SOLDIER'S MANUAL AND TRAINER’S GUIDE FOR THE AIR TRAFFIC CONTROL EQUIPMENT REPAIRER

MOS 94D

STP 9-94D14-SM-TG

SKILL LEVELS 1, 2, 3, and 4

APRIL 2020

HEADQUARTERS, DEPARTMENT OF THE ARMY

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PREFACE

STP 9-94D14-SM-TG is for skill levels 1, 2, 3, and 4 Soldiers holding Military Occupational Specialty (MOS) 94D and for trainers and first-line supervisors. It contains standardized training objectives, in the form of task summaries, to train and evaluate Soldiers on critical tasks that support unit missions during wartime. Trainers and first-line supervisors should ensure Soldiers holding MOS 94D SL1, 2, 3, and 4 have access to this publication.

STP 9-94D14-SM-TG applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the US Army Reserve (USAR) unless otherwise stated.

The proponent of STP 9-94D14-SM-TG is the United States Army Training and Doctrine Command (TRADOC), with the United States Army Combined Arms Support Command, Fort Lee, Virginia as the preparing agency. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to:

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  2221 Adams Ave, Fort Lee, VA 23801-2102
CHAPTER 1

Introduction

1.1 General

This Soldier training publication (STP) identifies the individual military occupational specialty (MOS) training requirements for Soldiers in MOS 94D. Another source of STP task data is the Central Army Registry (CAR). Commanders, trainers, and Soldiers should use the STP to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference to support the self-development and training of every Soldier in the unit. It is used with the STP 21-1-SMCT (Soldier’s Manual of Common Tasks Warrior Skills Level 1) collective training products, to establish effective training plans and programs that integrate Soldier, leader, and collective tasks. This chapter explains how to use the STP in establishing an effective individual training program. Based on these guidelines, commanders and unit trainers must tailor the information to meet the requirements for their specific unit.

1.2 Training Requirement

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

a. Operational Environment.

   (1) Commanders and leaders at all levels must conduct training with respect to a wide variety of operational missions across sustained land operations. These operations may include unified action partner considerations, and span the entire breadth of terrain and environmental possibilities. Commanders must strive to set the daily training conditions as closely as possible to those expected for actual operations.

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

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

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

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

b. How the Army Trains the Army.

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

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

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

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

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

Figure 1-1. Army Training and Leader Development Model

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

c. Leader Training and Leader Development.

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

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

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

(4) The life cycle management diagram combined with the 94D MOS Training Plan forms the Soldiers career development model. This information, combined with the MOS Training Plan in Chapter 2, forms the career development model for the MOS.

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

(1) Commander Responsibility.

(a) The unit commander is responsible for the wartime readiness of all elements in the formation. The commander is, therefore, the primary trainer of the organization and is responsible for ensuring that all training is conducted in accordance with the STP to the Army standard.
(b) Commanders ensure STP standards are met during all training. If a soldier fails to meet established standards for identified MOS tasks, the soldier must retrain until the tasks are performed to standard. Training to standard on MOS tasks is more important than completion of a unit training event such as a CATS evaluation. The objective is to focus on sustaining MOS proficiency — this is the critical factor commanders must adhere to when training individual soldiers in units.

(2) NCO Responsibility.

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

(b) Professional development programs enhance the individual’s career, through developmental assignments, experiential learning, continuing education, workshops and seminars, and by working with experienced professionals. Professional programs strengthen and augment the individual’s skills while building their expertise. A “career map” of these professional programs is available for every Soldier by accessing Army Career Tracker (ACT) web site, selecting “My Planner” and clicking on the button labeled “Printable Career Map”.

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

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

1.3 Battle-Focused Training

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

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

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

(1) Leaders conduct and evaluate training based on Army-wide training objectives and on the task standards published in the soldier’s manual task summaries or in the Central Army Registry (CAR). The task summaries ensure that --
Trainers in every unit and location define task standards the same way
Trainers evaluate all soldiers to the same standards

(2) Table 1-1 shows how battle-focused training relates to the trainer’s guide and soldier’s manual:
- The left column shows the steps involved in training soldiers.
- The right column shows how the STP supports each of these steps.

Table 1-1. Relationship of Battle-focused Training and STP

<table>
<thead>
<tr>
<th>BATTLE-FOCUS PROCESS</th>
<th>STP SUPPORT PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select supporting soldier tasks</td>
<td>Use TG to relate tasks to METL</td>
</tr>
<tr>
<td>Conduct training assessment</td>
<td>Use TG to define what soldier tasks to assess</td>
</tr>
<tr>
<td>Determine training objectives</td>
<td>Use TG to set objectives</td>
</tr>
<tr>
<td>Determine strategy; plan for training</td>
<td>Use TG to relate soldier tasks to strategy</td>
</tr>
<tr>
<td>Conduct pre-execution checks</td>
<td>Use SM task summary as source for task performance</td>
</tr>
<tr>
<td>Execute training; conduct after action review</td>
<td>Use SM task summary as source for task performance</td>
</tr>
<tr>
<td>Evaluate training against established standards</td>
<td>Use SM task summary as standard for evaluation</td>
</tr>
</tbody>
</table>

1.4 Summary Format

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

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

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

c. Conditions. The task conditions identify all the equipment, tools, references, job aids, and supporting personnel that the soldier needs to use to perform the task in wartime. This section identifies any environmental conditions that can alter task performance, such as visibility, temperature, or wind. This section also identifies any specific cues or events that trigger task performance, such as a chemical attack or identification of a threat vehicle.
d. Standards. The task standards describe how well and to what level the task must be performed under wartime conditions. Standards are typically described in terms of accuracy, completeness, and speed.

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

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

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

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

1.5 Training Execution

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) All training must be evaluated to measure performance levels against the established Army standard. The evaluation can be as fundamental as an informal, internal evaluation performed by the leader conducting the training. Evaluation is conducted specifically to enable the individual undergoing the training to know whether the training standard has been achieved. Trainers may have DA Form 5164-R (Hands-On Evaluation (LRA)) 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. Commanders must establish a climate that encourages candid and accurate feedback for the purpose of developing leaders and trained soldiers.

(2) Trainers may use DA Form 5165-R (Field Expedient Squad Book) to record hands-on GO/NO-GO results for a group of Soldier's having the same MOS and skill level. See Appendix B for instructions on how to obtain and fill out a copy of a DA Form 5165-R. Evaluation of training is not a test; it is not used to find reasons to punish leaders and soldiers. Evaluation tells soldiers whether or not they achieved the Army standard and, therefore, assists them in determining the overall effectiveness of their training plans. Evaluation produces disciplined soldiers, leaders, and units. Training without evaluation is a waste of time and resources.

