ULLS operator was properly trained.		
3. Reviewed the ULLS system flow of information to and from system interfaces.		
4. Reviewed ULLS-G maintenance forms for accuracy.		
<ul> <li>5. Analyzed ULLS-G reports and data to identify maintenance trends and problems.</li> <li>a. Document register.</li> <li>b. Prescribed load list (PLL) inventory report.</li> <li>c. Zero balance report.</li> <li>d. PLL excess management report.</li> <li>e. PLL inquiry.</li> <li>f. Non-mission capable (NMC) report.</li> </ul>		
<ul> <li>6. Analyzed AMSS reports and data to identify maintenance trends and problems.</li> <li>a. AMSS Authorization Report.</li> <li>b. Projected Fully Mission Capable (FMC) Rates Report.</li> <li>c. Equipment exception report.</li> <li>d. System status summary.</li> <li>e. Class IX failure data by administrative number.</li> </ul>		

- e. Class IX failure data by administrative number.
- f. Rollup by equipment identification code (EIC).
- g. Rollup by unit identification code (UIC).
- h. NMC Report.

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

#### References

**Required** AR 710-2 DA PAM 710-2-1

# Manage the Unit Army Oil Analysis Program (AOAP) 091-CLT-3014

**Conditions:** In a field or garrison environment given Automated Oil Analysis Log Printout, unit and higher headquarters AOAP standing operating procedures (SOPs) and policies, and applicable references.

Standards: Managed the unit AOAP in accordance with applicable references.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Ensured necessary publications were available.		
2. Reviewed the objectives and policies of the AOAP.		
3. Identified responsibilities of key AOAP personnel.		
4. Ensured sampling intervals and procedures were followed.		
<ol><li>Ensured samples are processed in accordance with applicable references and SOPs.</li></ol>		
<ol><li>Ensured lab results are processed in accordance with applicable references and SOPs and follow-up actions were completed.</li></ol>		

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

References Required DA PAM 738-750 TB 43-0211

# Subject Area 25: COMMON LOGISTIC TASKS

# Perform Classification Inspections on Tactical Vehicles 091-63B-3428

**Conditions:** In a field or shop environment given tools, test, measurement, and diagnostic equipment (TMDE), a selected wheeled vehicle, and references.

**Standards:** Inspected and tested the equipment in accordance with procedures and specifications in applicable technical manuals (TMs). Final disposition was in accordance with AR 750-1.

Performance Measures		<u>NO GO</u>
1. Reviewed the work order.		
2. Adhered to The Army Maintenance Management System (TAMMS) procedures.		
3. Used applicable publications.		
4. Performed initial inspection.		
5. Determined extent of damage to equipment.		
6. Determined disposition.		
7. Completed TAMMS forms, as required.		

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

#### References

Required TM 9-2320-272-24-1 TM 9-2320-272-24-2 TM 9-2320-272-24-3 TM 9-2320-273-34 TM 9-2320-279-20-1 TM 9-2320-279-20-2 TM 9-2320-279-20-3 TM 9-2320-279-34-1 TM 9-2320-279-34-2 TM 9-2320-279-34-3 TM 9-2320-280-20-1 TM 9-2320-280-20-2 TM 9-2320-280-20-3 TM 9-2320-280-34 TM 9-2320-283-20-1 TM 9-2320-283-20-3 TM 9-2320-360-20-1 TM 9-2320-360-20-2 TM 9-2320-363-20-1 TM 9-2320-363-20-2 TM 9-2320-364-20-1 TM 9-2320-364-20-2 TM 9-2320-364-20-3 TM 9-2320-364-20-4

# References

Required TM 9-2320-365-20-1 TM 9-2320-365-20-2 TM 9-2320-365-20-3 TM 9-2320-365-20-4 TM 9-2320-365-20-5 TM 9-2320-365-20-1 TM 9-2320-366-20-2 TM 9-2320-366-20-3 TM 9-2320-366-20-4 TM 9-2320-366-20-5 TM 9-2320-366-34-1 TM 9-2320-366-34-3 TM 9-2320-366-34-4

## **APPENDIX A**

## HANDS-ON EVALUATION

## HANDS-ON EVALUATION (DA FORM 5164-R) INSTRUCTIONS

DA Form 5164-R (Hands-On Evaluation) allows the trainer to keep a record of the performance measures a soldier passes or fails on each task.

## Before evaluation:

- 1. Obtain a blank copy of <u>DA Form 5164-R</u>, which you may locally reproduce on 8 ½ x 11 paper.
- 2. Enter the task title and 10-digit number from the STP task summary.
- 3. In Column a, enter the performance measure numbers from the task summary.
- 4. In Column b, enter the performance measure corresponding to the number in Column a (you may abbreviate this information, if necessary).
- 5. Locally reproduce the partially completed form when evaluating more than one soldier on the task or when evaluating the same soldier more than once.

## **During evaluation:**

- 1. Enter the date just before evaluating the soldier's task performance.
- 2. Enter the evaluator's name, the soldier's name, and the unit.
- 3. For each performance measure in Column b, enter a check in Column c (PASS) or Column d (FAIL), as appropriate.
- 4. Compare the number of performance measures the soldier passes (and, if applicable, which ones) against the task standards specified in the task summary. If the standards are met or exceeded, check the GO block under STATUS; otherwise, check the NO-GO block.

# **APPENDIX B**

## FIELD EXPEDIENT SQUAD BOOK

#### FIELD EXPEDIENT SQUAD BOOK (DA FORM 5165-R) INSTRUCTIONS

DA Form 5165-R (Field Expedient Squad Book) allows the trainer to keep a record of task proficiency for a group of soldiers.

## Before evaluation:

- 1. Obtain a blank copy of <u>DA Form 5165-R</u>, which you may locally reproduce on 8 ½, x 11, paper.
- 2. Locally reproduce the partially completed form if you are evaluating more than nine soldiers.

## **During evaluation:**

- 1. Enter the names of the soldiers you are evaluating, one name per column, at the top of the form.
- 2. Under STATUS, record (in pencil) the date in the GO block if the soldier demonstrated task proficiency to soldier's manual standards. Keep this information current by always recording the most recent date on which the soldier demonstrated task proficiency. Record the date in the NO-GO block if the soldier failed to demonstrate task proficiency to soldier's manual standards. Soldiers who failed to perform the task should be retrained and reevaluated until they can meet the standards. When the standards are met, enter the date in the appropriate GO block and erase the previous entry from the NO-GO block.

## After evaluation:

- 1. Read down each column (GO/NO-GO) to determine the training status of an individual. This will give you a quick indication of which tasks a soldier needs training on.
- 2. Read across the rows for each task to determine the training status of all soldiers. You can readily see which tasks to focus training on.
- 3. Line through the STATUS column of any soldier who leaves the unit.

# GLOSSARY

# Section I Acronyms & Abbreviations

AFC	automatic frequency control
AIT	advanced individual training
amp	ampere
AMSS	Army Materiel Status System
AN	annually
ANCOC	advanced NCO course
AOAP	Army Oil Analysis Program
APD	Army Publishing Directorate
AR	Army regulation
ARNG	Army Reserve National Guard
ARTEP	Army Training and Evaluation Program
ASI	additional skill identifier
ATTN	attention
ATTN BA	attention biannually
ВА	biannually
BA BDAR	biannually battle damage assessment and repair
BA BDAR BNCOC	biannually battle damage assessment and repair Basic NCO Course
BA BDAR BNCOC BTC	biannually battle damage assessment and repair Basic NCO Course Basic Technical Course
BA BDAR BNCOC BTC BW	biannually battle damage assessment and repair Basic NCO Course Basic Technical Course biweekly
BA BDAR BNCOC BTC BW CTIS	biannually battle damage assessment and repair Basic NCO Course Basic Technical Course biweekly Central Tire Inflation System
BA BDAR BNCOC BTC BW CTIS CTT	biannually battle damage assessment and repair Basic NCO Course Basic Technical Course biweekly Central Tire Inflation System common task test
BA BDAR BNCOC BTC BW CTIS CTT DA	<ul> <li>biannually</li> <li>battle damage assessment and repair</li> <li>Basic NCO Course</li> <li>Basic Technical Course</li> <li>biweekly</li> <li>Central Tire Inflation System</li> <li>common task test</li> <li>Department of the Army</li> </ul>

FM	field manual
FMC	fully mission capable
FMTV	Family of Medium Tactical Vehicles
Freq	frequency
ft-lb	foot-pound(s)
LO	lubrication order
МАСОМ	major Army command
MCSR	materiel condition status report
METL	mission-essential task list
МО	monthly
MOS	military occupational specialty
MOSC	military occupational specialty code
MSDS	material safety data sheet
MST	maintenance support team
N/A	not applicable
NCO	noncommissioned officer
NMC	non-mission capable
No.	number
OPORD	operations order
PAM	pamphlet
PLL	prescribed load list
PMCS	preventive maintenance checks and services
psi	pounds per square inch
РТО	power take off
QT	quarterly
RDL	Reimer Digital Library
RPM	revolutions per minute

SA	semiannually
SL	skill level
SM	soldier's manual
SMCT	soldier's manual of common tasks
SOP	standing operating procedure
STP	soldier training publication
Sust	sustainment
TAMMS	The Army Maintenance Management System
ТВ	technical bulletin
тс	training circular
TG	trainer's guide
ТМ	technical manual
TMDE	test, measurement, and diagnostic equipment
Tng	training
UIC	unit identification code
ULLS	Unit Level Logistics System
ULLS-G	Unit Level Logistics System-Ground
UNIT	Trained in the Unit
USAR	United States Army Reserve
VA	Virginia
WK	weekly

## Section II <u>Terms</u>

#### additional skill identifier

Identifies specialized skills that are closely related but in addition to those required by a military occupational specialty (MOS) or special skill identifier (SSI). Specialized skills identified by the ASI include operation and maintenance of specific weapons systems and equipment, administrative type systems and subsystems, computer programming, languages, procedures, installation management, analytic methods, animal handling techniques, and similar required skills that are too restricted in scope to comprise an MOS or SSI.

#### air brake

The general term used to describe the braking system used on most railways operating in North America (see AB Brake).

#### air brake hose

The flexible hose at each end of a car that is fastened to the brake pipe angle cock on one end and has a fitting on the other end that engages with a similar coupling on an adjoining car. Sometimes known as the "air hose" or the "brake hose". (See Train line.)

#### air brake hose coupling

A special type of standardized fitting that is attached to one end of an air brake hose in order to provide means for rapid and positive connection and disconnection of the hoses between adjacent cars.

#### air compressor

A power-driven air pump, which on locomotives and self-propelled cars supplies compressed air for the operation of air brakes and other air-actuated equipment. Compressors may be driven from the engine or by an electric motor, either directly or through V-belts and pulleys.

#### air gage (air brake)

A dial type pressure measuring device used to register the pressure of air in the reservoirs, brake pipe, or brake cylinders. Duplex gages with two pointers are available for measuring two pressures on the same dial face.

#### Alternator

A device that generates alternating current electricity.

#### Ampere

The fundamental unit of measure for electric current. One ampere is defined as the current that flows when a potential of one volt is impressed on a resistance of one Ohm.

#### ANCOC (Advanced Noncommissioned Officers' Course)

Training designed for soldiers in grade E6 to teach them the duties of grade E7 and to prepare them for assuming the greater responsibility.

#### Annual training

The minimal period of annual active duty training a member performs to satisfy the annual training requirements associated with a Reserve Component assignment. It may be performed during one consecutive period or in increments of one or more days, depending upon mission requirements.

## basic noncommissioned officer course

Training designed for soldiers in grade E5 to learn the duties of grade E6. Soldiers receive specialized training in their MOS and in related subjects that prepare them to perform duties in a supervisory capacity.

## **BNCOC (Basic Noncommissioned Officers' Course)**

Training designed for sergeants to learn the duties of a staff sergeant and to prepare them for assuming duties and positions of greater responsibility.

#### circuit (electrical)

A complete path of an electric current including the generating device.