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

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

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

d. After Action Review. The AAR, whether formal or informal, provides feedback for all training. It is a structured review process that allows participating soldiers, leaders, and units to discover for themselves what happened during the training, why it happened, and how it can be done better. The AAR is a professional discussion that requires the active participation of those being trained. ADP 7-0 provides detailed instructions for conducting an AAR and detailed guidance on coaching and critiquing during training.

1.7 Training Support

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

a. Glossary. The glossary, which follows the last appendix, is a single comprehensive list of acronyms, abbreviations, definitions, and letter symbols.

b. References. This section contains two lists of references, required and related, which support training of all tasks in this STP. Required references are listed in the conditions statement and are required for the Soldier to do the task. Related references are materials that provide more detailed information and a more thorough explanation of task performance.
CHAPTER 2

Trainer’s Guide

2.1 General

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

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

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

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

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

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

- **Subject Area Column.** This column lists the subject area number and title in the same order as Section I, Part One of the MOS Training Plan.
- **Task Number Column.** This column lists the task numbers for all tasks included in the subject area.
- **Title Column.** This column lists the task title for each task in the subject area.
Training Location Column. This column identifies the training location and the Leadership Domain (Institutional, Operational, or Self-Development) where the task is first trained to soldier training publications standards. If the task is first trained to standard in the unit, the word “OP” will be in this column. If the task is first trained to standard in the training base, it will identify, by brevity code (S-D, INST), the resident course where the task was taught. Table 2-1 contains a list of training locations and their corresponding brevity codes.

Table 2-1. Training Locations.

<table>
<thead>
<tr>
<th>AIT</th>
<th>Advanced Individual Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>INST</td>
<td>Institutional</td>
</tr>
<tr>
<td>OP</td>
<td>Operational/Unit</td>
</tr>
</tbody>
</table>

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

Table 2-2. Sustainment Training Frequency Codes.

<table>
<thead>
<tr>
<th>BA</th>
<th>Biennially</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN</td>
<td>Annually</td>
</tr>
<tr>
<td>SA</td>
<td>Semi-</td>
</tr>
<tr>
<td>QT</td>
<td>Quarterly</td>
</tr>
<tr>
<td>BM</td>
<td>Bimonthly</td>
</tr>
<tr>
<td>MO</td>
<td>Monthly</td>
</tr>
<tr>
<td>BW</td>
<td>Biweekly</td>
</tr>
<tr>
<td>WK</td>
<td>Weekly</td>
</tr>
<tr>
<td>DA</td>
<td>Daily</td>
</tr>
<tr>
<td>HR</td>
<td>Hourly</td>
</tr>
<tr>
<td>OT</td>
<td>One time</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
</tr>
</tbody>
</table>

Sustainment Training Skill Level Column. This column lists the skill levels of the MOS for which soldiers must receive sustainment training to ensure they maintain proficiency to soldier’s manual standards.
2.2. Part One, Section I. Subject Area Codes.

**Skill Level SL1**
1. Tactical Radar.
2. Fiber Optics.
3. AN/TPX-56.
4. AN/TSW-7A.
5. AN/TSQ-198.
6. Tactical Airspace Integration System AN/TSQ-221.
7. Digital Voice Recorder DVRS.
9. AN/ASM-146B or AN/USM-147B.
11. TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE).

**Skill Level SL2**
12. Tactical Radar Supervision.
14. Tactical Airspace Integration System AN/TSQ-221.
15. AN/TSQ-198.
16. Shop Operations Administration

**Skill Level SL3**
17. Maintenance Operations I.
18. Maintenance Management I.

**Skill Level SL4**
19. Maintenance Operations II.
20. Maintenance Management II.
2.3. Part One, Section II, Duty Position Training Requirements.

Table 2-3. Duty Position Training Requirements.

<table>
<thead>
<tr>
<th>SKILL LEVEL</th>
<th>DUTY POSITION</th>
<th>SUBJECT AREAS</th>
<th>CROSS TRAIN</th>
<th>TRAIN-UP/MERGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL1</td>
<td>ATC EQUIP REPAIRER</td>
<td>1-12</td>
<td>NA</td>
<td>94D10 ATC EQUIPMENT REPAIRER</td>
</tr>
<tr>
<td>SL2</td>
<td>ATC EQUIP REPAIRER</td>
<td>1-15</td>
<td>NA</td>
<td>94D20 ATC EQUIPMENT REPAIRER SUPERVISOR</td>
</tr>
<tr>
<td>SL3</td>
<td>ATC EQUIP REPAIRER</td>
<td>1-15</td>
<td>NA</td>
<td>94D30 ATC SYSTEMS MAINT SUPERVISOR</td>
</tr>
<tr>
<td>SL4</td>
<td>ATC EQUIP REPAIRER</td>
<td>1-15</td>
<td>NA</td>
<td>94D40 SYSTEMS MAINT SUPERVISOR</td>
</tr>
</tbody>
</table>
### MOS TRAINING PLAN

**MOS 94D**

## CRITICAL TASKS

Table 2-4. CRITICAL TASKS

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng Sl</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skill Level SL1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 1 Tactical Radar</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1051</td>
<td>Perform System Parameters Certification Prior to Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31(*) Flight Check</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1041</td>
<td>Perform Preventive Maintenance Checks and Services on Air Traffic Navigation, Integration and Coordination System, (ATNAVICS) AN/TPN-31(*)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1081</td>
<td>Repair Air Traffic Navigation, Integration and Coordination System (ATNAVICS) AN/TPN-31(*)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 2 Fiber Optics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1101</td>
<td>Repair Multipurpose Electronic and Fiber Optic Cables</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 3 AN/TPX-56</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>091-94D-1092</td>
<td>Perform Preventive Maintenance Checks and Services on IFF Interrogator AN/TPX (*)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 4 AN/TSW-7A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1180</td>
<td>Repair Air Traffic Control (ATC) Central AN/TSW-7A</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 5 AN/TSQ-198</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1280</td>
<td>Repair Tactical Terminal Control System AN/TSQ-198(*)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 6 Tactical Airspace Integration System AN/TSQ-221</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1380</td>
<td>Repair Tactical Airspace Integration System (TAIS) AN/TSQ-221(*)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 7 Digital Voice Recorder DVRS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94D-1880</td>
<td>Repair Digital Voice Recorder System (DVRS)</td>
<td>INST AN 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subject Area 8 Commercial-off-the-Shelf (COTS) Computers</strong></td>
<td></td>
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</tr>
</tbody>
</table>
### Table 2-4. CRITICAL TASKS

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-1106</td>
<td>Repair Commercial Off the Shelf (COTS) Air Traffic Control (ATC) Automation Systems</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-94D-1910</td>
<td>Maintain Chicago Manufacturing (CM) Receiver/Transmitter Radio Set (*)</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Subject Area 9 AN/ASM-146B or AN/USM-147B**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-1450</td>
<td>Operate Electronic Shop, Shelter Mounted, Avionics AN/ASM-146B or AN/ASM-147B</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Subject Area 10 Mobile Tower System (MOTS) AN/MSQ-135**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-1190</td>
<td>Repair Mobile Tower System (MOTS) AN/MSQ-135*</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Subject Area 11 TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE)**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-1900</td>
<td>Operate General Purpose Test Equipment</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