#### condition

The task condition describes the field conditions under which the task will be performed. The condition expands on the information in the task title by identifying when, where, and why the soldier performs the task and what materials, personnel, and equipment the soldier must have to perform the task. The learning objective condition describes the training situation or environment under which the student must perform the learning action statement. It includes any pertinent influence on learning objective performance, including identification of materials, facilities, and equipment the student must have to perform the objective.

#### cooling water

The fluid, which circulates through the jacket space of cylinders and cylinder heads to prevent excessive heating of the castings.

#### cooling water system

The entire system of pumps, pipes, radiators, fans, and other apparatus installed on an internal combustion engine to cool the engine.

#### critical task

A collective or individual task determined to be essential to wartime mission, duty accomplishment, or survivability. Critical individual tasks are trained in the training base and/or unit, and they are reinforced in the unit.

#### Current

The flow of electrical energy in a circuit. See ampere, the unit of current.

#### **Cylinder Head**

The part, which covers and seals the end of the cylinder and usually contains the valves.

#### **Diesel Engine**

An internal combustion engine invented by Rudolf Diesel differing from other internal combustion engines because its compression is high enough to cause combustion without the necessity of introducing a spark for ignition.

#### **Duty Position**

Duty positions are determined by military occupational specialties (MOSs), which are subdivided into five major skill levels (SLs). These SLs are further subdivided into related individual tasks, which identify a soldier's SL or job.

#### **Duty Position Task**

A task identified with and related to a particular position at a given SL within a specified MOS or area of concentration (AOC).

## Enabling learning objective (ELO)

Learning objective that supports the terminal learning objective (TLO). The ELO must be learned or accomplished to learn or accomplish the TLO. It consists of an action, condition, and standard. Enabling objectives are identified when designing the lesson. A TLO does not have to have enabling objectives, but it may have more than one.

## Fault

A physical condition that causes a device, a component, or an element to fail to perform in a required manner.

#### Field Manual (FM)

A DA publication that contains doctrine that prescribes how the Army and its organizations function on the battlefield in terms of missions, organizations, personnel, and equipment. The level of detail should facilitate an understanding of "shat" and "how" for commanders and staffs to execute their missions and tasks. The FM may also be used to publish selected alliance doctrinal publications that are not readily integrated into other doctrinal literature.

#### Foot-pounds (ft-lbs)

Units in which work is measured; is equivalent to the work of raising one pound vertically a distance of one foot or of moving an object one foot against a resistance of one pound.

#### GO/NO-GO

This is a pass/fail evaluation whereby the soldier (student) cannot be partially correct. Either he meets the standard or he does not meet the standard.

#### ground

An electrical connection, whether intentional or accidental, between the positive side of an electric circuit and the earth, or some conducting object that serves in its plane, such as a locomotive underframe.

#### Inspection

An examination by visual or other means to determine item condition.

#### Instructor

Any personnel, military or civilian, who presents instruction.

#### Learning objective (LO)

A statement of what the student is to be capable of accomplish in terms of the expected student performance under specific conditions to accepted standards. Learning objectives clearly and concisely describe student performance required to demonstrate competency in the material being taught. They focus the training development on what needs to be trained and focuses student learning on what needs to be learned. Both terminal and enabling objectives are learning objectives.

#### Lubrication

Term applied to the use of oil, grease, or other substances between moving parts of machinery for reducing friction, resistance, and heating caused by motion of the parts in contact.

#### malfunction

Failure of an item to function in accordance with its expected performance or functioning of the explosive components during a nonfunctional test. A critical malfunction is one, which may cause a hazard under the circumstances described above. For purposes of clarity, malfunctions do not include accidents and incidents resulting from negligence, malpractice, or implication in such situations as vehicular accidents, fires, and so on. However, malfunctions do include abnormal or premature function of explosive ammunition items during normal handling, maintenance, storage, transportation, and tactical deployment. Includes cook off, hangfire, misfire, and so on.

## Military occupation specialty

A term used to identify a group of duty positions possessing such close occupational or functional relationship that an optimal degree of interchangeability among persons so classified exists at any given level of skill. Advanced--One which reflects specialized occupational qualifications above the entry military occupational specialty level required for performance in those duty positions which represent the journeyman, supervisory, or leadership levels of skill. Duty--One in which the soldier is actually performing duty. Entry--One that reflects the occupational qualifications required for performance in those duty positions, which represent the lowest level of skill within an entry group. Primary--One (entry or advanced) representing the highest or most significant job skill, which the individual can best perform. Secondary--Any awarded, other than that designated primary.

#### Performance measures

Those behaviors, products, and characteristics that the trainer observes to determine if the soldier has performed a task correctly. Successful accomplishment of these measures result in meeting the task standard. In SMs, the steps to follow in performing a job task.

#### Performance step

A single discrete operation, movement, or action that comprises part of a task.

#### Performance test

An evaluation of the actual performance of the task or learning objective using the conditions under which it will be performed and the absolute standards for acceptable performance.

#### Practical exercise (PE)

The practical exercise is the hands-on application of the performance required in enabling or terminal learning objectives. Gives the student the opportunity to acquire and practice skills, knowledges, and the behaviors necessary to perform the training objective successfully.

#### **Reclassification training**

A soldier may be reclassified into a new job due to organizational restructure, mission or new/revised systems, and so forth. Reclassification training is training provided to those individuals which qualifies them to perform in a newly assigned job (MOS, AOC, and so on).

## **Refresher training**

Training that reinforces previous training and/or helps to sustain or regain previously acquired skills and knowledge. Refresher training is related to course-specific training objectives, performed under prescribed conditions, and meets prescribed performance standards. Training may take place in a course during or outside of POI time. It usually takes place in the unit to sustain or retrain a previously required proficiency level or it may be used to prepare an individual for institutional training (such as, to meet prerequisite training requirements).

#### Skill level (SL)

The level of proficiency in an MOS. It reflects the skills required to do the job at the grade the soldier holds.

#### Skills

The ability to perform a job related activity, which contributes to the effective performance of a task.

#### SL (skill level)

The level of performance in an MOS. It reflects the skills required to do your job at your skill level.

#### Standard

A statement, which establishes a criteria for how well a task or learning objective, must be performed. The standard specifies how well, completely, or accurately a process must be performed or product produced. The task standard reflects task performance requirements on the job. The learning objective standard reflects the standard that must be achieved in the formal learning environment.

## Task

A clearly defined and measurable activity accomplished by individuals and organizations. It is the lowest behavioral level in a job or unit that is performed for its own sake. It must be specific; usually has a definite beginning and ending; may support or be supported by other tasks; has only one action and, therefore, is described using only one verb; generally is performed in a relatively short time (however, there may be no time limit or there may be a specific time limit); and it must be observable and measurable. The task title must contain an action verb and object and may contain a qualifier.

## Task - Critical task

A collective or individual task a unit or individual must perform to accomplish their mission and duties and to survive in war or operations other than war (OOTW). Critical tasks must be trained.

#### **Task summary**

A listing in the soldier training publication of the conditions, standards, and performance measures, references, and proponent for each individual critical task. Information is extracted from the individual critical task analysis. See "Task performance specifications." Reference-dependent task summary--A summary written for those tasks which require the trained soldier to refer to one or more publications while performing all or part of a task in wartime conditions. Reference-independent task summary--A summary written for those tasks which require the trained soldier to perform the task in wartime conditions from memory, without reference to any publications.

#### Torque

Usually expressed in foot-pounds, torque is the twisting or turning force developed by the rotating shaft of an engine or motor. The pressure or twisting force of a wrench on a nut is also called torque and is expressed in foot-pounds.

#### Unit training

Training (individual, collective, and joint or combined) that takes place outside the Army's institutional base.

#### Volt

The unit of electromotive force that, when impressed on an electrical conductor whose resistance is 1 ohm, will produce a current of 1 ampere.

# REFERENCES

## **Required Publications**

Required publications are sources that users must read in order to understand or to comply with this publication.

Army Regulations	
AR 25-400-2	The Army Records Information Management System (ARIMS) 15 November 2004
AR 190-13	The Army Physical Security Program 30 September 1993
AR 190-51	Security of Unclassified Army Property (Sensitive and Nonsensitive) 30 September 1993
AR 220-1	Unit Status Reporting 10 June 2003
AR 385-10	The Army Safety Program 29 February 2000
AR 385-40	Accident Reporting and Records 1 November 1994
AR 385-55	Prevention of Motor Vehicle Accidents 12 March 1987
AR 600-55	The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing) 31 December 1993
AR 700-4	Logistics Assistance 20 August 2002
AR 700-138	Army Logistics Readiness and Sustainability 26 February 2004
AR 710-2	Inventory Management Supply Policy Below the National Level 25 February 2004
AR 725-50	Requisition, Receipt, and Issue System 15 November 1995
AR 735-5	Policies and Procedures for Property Accountability 10 June 2002
AR 750-1	Army Materiel Maintenance Policy 18 August 2003
AR 750-43	Army Test, Measurement and Diagnostic Equipment Program 28 November 1997

Except where otherwise indicated below, the following forms are available as follows: DA forms are available on the Army Electronic Library (AEL) and the APD web site, <u>www.apd.army.mil</u>. DD Forms are available from the OSD web site, <u>www.dior.whs.mil</u>.

## **Department of Army Forms**

DA FORM 17	Requisition for Publications and Blank Forms
DA FORM 17-1	Requisition for Publications and Blank Forms (Continuation Sheet)
DA FORM 2028	Recommended Changes to Publications and Blank Forms
DA FORM 2062	Hand Receipt/Annex Number
DA FORM 2404	Equipment Inspection and Maintenance Worksheet
DA FORM 4569-1-R	Security Assistance Publication Requisition Code Sheet
DA FORM 5164-R	Hands-On Evaluation
DA FORM 5165-R	Field Expedient Squad Book
DA FORM 5988-E	Equipment Inspection Maintenance Worksheet

# **Department of Army Pamphlets**

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms 1 October 2004
DA PAM 25-33	User's Guide for Army Publications and Forms 15 September 1996
DA PAM 710-2-1	Using Unit Supply System (Manual Procedures) (Standalone Pub) 31 December 1997

DA PAM 710-2-2	Supply Support Activity Supply System: Manual Procedures 30 September 1998
DA PAM 738-750	Functional Users Manual for The Army Maintenance Management System (TAMMS) 1 August 1994
DA PAM 750-1	Leader's Unit Level Maintenance Handbook 3 October 2003
DA PAM 750-35	Guide for Motor Pool Operations 1 August 1994
Field Manuals	
FM 1-02	Operational Terms and Graphics 21 September 2004
FM 4-30.3	Maintenance Operations and Procedures 28 July 2004
FM 5-125	Rigging Techniques, Procedures, and Applications. 3 October 1995
FM 5-170	Engineer Reconnaissance 5 May 1998
FM 9-43-2	Recovery and Battlefield Damage Assessment and Repair 3 October 1995
FM 25-4	How to Conduct Training Exercises 10 September 1984
FM 25-5	Training for Mobilization and War 25 January 1985
Lubrication Orders	
LO 9-2320-272-12 LO 9-2320-279-12	Truck, 5-Ton, 6X6, M939, M939A1 and M939A2 Series (Diesel) Truck, Cargo, 5-Ton, 6X6, Dropside, M923, M923A1, M923A2, M925, M925A1, M925A2; Truck, Cargo: 5-Ton, 6X6, M924, M924A1, M926, M926A1: Truck, Cargo: 5-Ton, 6X6, XLWB, M927, M927A1, M927A2, M928, M928A1, M928A2; Truck, Dump: 5-Ton, 6X6, M929, M929A1, M929A2; M930, M930A1, M930A2; Truck, Tractor: 5-Ton, 6X6, M931, M931A1, M931A2, M932, M932A1, M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934, M934A1, M934A2, M935, M935A1, M935A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936, M936A1, M936A2 11 June 1990 M977 Series, 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel With Winch M978; Truck, Tank, Fuel Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck Wrecker- Recovery M984; Truck Wrecker-Recovery M984A1; Truck, Wrecker- Recovery M984A1; Truck, Cargo, With Winch M985; Truck Cargo, With Winch M985E1; Truck, Cargo, Without Winch M985; Truck Cargo, With Winch M985E1; Truck, Cargo, Without Winch 15 December 1998
Soldier Training Publications	
STP 21-1-SMCT	Soldier's Manual of Common Tasks Skill Level 1 31 August 2003
STP 21-24-SMCT	Soldier's Manual of Common Tasks (SMCT) Skill Levels 2-4 31 August 2003
Technical Bulletins	
TB 43-0211	Army Oil Analysis Program (AOAP) Guide For Leaders and Users 15 September 2003
TB 43-180	Calibration and Repair Requirements for the Maintenance of Army Materiel 15 September 2002