#### Skill Level SL2

**Subject Area 12 Tactical Radar Supervision**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-2010</td>
<td>Manage Preparation of Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31 (*)</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
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</table>

**Subject Area 13 Mobile Tower System (MOTS) AN/MSQ-135**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-2020</td>
<td>Manage Preparation of Mobile Tower System (MOTS) AN/MSQ135 (*)</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Subject Area 14 Tactical Airspace Integration System AN/TSQ-221**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-2040</td>
<td>Manage Preparation of Tactical Airspace Integration System (TAIS) AN/TSQ-221 (*)</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Subject Area 15 AN/TSQ-198**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-2030</td>
<td>Manage Preparation of Tactical Terminal Control System (TTCS) AN/TSQ-198 (*)</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
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</table>

**Subject Area 16 Shop Operations Administration**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-94D-2060</td>
<td>Administer Maintenance Certification Records and Forms</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-94D-2050</td>
<td>Conduct Air Traffic Control (ATC) Logistical Operations</td>
<td>OP</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>

#### Skill Level SL3

**Subject Area 17 Maintenance Operations I**

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-LCST-3005</td>
<td>Maintain Hand Receipts</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-3007</td>
<td>Conduct a Military Briefing</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-3004</td>
<td>Administer Training Programs at the Platoon Level</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
</tbody>
</table>
Table 2-4. CRITICAL TASKS

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Subject Area</th>
<th>Title</th>
<th>Training Location</th>
<th>Sust Tng Freq</th>
<th>Sust Tng SL</th>
</tr>
</thead>
<tbody>
<tr>
<td>091-LCST-3003</td>
<td>18 Maintenance Management I</td>
<td>Conduct Administrative Procedures at the Platoon Level</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3005</td>
<td></td>
<td>Perform Battle Damage Assessment and Repair</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3006</td>
<td></td>
<td>Conduct Quality Assurance/Quality Checks (QA/QC) for Maintenance Operations</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3004</td>
<td></td>
<td>Develop a Maintenance Standard Operating Procedure (SOP)</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3007</td>
<td></td>
<td>Conduct Shop Operations</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3008</td>
<td></td>
<td>Administer Logistics Information Systems</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-3009</td>
<td></td>
<td>Implement Command Maintenance Discipline Program (CMDP)</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td><strong>Skill Level SL4</strong></td>
<td>Subject Area 19 Maintenance Operations II</td>
<td>Conduct Administrative Procedures at the Company Level</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-4003</td>
<td></td>
<td>Facilitate Training Programs at the Company Level</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-4004</td>
<td></td>
<td>Conduct Logistical Operations at the Brigade Level and Higher</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-4005</td>
<td></td>
<td>Apply Critical Thinking as a Senior Leader</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-LCST-4001</td>
<td></td>
<td>Conduct a Military Decision Briefing</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
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<tr>
<td>091-LCST-4007</td>
<td></td>
<td>Conduct Tactical Operations at the Battalion Level and Higher</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td><strong>Subject Area 20 Maintenance Management II</strong></td>
<td></td>
<td>Lead Command Supply Discipline Program at the Company Level</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
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<tr>
<td>091-MCST-4003</td>
<td></td>
<td>Maintain Automated Maintenance Records</td>
<td>INST</td>
<td>AN</td>
<td>1-4</td>
</tr>
<tr>
<td>091-MCST-4001</td>
<td></td>
<td>Lead Maintenance Production Control</td>
<td>INST</td>
<td>AN</td>
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</tr>
</tbody>
</table>
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CHAPTER 3
MOS/Skill Level Tasks

Skill Level SL1
Subject Area 1: Tactical Radar
091-94D-1051

Perform System Parameters Certification Prior to Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31(*) Flight Check

<table>
<thead>
<tr>
<th>DANGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe all Dangers within the maintenance manual.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe all Warnings within the maintenance manual.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe all Cautions within the maintenance manual.</td>
</tr>
</tbody>
</table>

**Conditions:** In an Operational Environment (OE), your supervisor has tasked you to perform System Parameters Certification prior to Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31(*) Flight check. You are provided with a (ATNAVICS) AN/TPN-31 (*), Technical Manual (TM) 11-5840-381-10, TM 11-5840-381-23P, The Army Maintenance Management System (TAMMS) Users Manual DA Pam 750-8, Equipment Maintenance and Inspection Worksheet DA Form 2404, Local Standard Operating Procedure (SOP). If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** Complete assembly and preparation of the (ATNAVICS) AN/TPN-31 (*) to pass the flight check in accordance with TM 11-5840-381-10 to 100% accuracy. When the task is completed the System Parameters Certification of the (ATNAVICS) AN/TPN-31(*) should be fully mission Capable. Complete all maintenance forms and records in accordance with DA Pam 750-8. Ensure all safety precautions are observed without violation.

**Special Condition:** If listed equipment is not available, comparable equipment may be substituted.

**Special Standards:** None
Special Equipment:

Cue: None

Note: None

Performance Steps

1. Verify sensor pallet siting requirement in accordance with TM 11-5840-381-10.

2. Read siting considerations in TM 11-5840-381-10.

3. Verify survey data prior to radar deployment in accordance with TM 11-5840-381-10.

4. Assist in performing radar alignment and additional data measurement in accordance with TM 11-5840-381-10.

5. Ground sensor pallet, operations (OPS) shelter, and generator trailer in accordance with TM 11-5840-381-10.


7. Retrieve sensor power cable, OPS power cable and fiber optic cable for installation in accordance with TM 11-5840-381-10.

8. Assist controllers with OPS and sensor generator startup procedures in accordance with TM 11-5840-381-10.


Evaluation Preparation: Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Verified sensor pallet siting requirement in accordance with TM 11-5840-381-10.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Read siting consideration in TM 11-5840-381-10.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Verified data prior to radar deployment in accordance with TM 11-5840-381-10.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Performance Measures

4. Assisted in performing radar alignment and additional data measurement in accordance with TM 11-5840-381-10. _____  _____

5. Grounded sensor pallet, operations (OPS) shelter, and generator trailer in accordance with TM 11-5840-381-10. _____  _____

6. Prepared shelter for use in accordance with TM 11-5840-381-10. _____  _____

7. Retrieved sensor power cable, OPS power cable and fiber optic cable for installation in accordance with TM 11-5840-381-10. _____  _____

8. Assisted controllers with OPS and sensor generator startup procedures in accordance with TM 11-5840-381-10. _____  _____


10. Verified initial adjustment, checks, and self-test procedures in accordance with TM 11-5840-381-10. _____  _____

Evaluation Guidance: Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

References

TM 11-5840-381-10
TM 11-5840-381-23P
Perform Preventive Maintenance Checks and Services on Air Traffic Navigation, Integration and Coordination System, (ATNAVICS) AN/TPN-31(*)

WARNING

Do not position the generator directly behind or in front of the operation shelter or closer than 30 feet to operation shelter. Failure to heed this warning may result in personnel suffocation due to carbon monoxide and other toxic gases entering the ECU.