Technical Manuals	
TM 9-243	Use and Care of Hand Tools and Measuring Tools (M6290-AJ-MAN-010; TO 32-1-101; TM-10209-10/1) 12 December 1983
TM 9-2320-260-20	Unit Maintenance for 5-Ton, 6X6, M809 Series Trucks (Diesel) Truck, Cargo M813 WO/W, W/W; M813A1 WO/W, W/W; M814 WO/W, W/W; Truck, Bolster, Logging M815 W/W; Truck, Wrecker, Medium M816 W/W; Truck, Dump M817 WO/W, W/W; Truck, Tractor M818 WO/W, W/W; Truck, Tractor, Wrecker M819 W/W; Truck, Van, Expansible M820 WO/W; M820A1 O/W; M829A2 WO/W; Truck, Stake, Bridge Transporting M821 W/W 28 April 1995
TM 9-2320-272-10	Operator's Manual for Truck, 5-Ton, 6X6, M939, M939A1, and M939A2 Series Trucks (Diesel), Truck, Cargo: 5-Ton, 6X6 Dropside, M923; M923A1; M923A2); M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M27A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A; Truck, Tractor: 5-Ton, 6X6, Truck, Van, Expansible: 5-Ton, 6X6, M934, M934A1 M931; M931A1; M931A2; M932; M923A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 15 August 1996
TM 9-2320-272-24-1	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-2	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-3	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-4	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel): Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5- Ton, 6X6 M934; M924A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998

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TM 9-2320-272-24P-2	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 1 February 1999
TM 9-2320-273-20	Organizational Maintenance Manual for Truck Tractor, Line Haul; 50,000 GVWR, 6X4: M915; Truck Tractor, Light Equipment Transporter (LET); 56,000 GVWR, 6X6 W/W, M916; Truck Tractor, Medium Equipment Transporter (MET); 75,000 GVWR, 8X6 W/W, M920; Truck Chassis; 75,000 GVWR, 8X6 for 20-Ton Dump Truck, M917 and Truck Chassis; 56,000 GVWR, 6X6 for Bituminous Distributor Truck, M918 and Truck Chassis; 75,000 GVWR, 8X6 for Concrete-Mobile Mixer Truck, M919 28 November 1980
TM 9-2320-273-34	Direct Support and General Support Maintenance for Truck Tractor, Line Haul; 50,000 GVWR, 6X4, M915; Truck Tractor, Light Equipment Transporter (LET), 56,000 GVWR, 6X6 W/W, M916; Truck Tractor, Medium Equipment Transporter (MET), 75,000 GVWR, 8X6 W/W, M920; Truck, Chassis: 75,000 GVWR, 8X6 for 20-Ton Dump Truck, M917; 56,000 GVWR, 6X6 for Bituminous Distributor Truck, M918 and 75,000 GVWR, 8X6 for Concrete-Mobile Mixer Truck, M919 19 December 1980
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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker-Recovery, M984; Truck, Wrecker- Recovery, M984A1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 21 November 1986
TM 9-2320-279-10-2	Operator's 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,

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TM 9-2320-279-20-1	Maintenance Instructions for Organizational Maintenance M977 Series, 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel, Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, With Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker- Recovery M984E1; Truck, Cargo, Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1 Truck, Cargo Without Winch M985E1 7 April 1987
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TM 9-2320-279-20-3	Maintenance Instructions Organizational Maintenance M977 Series, 8x8 Heavy Expanded Mobility Tactical (HEMTT) Truck, Cargo With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel, Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, With Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker-Recovery M984E1; Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1; Truck, Cargo, Without Winch M985E1 8 April 1987

TM 9-2320-279-24P-1	Direct Support and General Support Maintenance Repair Parts and Special Tools List for M977 Series, 8x8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker- Recovery M984A1; Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1 15 December 1998
TM 9-2320-279-34-1	Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985E1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-279-34-2	Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Crane, M983; Truck, Tactor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-279-34-3	Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck,

	Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-280-10	Operator's Manual for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, m1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1036; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, W/Winch, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 2-Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 31 January 1996
TM 9-2320-280-20-1	Unit Maintenance Volume 1 of 3 for Truck, Utility: Cargo/Troop Carrier, 1- 1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1/1/4 Ton, 4X4, M1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1/1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton,4X4, M1043; M1043A1; M1043A2; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2; M1123; M1121 31 January 1996
TM 9-2320-280-20-2	Unit Maintenance Volume No. 2 of 3 Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4

Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4. w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor. 1-1/4 Ton. 4X4. M1045: M1045A1: M1045A2: Truck. Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1 31 January 1996 TM 9-2320-280-20-3 Unit Maintenance Manual for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1045; M1045A; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1/1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042: Truck. Ambulance. 2-Litter. Armored. 4X4. M996: M966A1: Truck, Ambulance, 4- Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 31 January 1996 TM 9-2320-280-24P-1 Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List, Volume 1 of 2, For Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; M1121; Truck, Utility: TOW Carrier, w/Supplemental Armor. 1-1/4 Ton. 4X4. M1045: M1045A: M1045A2: Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-14 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility, Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 30 March 2001