Carbon monoxide is without color or smell, but can kill you. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure. Carbon monoxide occurs in the exhaust fumes of fuel-burning heater and internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of no air movement. Precautions must be followed to insure crew safety when the heater or engine is operated.

Generator must be set up at least 3 meters (10 feet) away from sensor vehicle. If a generator is emplaced closer than 3 meters (10 feet) to the ATNAVICS and is refueled while the system is operating, the fuel may ignite, causing serious burns and injury to personnel.

Gasoline (MOGAS, AVGAS) must be maintained at least 15 meters (50 feet) away from the system (both Operator and Sensor vehicles). Diesel fuel (JP-8) must be maintained at least 3 meters (10 feet) away from the system (both Operator and Sensor vehicles).

FUELS CAN CREATE EXPLOSIVE ATMOSPHERE AND ARE A FLAMMABLE CLASS B FIRE HAZARD. Some fuels which can be used by the generator are highly volatile and/or explosive. Prevent sparks and open flames in the area of refueling and ensure the generator and the fueling source are properly grounded. Fire or explosion can result in personnel being injured or dying.

DO NOT STAND IN THE DIRECT PATH OF THE ANTENNA WHEN THE POWER IS ON!!

DO NOT WORK ON THE WAVEGUIDES WHILE THE POWER IS ON!!

DANGEROUS RF POWER LEVELS EXIST ON AND NEAR ANTENNA DURING OPERATION. DO NOT STAND CLOSER THAN 15 METERS IN THE DIRECTION OF THE PRECISION APPROACH RADAR (PAR) BEAM.
DO NOT STAND 3 METERS (9.8 FEET) TO THE ANTENNA WHEN THE TRANSMITTER IS OPERATING. RF ELECTROMAGNETIC RADIATION CAN CAUSE SERIOUS BURNS AND INJURY

The handling, storage, and disposal of hazardous materials will be accomplished in accordance with applicable Material Safety Data Sheets (MSDSs).

FUELS ARE TOXIC. Avoid contact or ingestion of any fluids used as fuels by the generator.

ETHYLENE GLYCOL. Harmful if swallowed. Potential irritant to skin. Wear protective gloves during handling to prevent contact with skin. Do not swallow.

Never charge a Lithium-Sulfur Dioxide battery.

HIGH VOLTAGE is used in the operation of this equipment.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technicians are aided by operators, they must be warned about dangerous areas.

---

**CAUTION**

Stow antenna when wind speed reaches 60 knots (111 km).

USE WRIST GROUND STRAPS OR MANUAL GROUNDING PROCEDURES. KEEP ESD ITEMS IN PROTECTIVE COVERING WHEN NOT IN USE. GROUND ALL ELECTRICAL TOOLS AND TEST EQUIPMENT. PERIODICALLY CHECK CONTINUITY AND RESISTANCE OF GROUNDING SYSTEM. USE ONLY METALIZED SOLDER SUCKERS. HANDLE ESD ITEMS ONLY IN PROTECTED AREAS.

MAKE CERTAIN EQUIPMENT IS POWERED DOWN. TOUCH GROUND PRIOR TO REMOVING ESD ITEMS. TOUCH PACKAGE OF REPLACEMENT ESD ITEM TO GROUND BEFORE OPENING. TOUCH GROUND PRIOR TO INSERTING REPLACEMENT ESD ITEMS.

Pallet mounts have not yet been released. Do not attempt to extend leveling jack beyond the point of making contact with the ground pads. To do so may cause damage to the pallet and/or High Mobility Multipurpose Wheeled Vehicle - Expanded Capacity Vehicle (HMMWV-ECV).

**Conditions:** In an operational environment (OE), perform preventive maintenance checks and services (PMCS) on Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31(*), as directed by your supervisor. At your workstation
you have the following items: Multimeter AN/USM-486; Radio Frequency Power Test Set AN/URM-213; Communications Security Equipment KY-57; Antenna Group OE-254; Tool Kit TK-100 or TK-105; wire brush and soft-bristle brush; oil, grease, rags, sponge, and lint-free cloth; Technical Manual (TM) 11-5840-381-10; TM 11-5840-381-23; TM 11-5840-381-23P; TM 5-4120-384-14; TM 11-5810-256-12; TM 11-5895-1611-12&P; TM 11-5985-357-13; Department of the Army (DA) Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA); Department of Defense (DD) Form 314 (Preventive Maintenance Schedule and Record) or equivalent; Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log) and DA Pamphlet 750-8.

**Standards:** Use DA Pamphlet 750-8 and TM 11-5840-381-10 to perform PMCS on ATNAVICS AN/TPN-31(*) and record maintenance activity on DA Form 5988-E and FAA Form 6030-1.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** Your supervisor has directed you to perform preventive maintenance checks and services on the ATNAVICS and record maintenance activity on DA Form 5988-E and FAA Form 6030-1 using DA Pamphlet 750-8 and TM 11-5840-381-10.

**Note:** If listed equipment is not available, comparable equipment may be substituted.

In order to ensure a system remains ready and available, it must be put into operation (outdoors and clear of reflective surfaces, including buildings) at least once every 45 days IAW "SYSTEM TURN ON" and "INITIAL ADJUSTMENTS, CHECKS, AND SELF-TEST" work packages of this manual. In addition, PMCS associated with this action must be performed IAW this work package.

Some PMCS checks require the system to be turned on. To perform these checks, system must be turned on IAW "SYSTEM TURN-ON" work package of this manual.

To ensure that the ATNAVICS is always mission ready, PMCS must be performed regularly. Follow step-by-step procedures outlined in TM 11-5840-381-10. In some instances, systems will be in the desert, operating in extreme environmental conditions and high operating tempo (OPTEMPO). During desert conditions, the standard PMCS "frequency" schedule will exceed the TM required scheduled services in order to maintain a high level of readiness.

**Performance Steps**
1. Obtain all required tools, test equipment, references and materials needed using TM 11-5840-381-10.

2. Complete the appropriate blocks on Maintenance Request Form using DA PAM 750-8.

3. Properly set up test equipment.


10. Complete the appropriate blocks on the Maintenance Request Form using DA PAM 750-8.

11. Notify supervisor upon completion of task.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

**Performance Measures**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Obtained all required tools, test equipment, references and materials needed using TM 11-5840-381-10.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Completed the appropriate blocks on Maintenance Request Form DA Form 5988-E, using DA PAM 750-8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Properly set up test equipment.</td>
<td></td>
<td></td>
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</tbody>
</table>
### Performance Measures

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>4</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 1 for BEFORE interval checks.</td>
</tr>
<tr>
<td>5</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 2 for DAILY interval checks, if applicable.</td>
</tr>
<tr>
<td>6</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 3 for WEEKLY interval checks, if applicable.</td>
</tr>
<tr>
<td>7</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 4 for MONTHLY interval checks, if applicable.</td>
</tr>
<tr>
<td>8</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 5 for QUARTERLY interval checks, if applicable.</td>
</tr>
<tr>
<td>9</td>
<td>Performed step-by-step procedures using TM 11-5840-381-10, table 6 for AFTER interval checks.</td>
</tr>
<tr>
<td>10</td>
<td>Completed the appropriate blocks on Maintenance Request Form using DA PAM 750-8.</td>
</tr>
<tr>
<td>11</td>
<td>Notified supervisor upon completion of task.</td>
</tr>
</tbody>
</table>

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

**References**

- DA FORM 5988-E
- DA PAM 750-8
- DD FORM 314
- FAA FORM 6030-1
- TM 5-4120-384-14
- TM 11-5810-256-12
- TM 11-5840-381-10
- TM 11-5840-381-23
- TM 11-5895-1611-12&P
- TM 11-5985-357-13
WARNIING

CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU
Carbon monoxide is without color or smell, but can kill you. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure. Carbon monoxide occurs in the exhaust fumes of fuel burning heaters and internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of no air movement. Precautions must be followed to insure crew safety when the heater or engine is operated.

1. DO NOT operate heater or engine in a closed place unless the place has a lot of moving air.
2. DO NOT operate with doors and exhaust vents closed.
3. BE ALERT at all times during the operation of heaters or engine for exhaust odors or exposure symptoms. If either is present, IMMEDIATELY VENTILATE personnel compartments. If symptoms persist, remove crew to fresh air, keep warm. DO NOT PERMIT PHYSICAL EXERCISE; If necessary, give artificial respiration.

FOR ARTIFICIAL RESPIRATION REFER TO FM 4-25.11 First Aid for Soldiers.

4. BE AWARE; the field protective mask for chemical-biological-radiological (CBR) protection will not protect you from carbon monoxide poisoning.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

HIGH VOLTAGE is used in this equipment. DEATH ON CONTACT may result if personnel fail to observe safety precautions. Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technicians are aided by operators, they must be warned about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it.

DO NOT SERVICE OR ADJUST ALONE
Never reach into or enter an enclosure to service or adjust the equipment except with someone who can render aid.

**HIGH NOISE LEVEL**
When operating, potentially dangerous noise levels exist. Without protection, long exposure to this noise may cause hearing loss. Use ear protectors when working within 30 ft (10 m) of equipment. See AR 40-5, Preventive Medicine, for additional information.

**CAUTION**
THIS EQUIPMENT CONTAINS PARTS SENSITIVE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD).

USE PRECAUTIONARY PROCEDURES WHEN TOUCHING, REMOVING OR INSERTING PRINTED CIRCUIT BOARDS.

EXCESSIVE RF POWER LEVELS PRESENT A HAZARD IN FRONT OF PAR ANTENNA WHEN THE POWER IS ON. KEEP MORE THAN 3 METERS AWAY. INSURE POWER IS OFF BEFORE ACCESSING OR WORKING ON THE ANTENNA. RF ELECTROMAGNETIC RADIATION CAN CAUSE SERIOUS BURNS AND INJURY.

Stow antenna when wind speed reaches 60 knots (111 km).

Pallet mounts have not yet been released. Do not attempt to extend leveling jack beyond the point of making contact with the ground pads. To do so may cause damage to the pallet and/or High Mobility Multipurpose Wheeled Vehicle - Expanded Capacity Vehicle (HMMWV-ECV).

Do not crank engine in excess of fifteen seconds. Allow starter to cool at least fifteen seconds between attempted starts. Failure to observe this caution could result in damage to the starter.

Alternate ratchet operations between all four legs to avoid binding caused by raising one corner of the pallet too high.

Do not leave door open longer than necessary. It can swing open or closed suddenly, causing damage to door or door hardware. Do not overextend shelter door hinges or damage may result. Wind may blow door open or closed and cause damage to door and door hardware.

**Conditions:** You are in an operational environment (OE), with a non-mission capable Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31(*) that has been submitted to the C&E shop with Department of the Army (DA) Form 2407, Maintenance Request and Department of the Army (DA) Form 2404, Equipment Inspection and Maintenance Worksheet or DA Form 5988-E, Equipment Inspection...
Maintenance Worksheet (EGA). Your supervisor has assigned the work order to you for repair. You have the following items: Tool Kit TK-105/G, Digital Multimeter AN/USM-486; Test Set Radio Frequency Power AN/URM-213; Technical Manual (TM) TM 11-5840-381-10; TM 11-5840-381-10HR; TM 11-5840-381-23; TM 11-5840-381-23P; DA Form 2404, Equipment Inspection and Maintenance Worksheet; DA Form 2407, Maintenance Request or DA Form 5990-E (Maintenance Request (EGA); Preventive Maintenance Schedule and Record; Federal Aviation Administration (FAA) Form 6030-1, Facility Maintenance Log; Technical Bulletin (TB) 385-4; and DA Pamphlet 750-8.

**Standards:** Restore ATNAVICS AN/TPN-31(*) to fully mission capable status using TM 11-5840-381-10; TM 11-5840-381-10HR; TM 11-5840-381-23; and TM 11-5840-381-23P. Complete without error all maintenance forms and records using DA Pam 750-8.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** Your supervisor has directed you to repair a non-mission capable Air Traffic Navigation Integration, and Coordination System (ATNAVICS) AN/TPN-31(*) that has been submitted to your C&E shop.

**Note:** (*) Annotates applicable version of
AN/TPN-31(V)1
AN/TPN-31(V)2
AN/TPN-31(V)3
AN/TPN-31(V)6
(NSN 5840-01-450-8126) (EIC: IT8)

If listed equipment is not available, equivalent equipment may be substituted.

**Performance Steps**

1. Obtain all required tools, test equipment, references and materials using TM 11-5840-381-23.

2. Complete the appropriate blocks on Maintenance Request Form using DA PAM 750-8.

3. Perform visual inspection.

4. Properly set up test equipment.

5. Verify faults listed on Maintenance Request Form using appropriate troubleshooting chart in TM 11-5840-381-23.

7. Identify defective component(s) using TM 11-5840-381-23.
   
   
   b. Rotate radiate/rotate switch to proper position for maintenance services.