TM 9-2320-280-24P-2	Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List, Volume 2 of 2 for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1/1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M104A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2- Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 30 March 2001
TM 9-2320-280-34	Direct Support and General Support Maintenance for Truck, Utility: Cargo/Troop Carrier, 1 1/4-Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored, 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 31 January 1996
TM 9-2320-283-20-1	Organizational Maintenance for Truck Tractor, Line Haul, 50, 000 GVWR, 6x4, M915A1 8 December 1983
TM 9-2320-283-20-2	Organizational Maintenance for Truck Tractor, Line Haul, 50, 000 GVWR, 6x4, M915A1 8 December 1983
TM 9-2320-283-20-3	Organizational Maintenance for Truck Tractor, Line Haul; 50, 000 GVWR, 6x4, M915A1 8 December 1983
TM 9-2320-360-20-1	Unit Maintenance Manual for Truck, Tractor, M1070, 8X8, Heavy Equipment Transporter (HET) 31 March 1994
TM 9-2320-360-20-2	Unit Maintenance Manual for Truck, Tractor, M1070, 8X8, Heavy Equipment Transporter (HET) 31 March 1994
TM 9-2320-361-20	Unit Maintenance for 2-1/2-Ton, 6x6, M44A2 Series Trucks (Multifuel) Model Truck, Cargo M35A2 w/o Winch, w/Winch; M35A2C w/o Winch, w/Winch; M36A2 w/o Winch, w/Winch; Truck, Tank, Fuel M49A2C w/o Winch, w/Winch; Truck, Tank, Water M50A2 w/o Winch, w/Winch; M50A3 w/o Winch, w/Winch; Truck, Van, Shop M109A3 w/o Winch, w/Winch; Truck, Instrument Repair Shop M185A3 w/o Winch, w/Winch;

	Truck, Tractor M275A2 w/o Winch, w/Winch; Truck, Dump M342A2 w/o Winch, w/Winch; Truck, Maintenance, Pipeline Construction M756A2 w/Winch; Truck, Maintenance, Earth Boring and Polesetting w/Winch 25 October 1991
TM 9-2320-363-20-1	Unit Maintenance Manual for Truck, Tractor, Line Haul 52,000 GVWR, 6X4, M915A2; Truck Tractor, Light Equipment Transporter (LET) 68,000 GVWR, 6X6, W/WINCH, M916A1; Truck Tractor, Light Equipment Transporter (LET) 68,000 GVWR, 6X6, W/WINCH, M916A2; Truck, Dump, Heavy, Chassis 68,000 GVWR, 6X6, 14 Cu Yd, On-Off Highway M917A1, M917A1 W/MCS, Volume 1 of 2 11 June 1992
TM 9-2320-363-20-2	Unit Maintenance Manual for Truck, Tractor, Line Haul 52,000 GVWR, 6X4, M915A2; Truck Tractor, Light Equipment Transporter (LET) 68,000 GVWR, 6X6, W/WINCH, M916A1; Truck Tractor, Light Equipment Transporter (LET) 68,000 GVWR, 6X6, W/WINCH, M916A2; Truck, Dump, Heavy, Chassis 68,000 GVWR, 6X6, 14 Cu Yd, On-Off Highway M917A1, M917A1 W/MCS, Volume 2 of 2 12 June 1992
TM 9-2320-364-20-1	Unit Maintenance Manual, Volume I for Palletized Load System Model M1074/M1075 1 August 1999
TM 9-2320-364-20-2	Unit Maintenance Manual, Volume II for Palletized Load System Model M1074/M1075 4 August 1999
TM 9-2320-364-20-3	Unit Maintenance Manual, Volume III for Palletized Load System Model M1074/M1075 1 August 1999
TM 9-2320-364-20-4	Unit Maintenance Manual, for Palletized Load System Model M1074/M1075 1 August 1999
TM 9-2320-365-10	Operator's Instructions Manual for M1078 Series, 2-1/2 Ton, 4X4 Light Medium Tactical Vehicles (LMTV) Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1078 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, LVAD, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-1	Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4 Light Medium Tactical Vehicles (LMTV) Truck, Car., LMTV, M1078W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN; Vol. 1 of 5 17 June 1998
TM 9-2320-365-20-2	Maintenance Instructions Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Vol. No. 2 of 5 for Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-3	Maintenance Instructions Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Vol. No. 3 of 5 for Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-4	Technical Manual Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4 X 4, Light Medium Tactical Vehicles (LMTV) Volume No. 4 of 5 Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-5	Technical Manual Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4 X 4, Light Medium Tactical Vehicles (LMTV) Volume No. 5 of 5 Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998

TM 9-2320-365-24P	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for M1078 Series, 2-1/2-Ton, 4X4 Light Medium Tactical Vehicle (LMTV) Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Airdrop, M1081 W/WN, W/O WN 31 July 2001
TM 9-2320-365-34-1	Maintenance Instructions Direct Support Maintenance for M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080 W/O WN; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-366-20-1	Maintenance Instructions Unit Maintenance M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles (MTV) for Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-20-2	Maintenance Instructions Unit Maintenance for M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles (MTV) Vol. No. 2 of 5 Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, w/Material Handling Equipment (MHE), M1084; Truck Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Ar., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-20-3	Maintenance Instructions Unit Maintenance M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles (MTV) Vol. No. 3 of 5 for Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084 (2320-01-354-3387) (EIC: BR3) TRK, CAR., MTV, LWB, M1085 W/WN (2320-01-360-1897) (EIC: BT5) W/O WN (2320-01-354-4530) (EIC: BR7) TRK, CAR., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-20-4	Maintenance Instructions Unit Maintenance for M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles (MTV) Volume No. 4 of 5 Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-20-5	Maintenance Instructions Unit Maintenance for M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles (MTV) Volume No. 5 of 5 Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/ Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O