8. Replace defective component(s) using TM 11-5840-381-23P.
   
   a. Remove component(s) to be replaced and those that prevent access to them.
   
   
   c. Disassemble component(s) to be replaced.
   
   d. Clean all component(s) that were dusty, dirty, or corroded.
   
   e. Replace serviceable component(s), if necessary.
   
   
   g. Rotate radiate/rotate switch to operational status.


11. Tag defective component(s) for turn-in using DA PAM 750-8.

12. Notify supervisor upon completion of task.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

**Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials using TM 11-5840-381-23.</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>2. Completed appropriate blocks on Maintenance Request Form using DA PAM 750-8.</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Performance Measures</td>
<td>GO</td>
<td>NO GO</td>
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<tr>
<td>----------------------------------------------------------</td>
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</tr>
<tr>
<td>3. Performed visual inspection.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4. Properly set up test equipment.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>5. Verified faults listed on Maintenance Request Form using appropriate troubleshooting chart in TM 11-5840-381-23.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>6. Performed troubleshooting procedures on the ATNAVICS AN/TPN 31(*) using the troubleshooting chart in TM 11-5840-381-23.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>7. Identified defective component(s) using TM 11-5840-381-23.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>8. Replaced defective component(s) using TM 11-5840-381-23P.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>10. Completed appropriate blocks on Maintenance Request Form using DA PAM 750-8.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>11. Tagged defective part(s) for turn-in using DA PAM 750-8.</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>12. Notified supervisor upon completion of task.</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

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

**References**

DA FORM 2404  
DA FORM 2407  
DA FORM 5988-E  
DA FORM 5990-E  
FAA FORM 6030-1  
TM 11-5840-381-23  
TM 11-5840-381-23P  
TM 11-5895-1611-12&P
Subject Area 2: Fiber Optics

091-94D-1101
Repair Multipurpose Electronic and Fiber Optic Cables

**DANGER**
This task should not be performed in MOPP4.

**WARNING**
- When possible, keep one hand out of contact with equipment. This prevents current from flowing through vital organs of body.
- Remove all jewelry before beginning work on electric equipment.

**CAUTION**
- When removing, installing or connecting hardware use care to prevent damage to equipment.

**Conditions:** You are in an operational environment (OE), a faulty fiber optic cable and RF cable with a maintenance request form has been submitted to your shop. Your supervisor has assigned the work order to you for repair. You have the following items: Fiber Optic cable repair kit; all applicable Tools; Equipment; Test, Measurement, and Diagnostic Equipment (TMDE); Technical Manual (TM) 11-6020-200-10; TM 11-6020-200-23&P; National Electrical Code (NEC) 2017 Edition; Joint Industry Standard IPC J-STD-001G; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet); DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request); Technical Bulletin (TB) 385-4; DA Pamphlet 750-8; local Standard Operating Procedure (SOP), and replaceable component(s). If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** Repair the faulty fiber optic cable and RF cable in accordance with Standard Operating Procedure to 100% accuracy. When the task is complete the fiber optic cable and RF cable must be fully mission capable and soldering of cables will be in accordance with the Joint Industry Standard. Complete all appropriate maintenance forms without error using DA Pam 750-8. Ensure all safety precautions are observed without violation.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**
**Cue:** Your supervisor has directed you to repair a non-mission capable Fiber Optic Cable submitted to your C&E shop.

**Note:** If listed equipment is not available, equivalent equipment may be substituted.

**Performance Steps**

1. Obtain all required tools, test equipment, references and materials using TM 11-6020-200-23&P.

2. Complete appropriate blocks on maintenance request form using DA PAM 750-8.

3. Perform visual inspection on suspected faulty electronic cable.

4. Identify defective portion(s) of electronic/fiber optic cable using a multimeter or the fiber optic repair kit in accordance with TM 11-6020-200-23&P.

5. Repair defective portion(s) of cable using the fiber optic cable repair kit.

6. Test fiber optic cable to ensure it is fully operational.


8. Tag defective part(s) for turn-in if applicable, using DA PAM 750-8.

9. Notify supervisor upon completion of task.

**Evaluation Preparation:** Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

**Performance Measures**

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials using TM 11-6020-200-23&amp;P.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>2. Completed appropriate blocks on maintenance request form using DA PAM 750-8.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>3. Performed visual inspection on suspected faulty fiber optic cable.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>4. Identified defective portion(s) of electronic/fiber optic cable using a multimeter or the fiber optic repair kit in accordance with TM 11-6020-200-23&amp;P.</td>
<td>____</td>
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</tbody>
</table>
**Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>5. Repaired defective portion(s) of cable using the fiber optics cable repair kit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Tested fiber optic cable to ensure full operational use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Tagged defective part(s) for turn-in if applicable, using DA PAM 750-8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Notified supervisor upon completion of task.</td>
<td></td>
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</tr>
</tbody>
</table>

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

- DA FORM 2404
- DA FORM 2407
- DA FORM 2407-1
- DA FORM 5988-E
- DA FORM 5990-E
- DA PAM 750-8
- IPC-J-STD-001GS
- LOCAL SOP
- NFPA 70 National Electrical Code 2020
- TB 385-4
- TM 11-6020-200-10
- TM 11-6020-200-23&P
Subject Area 3: AN/TPX-56

091-94D-1092
Perform Preventive Maintenance Checks and Services on IFF Interrogator AN/TPX (*)

WARNING

HIGH VOLTAGE IS USED IN THE OPERATION OF THIS EQUIPMENT.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When technicians are aided by operators, they must be warned about dangerous areas.

Lithium organic batteries or cells are used in this equipment. They are potentially hazardous if misused or tampered with before, during, or after discharge. The following precautions must be strictly observed to prevent possible death or injury to personnel or equipment.

DO NOT attempt to recharge batteries.

DO NOT heat, incinerate, crush, puncture, disassemble, or otherwise mutilate batteries.

DO NOT short circuit the batteries.

DO NOT store batteries in the equipment during long periods of nonuse, in excess of 30 days, or when the equipment is to be shipped.

TURN OFF the equipment immediately if you detect the battery compartment becoming unduly hot, hear battery cells venting (hissing sound), or smell irritating sulfur dioxide gas. Remove and dispose of the batteries only after they are cool.

CAUTION

This equipment contains electrostatic discharge (ESD) sensitive devices.

Conditions: In an operational environment (OE), an Interrogator Set AN/TPX-56 or Interrogator Set AN/TPX-57 is due organizational preventive maintenance checks and services (PMCS), as indicated by (TM 11-5895-1611-12&P for the AN/TPX-56) or (TM 11-5895-1815-12&P for the AN/TPX-57). You are given the following, AN/TPX-56 or AN/TPX-57, DA Form 2404 Equipment or Inspection and Maintenance Worksheet, DA PAM 750-8. If any of the above equipment is obsolete or not available, use equivalent equipment.
Standards: Perform organizational PMCS on Interrogator Set AN/TPX-56 or Interrogator Set AN/TPX-57 using (TM 11-5895-1611-12&P AN/TPX-56) or (TM 11-5895-1815-12&P AN/TPX-57) to 100% accuracy. When task is completed the AN/TPX-56 or AN/TPX-57 must be fully mission capable. Annotate all deficiencies on maintenance forms in accordance with DA PAM 750-8 without error.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: An Interrogator Set AN/TPX-56(*) or AN/TPX-57(*)& and forms have been brought into the C&E Shop for organizational preventive maintenance checks and services.