TM 0 0000 000 04 4	WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-34-1	Maintenance Instructions for Direct Support and General Support Maintenance M1083 Series, 5-Ton, 6 X 6, Medium Tactical Vehicles (MTV) Volume No. 1 of 2 Model Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-34-2	Maintenance Instructions for Direct Support and General Support Maintenance M1083 Series, 5-Ton, 6 X 6, Medium Tactical Vehicles (MTV) Volume No. 2 of 2 Model Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-34-3	Maintenance Instructions for Direct Support and General Support Maintenance M1083 Series, 5-Ton, 6 X 6, Medium Tactical Vehicles (MTV) Volume No. 3 of 4 Model Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2320-366-34-4	Maintenance Instructions for Direct Support and General Support Maintenance M1083 Series, 5-Ton, 6 X 6, Medium Tactical Vehicles (MTV) Volume No. 4 of 4 Model Truck, Car., MTV, M1083 W/WN, W/O WN; Truck, Car., MTV, W/Material Handling Equipment (MHE), M1084; Truck, Car., MTV, LWB, M1085 W/WN, W/O WN; Truck, Car., MTV, LWB, W/ Material Handling Equipment (MHE), M1086; Truck, Tractor, MTV, M1088 W/WN, W/O WN; Truck, Wrecker, MTV, M1089; Truck, Dump, MTV, M1090 W/WN, W/O WN; Truck, Chas, MTV, M1092; Truck, Car., MTV, Air Drop, M1093 W/WN, W/O WN; Truck, Dump, MTV, Air Drop, M1094 W/WN, W/O WN; Truck, Chas, MTV, LWB, M1096 15 September 1998
TM 9-2330-381-14	Operator's, Unit, Direct Support and General Support Maintenance Manual for Heavy Equipment Transporter Semitrailer, 70 Ton, M1000 30 November 1994

TM 9-2815-224-34&P	Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) Engine, Diesel: 8-Cylinder, Turbo Charged, Detroit Diesel Corporation Model 8V92TA 20 January 1988
TM 9-2815-237-34	Direct Support and General Support Maintenance for Engine, Diesel; 8 Cylinder, Naturally Aspirated, Fuel-Injected, Water Cooled, DDA Model 6.2 Liter, DDA Model 6.5 Liter 31 January 1996
TM 9-6140-200-14	Operator's, Unit, Direct Support and General Support Maintenance Manual for Lead-Acid Storage Batteries; 4HN, 24 Volt (Dry), M11188/2- 24V; 4HN, 24 Volt (Wet), M11188/2-24V; 2HN, 12 Volt (Dry), MS35000- 2; 2HN, 12 Volt (Wet), MS35000-2; 6TN, 12 Volt (Dry), MS35000-1; 6TL, 12 Volt (Dry), MS35000-3; 6TL, 12 Volt (Wet), MS83149-1; 6TLFP, 12 Volt (Dry), 6TLFP; 6TLFP, 12 Volt (Wet), 6TLFP; 6TMF, 12 Volt (Dry), 6TMF; 6TMF, 12 Volt (Wet), 6TMF; 6TGEL, 12 Volt (GEL), 6TGEL; NBB248, 12 Volt (GEL), NBB248; NBB248GTW, 12 Volt (GEL), NGB248 11 September 1998
TM 9-8000	Principles of Automotive Vehicles 25 October 1985
TM 10-3930-660-20	Unit Maintenance Manual for Truck, Forklift, 6,000 Lb. Variable Reach, Rough Terrain 25 March 1993
<b>Training Circulars</b> TC 43-35	Recovery Training 3 October 1995

## **Related Publications**

Related publications are sources of additional information. They are not required in order to understand this publication.

Army Regulation	
AR 25-11	Record Communications and the Privacy Communications System 4 September 1990
AR 385-10	The Army Safety Program 29 February 2000
AR 385-40	Accident Reporting and Records 1 November 1994
AR 385-55	Prevention of Motor Vehicle Accidents 12 March 1987
AR 750-1	Army Materiel Maintenance Policy 18 August 2003
AR 750-10	Army Modification Program 8 August 2000
AR 750-43	Army Test, Measurement and Diagnostic Equipment Program 28 November 1997

Department of Army Pamphlets		
DA PAM 738-750	Functional Users Manual for The Army Maintenance Management System (TAMMS) 1 August 1994	
Field Manuals FM 4-30.3	Maintenance Operations and Procedures 28 July 2004	

Lubrication Orders	
LO 9-2320-279-12	M977 Series, 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel With Winch M978; Truck, Tank, Fuel Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck Wrecker- Recovery M984; Truck Wrecker-Recovery M984A1; Truck, Wrecker- Recovery M984A1; Truck, Cargo, With Winch M985; Truck Cargo, With Winch M985E1; Truck, Cargo, Without Winch; Truck, Cargo, With Winch M985E1; Truck, Cargo, Without Winch M985E1 15 December 1998
Technical Manuals	
TM 9-243	Use and Care of Hand Tools and Measuring Tools (M6290-AJ-MAN-010; TO 32-1-101; TM-10209-10/1) 12 December 1983
TM 9-2320-272-24-1	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928, M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-2	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-3	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24-4	Unit, Direct Support, and General Support Maintenance Manual for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel): Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5- Ton, 6X6 M934; M924A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 30 June 1998
TM 9-2320-272-24P-1	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton,

	6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M934A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 1 February 1999
TM 9-2320-272-24P-2	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for Truck, 5-Ton, 6X6, M939, M939A1, M939A2 Series Trucks (Diesel) Truck, Cargo: 5-Ton, 6X6, Dropside, M923; M923A1; M923A2; M925; M925A1; M925A2; Truck, Cargo: 5-Ton, 6X6 XLWB, M927; M927A1; M927A2; M928; M928A1; M928A2; Truck, Dump: 5-Ton, 6X6, M929; M929A1; M929A2; M930; M930A1; M930A2; Truck, Tractor: 5-Ton, 6X6, M931; M931A1; M931A2; M932; M932A1; M932A2; Truck, Van, Expansible: 5-Ton, 6X6, M934; M936A1; M934A2; Truck, Medium Wrecker: 5-Ton, 6X6, M936; M936A1; M936A2 1 February 1999
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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Wrecker-Recovery, M984A2; Truck, Wrecker- Recovery, M984A1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 21 November 1986
TM 9-2320-279-10-2	Operator's 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Wrecker-Recovery, M984A2; Truck, Wrecker- Recovery, M984A1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 15 June 1987
TM 9-2320-279-20-1	Maintenance Instructions for Organizational Maintenance M977 Series, 8X8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel, Without Winch M978; Truck,

	Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, With Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker- Recovery M984E1; Truck, Cargo, Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1 Truck, Cargo Without Winch M985E1 7 April 1987
TM 9-2320-279-20-2	Maintenance Instructions for Organizational Maintenance 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, Without Winch, M985E1; Truck, Cargo, With Winch, M985E1A2R1 7 April 1987
TM 9-2320-279-20-3	Maintenance Instructions Organizational Maintenance M977 Series, 8x8 Heavy Expanded Mobility Tactical (HEMTT) Truck, Cargo With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel, Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, Without Crane M983; Truck, Tractor, With Winch, With Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker-Recovery M984E1; Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1; Truck, Cargo, Without Winch M985E1 8 April 1987
TM 9-2320-279-24P-1	Direct Support and General Support Maintenance Repair Parts and Special Tools List for M977 Series, 8x8 Heavy Expanded Mobility Tactical Trucks (HEMTT) Truck, Cargo, With Winch M977; Truck, Cargo, Without Winch M977; Truck, Tank, Fuel, With Winch M978; Truck, Tank, Fuel Without Winch M978; Truck, Tractor, With Winch, Without Crane M983; Truck, Wrecker-Recovery M984; Truck, Wrecker- Recovery M984A1; Truck, Cargo, With Winch M985; Truck, Cargo, Without Winch M985; Truck, Cargo, With Winch M985E1 15 December 1998
TM 9-2320-279-34-1	<ul> <li>Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker-</li> </ul>

	Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-279-34-2	Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tractor, With Winch, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M9842; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2R1; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985, Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1A2; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-279-34-3	Maintenance Instructions Direct Support and General Support 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, Without Winch, M977A2; Truck, Cargo, Without Winch, M977A2R1; Truck, Tank, Fuel, With Winch, M978; Truck, Tank, Fuel, With Winch, M978A2; Truck, Tank, Fuel, With Winch, M978A2R1; Truck, Tank, Fuel, Without Winch, M978; Truck, Tank, Fuel, Without Winch, M978A2; Truck, Tank, Fuel, Without Winch, M978A2R1; Truck, Tank, Fuel, Without Crane, M983; Truck, Tractor, With Winch, Without Crane, M983A2; Truck, Tractor, With Winch, Without Crane, M983A2R1; Truck, Tractor, With Winch, With Crane, M983; Truck, Wrecker- Recovery, M984; Truck, Wrecker-Recovery, M984A1; Truck, Wrecker- Recovery, M984A2; Truck, Wrecker-Recovery, M984A2R1; Truck, Cargo, With Winch, M985; Truck, Cargo, With Winch, M985A2; Truck, Cargo, With Winch, M985A2; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, Without Winch, M985A2R1; Truck, Cargo, Without Winch, M985A2; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1; Truck, Cargo, With Winch, M985E1A2R1 3 June 1987
TM 9-2320-280-10	Operator's Manual for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1036; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046;

	M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, M1042; Truck, Ambulance, 2-Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 31 January 1996
TM 9-2320-280-24P-2	Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List, Volume 2 of 2 for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998; M998A1; Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, w/Winch, M1038; M1038A1; Truck, Utility: Heavy Variant, 4X4, M1097; M1097A1; M1097A2; Truck, Utility: TOW Carrier, Armored, 1-1/4 Ton, 4X4, M966; M966A1; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1045; M1045A1; M1045A2; Truck, Utility: TOW Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1046; M1046A1; Truck, Utility: Armament Carrier, Armored, 1-1/4 Ton, 4X4, M1025; M1025A1; M1025A2; Truck, Utility: Armament Carrier, Armored, 1/1/4 Ton, 4X4, w/Winch, M1026; M1026A1; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, M1043; M1043A1; M1043A2; Truck, Utility: Armament Carrier, w/Supplemental Armor, 1-1/4 Ton, 4X4, w/Winch, M1044; M1044A1; Truck, Utility: S250 Shelter Carrier, 4X4, M1037; Truck, Utility: S250 Shelter Carrier, 4X4, w/Winch, M1042; Truck, Ambulance, 2- Litter, Armored, 4X4, M996; M996A1; Truck, Ambulance, 4-Litter, Armored 4X4, M997; M997A1; M997A2; Truck, Ambulance, 2-Litter, Soft Top, 4X4, M1035; M1035A1; M1035A2 30 March 2001
TM 9-2320-365-20-1	Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4 Light Medium Tactical Vehicles (LMTV) Truck, Car., LMTV, M1078W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN; Vol. 1 of 5 17 June 1998
TM 9-2320-365-20-2	Maintenance Instructions Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Vol. No. 2 of 5 for Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-3	Maintenance Instructions Unit Maintenance M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Vol. No. 3 of 5 for Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-4	Technical Manual Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4 X 4, Light Medium Tactical Vehicles (LMTV) Volume No. 4 of 5 Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-2320-365-20-5	Technical Manual Maintenance Instructions for Unit Maintenance M1078 Series, 2 1/2-Ton, 4 X 4, Light Medium Tactical Vehicles (LMTV) Volume No. 5 of 5 Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998

TM 9-2320-365-24P	Unit, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for M1078 Series, 2-1/2-Ton, 4X4 Light Medium Tactical Vehicle (LMTV) Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080; Truck, Car., LMTV, Airdrop, M1081 W/WN, W/O WN 31 July 2001
TM 9-2320-365-34-1	Maintenance Instructions Direct Support Maintenance for M1078 Series, 2 1/2-Ton, 4X4, Light Medium Tactical Vehicles (LMTV) Truck, Car., LMTV, M1078 W/WN, W/O WN; Truck, Van, LMTV, M1079 W/WN, W/O WN; Truck, Chas, LMTV, M1080 W/O WN; Truck, Car., LMTV, Air Drop, M1081 W/WN, W/O WN 17 June 1998
TM 9-8000	Principles of Automotive Vehicles 25 October 1985
TM 11-6625-3052-14	Operator's, Unit, Direct Support and General Support Maintenance Manual for Digital Multimeter AN/PSM-45 10 January 1984

By order of the Secretary of the Army:

PETER J. SCHOOMAKER

General, United States Army Chief of Staff

Official:

Sandra R. Riley

SANDRA R. RILEY Administrative Assistant to the Secretary of the Army 0501201

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