Note: If listed equipment is not available, equivalent equipment may be used.

(*) Annotates applicable version of
Interrogator Set AN/TPX-56(V)2 (NSN 5895-01-392-2206) (EIC: IZL)
Interrogator Set AN/TPX-56(V)3 (NSN 5895-01-504-4594) (EIC: N/A)
Interrogator Set AN/TPX-56(V)4 (NSN 5895-01-586-3140) (EIC: N/A)
Interrogator Set AN/TPX-57(V)1 (NSN 5895-01-530-4167)

Performance Steps

1. Obtain all required tools, test equipment, references and materials using TM 11-5895-1611-12&P for AN/TPX-56 or TM 11-5895-1815-12&P for AN/TPX-57.

2. Complete initial blocks on maintenance request form using DA PAM 750-8.

3. Perform visual inspection.

4. Properly set up test equipment.

5. Perform Built-In Test (BIT) by turning power CIRCUIT BREAKER on.

6. Inspect cable connections to interrogator and associated components for damage and corrosion.

NOTE: Ensure connections are clean, intact, and secure.

7. Inspect the exterior surfaces.

   a. Check IFF enclosure, interrogator, and mounting base assembly for cleanliness and overall condition.
b. Remove dirt, grease, and moisture.

c. Inspect for corrosion, scratched paint, missing screws, and bent or broken hardware.

d. Repair as necessary.

e. Report any corrosion problems.

8. Inspect batteries every 180 days.

a. Inspect battery cover assembly gasket for cuts or separation from battery cover.

b. Replace batteries.

9. Inspect indicators.

a. Check indicators for overall condition.

b. Check glass surfaces for damage and cleanliness.

10. Inspect switches/controls for proper mechanical action (no backlash, binding, or scraping).

11. Complete appropriate blocks on maintenance request form using DA PAM 750-8 to close out service.

12. Notify supervisor upon completion of task.

**Evaluation Preparation:** Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials using TM 11-5895-1611-12&amp;P for AN/TPX-56 or TM 11-5895-1815-12&amp;P for AN/TPX-57.</td>
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<tr>
<td>2. Completed initial blocks on maintenance request form using DA PAM 750-8.</td>
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<td>3. Performed visual inspection.</td>
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<td>4. Properly set up test equipment.</td>
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5. Performed Built-In Test (BIT) by turning power CIRCUIT BREAKER on.
6. Inspected cable connections to interrogator and associated components for damage and corrosion.
7. Inspected the exterior surfaces.
8. Inspected batteries every 180 days.
9. Inspected indicators.
10. Inspected switches/controls for proper mechanical action (no backlash, binding, or scraping).
11. Completed appropriate blocks on maintenance request form using DA PAM 750-8 to close out service.
12. Notified supervisor upon completion of task.

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

- DA FORM 2404
- DA PAM 750-8
- TM 11-5895-1611-12&P
- TM 11-5895-1815-12&P
Subject Area 4: AN/TSW-7A

091-94D-1180
Repair Air Traffic Control (ATC) Central AN/TSW-7A

WARNING

HIGH VOLTAGE is used in the operation of this equipment DEATH ON CONTACT may result if personnel fail to observe safety precautions when performing functional and troubleshooting procedures on the test set. Shut down equipment and disconnect power supply before beginning work on equipment. Do not be misled by the term low voltage. Potentials as low as 50 volts may cause death under adverse conditions. For Artificial Respiration, refer to FM 4-25.11.

- Death or serious injury may result from failure to observe safety precautions when performing functional test procedures.

Conditions: In an operational environment (OE), repair an Air Traffic Control (ATC) Central AN/TSW-7A, which has failed an operational check. Given the replaceable module or component; access to all assigned tools and test, measurement, and diagnostic equipment (TMDE); Tool Kit TK-100/G or TK-105/G; Digital Multimeter AN/USM-486, Oscilloscope OS-261/C, Electrical Dummy Load DA-75/U, and Signal Generator SG-1112/U; Technical Manual (TM) 11-5895-801-12, TM 11-5895-801-20P, TM 11-5895-801-34 and TM 11-5895-801-34P; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA)), DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request (EGA)), Department of Defense (DD) Form 314 (Preventive Maintenance Schedule and Record), Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log), Technical Bulletin (TB) 385-4, DA Pamphlet 750-8, and local standing operating procedure (SOP).

Standards: Restored the AN/TSW-7A to fully mission capable in accordance with TM 11-5895-801-12, TM 11-5895-801-34, TM 11-5895-801-20P, TM 11-5895-801-34P. Close out all associated maintenance forms and records.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: Your supervisor has directed you to repair a non-mission capable AN/TSW-7A submitted to your C&E Shop.

Note: Use applicable procedures from TM 11-5895-801-12 and TM 11-5895-801-34 to troubleshoot the system.
Performance Steps

1. Observe all safety precautions during the task in accordance with TB 385-4 and equipment TM.

2. Obtain equipment history by reviewing DA Form 2404 or DA Form 5988-E.

3. Perform a preliminary examination to detect:
   a. Abnormal front panel indications.
   b. Any odor of burned parts or insulation.
   c. High voltage arcing or other abnormal sounds.
   d. Abnormal equipment operation.

4. Sectionalize trouble to the faulty chassis or subchassis.

5. Localize the fault to a portion or stage using the troubleshooting aids and procedures found in TM 11-5895-801-12 and TM 11-5895-801-34, as necessary:
   a. Waveform amplitude.
   b. Wiring diagram.
   c. Unit/organizational symptom troubleshooting chart.
   d. Waveform illustrations.

6. Isolate fault to the defective part using the troubleshooting aids and procedures found in TM 11-5895-801-12 and TM 11-5895-801-34, as necessary:
   a. Voltage and resistance diagram.
   b. Complete schematic diagram.
   d. Receptacle and plug pin connections.
   e. Isolating by parts substitution.

7. Fill out DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1, showing work accomplished in accordance with DA Pamphlet 750-8.
8. Take appropriate action to begin repair process IAW TM 11-5895-801-12 or TM 11-5895-801-34. Refer to last entry on DA Form 2407 or DA Form 5990-E to identify parts and/or actions needed to repair faulty AN/TSW-7A and took appropriate action, as follows:

   a. Equipment requires parts available on site. Prepare a supply request and obtained replacement parts in accordance with local SOP.

   b. Equipment requires parts not available on site. Contact surrounding sites, Area Maintenance Supply Facility (AMSF), or other units to locate parts.

      (1) Coordinate to obtain parts in accordance with local SOP if parts were available.

      (2) Initiate the appropriate high priority parts request in accordance with local SOP if parts were not available.

   c. Equipment Not Repairable This Station (NRTS). Prepare DA Form 2407 or DA Form 5990-E and evacuate equipment requiring repair to the appropriate support maintenance facility in accordance with local SOPs.

9. Replace faulty component or module.

10. Conduct performance test AN/TSW-7A.

11. Update DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1.

12. Initiate DA Form 2404 or DA Form 5988-E and gather equipment needed to perform PMCS.

**NOTE:** In some instances, systems will be in the desert, operating in extreme environmental conditions and high Operating Tempo (OPTEMPO). During desert conditions, the standard (PMCS) Preventive Maintenance Checks and Services "frequency" schedule shall exceed the TM required scheduled services in order to maintain a high level of readiness

13. Perform regular PMCS (including weekly/quarterly) to ensure equipment readiness.

14. Spot-paint, when necessary and weather permits some instances, systems will be in the desert, operating in extreme environmental conditions and high Operating Tempo (OPTEMPO).

**NOTE:** During desert conditions, the standard PMCS "frequency" schedule shall exceed the TM required scheduled services in order to maintain a high level of readiness, in accordance with TB 43-0118 and TM 43-0139.

13 April 2020
15. Request final inspection.

16. Close out maintenance forms and records.

17. Turn in completed DA Form 2404 or DA Form 5988-E to maintenance supervisor and logged maintenance activity on FAA Form 6030-1.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
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<tbody>
<tr>
<td>1. Observed all safety precautions during the task in accordance with TB 385-4 and equipment TMIs.</td>
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<tr>
<td>2. Obtained equipment history by reviewing DA Form 2404 or DA Form 5988-E.</td>
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<tr>
<td>3. Performed a preliminary examination.</td>
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<tr>
<td>4. Sectionalized trouble to the faulty chassis or sub chassis.</td>
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<tr>
<td>5. Localized the fault to a portion or stage using the troubleshooting aids and procedures found in TM 11-5895-801-12 and TM 11-5895-801-34, as necessary.</td>
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<tr>
<td>6. Isolated fault to the defective part using the following troubleshooting aids and procedures, as necessary.</td>
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<tr>
<td>7. Filled out DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1, showing work accomplished in accordance with DA Pamphlet 750-8.</td>
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<tr>
<td>8. Took appropriate action to begin repair process. Referred to last entry on DA Form 2407 or DA Form 5990-E to identify parts and/or actions needed to repair faulty AN/TSW-7A and took appropriate action, as follows:</td>
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<tr>
<td>9. Replaced faulty component or module.</td>
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<tr>
<td>10. Conducted performance test on AN/TSW-7A.</td>
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<tr>
<td>11. Updated DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1.</td>
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<td>12.</td>
<td>Initiated DA Form 2404 or DA Form 5988-E and gather equipment needed to perform PMCS.</td>
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<tr>
<td>13.</td>
<td>Performed regular PMCS (including weekly/quarterly) to ensure equipment readiness.</td>
<td></td>
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<tr>
<td>14.</td>
<td>Spot-painted, when necessary and weather permits. Performed weekly/quarterly checks and services IAW TM 11-5895-801-12 PMCS chart in Chapter 4, in accordance with TB 43-0118 and TM 43-0139.</td>
<td></td>
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<td>15.</td>
<td>Requested final inspection.</td>
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<td>16.</td>
<td>Closed out maintenance forms and records.</td>
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<td>Turned in completed DA Form 2404 or DA Form 5988-E to maintenance supervisor and logged maintenance activity on FAA Form 6030-1.</td>
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### Evaluation Guidance:
Score the Soldier GO, if all performance measures are passed. Score the Soldier NO-GO, if any performance measure is failed. If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

### References
- DA FORM 2404
- DA FORM 2407
- DA FORM 5988-E
- DA FORM 5990-E
- DA PAM 750-8
- DD FORM 314
- FAA FORM 6030-1
- TB 385-4
- TM 11-5895-801-12
- TM 11-5895-801-20P
- TM 11-5895-801-34
- TM 11-5895-801-34P
Subject Area 5: AN/TSQ-198

091-94D-1280
Repair Tactical Terminal Control System AN/TSQ-198(*)

<table>
<thead>
<tr>
<th><strong>DANGER</strong></th>
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<tbody>
<tr>
<td><strong>DO NOT STAND IN THE DIRECT PATH OF THE ANTENNA WHEN THE POWER IS ON!! DO NOT WORK ON THE ANTENNA WHILE THE POWER IS ON!!</strong></td>
</tr>
<tr>
<td>Radio frequency electromagnetic radiation can cause fatal burns. It can literally cook internal organs and flesh. If you feel the slightest warming effect while near the equipment,</td>
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<tr>
<td><strong>MOVE AWAY QUICKLY!!</strong></td>
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<tr>
<th><strong>WARNING</strong></th>
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<tbody>
<tr>
<td><strong>HIGH VOLTAGE</strong> is used in the operation of this equipment. Do not be misled by the term &quot;low voltage.&quot; Potentials as low as 50 volts may cause death under adverse conditions.</td>
</tr>
<tr>
<td><strong>DEATH ON CONTACT</strong> may result if personnel fail to observe safety precautions. Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technicians are aided by operators, they must be warned about dangerous areas. Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it. Be careful not to contact high-voltage connections or 115 volt ac input connections when installing or operating this equipment. Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.</td>
</tr>
<tr>
<td><strong>SERIOUS INJURY OR EVEN DEATH CAN HAPPEN IF THE FOLLOWING ARE NOT CAREFULLY OBSERVED WHEN INSTALLING AND USING THE ANTENNAS USED WITH YOUR RADIO SETS.</strong></td>
</tr>
<tr>
<td>Handle and dispose of batteries IAW TB 43-0134, &quot;Battery Disposition and Disposal&quot;.</td>
</tr>
<tr>
<td>Ensure the canvas cover (if installed) is removed from the trailer before operating the generator. When the generator set is running, lethal levels of current are present. Be certain that the generator set is not running before attempting to connect or disconnect power cables. Exercise extreme care when working around power</td>
</tr>
</tbody>
</table>
cables. Use the generator set AC CIRCUIT INTERRUPTER switch to remove AC power output before changing voltage output to prevent arcing.

When the generator set is running, lethal levels of current (55 to 100 Amps) are present. Be certain that the generator set is not running before attempting to connect or disconnect power cable. Exercise extreme care when working around power cables. Turning the HMWWV ignition off while AUX MG/VEHICLE/VEHICLE OVERRIDE switch is in the VEHICLE position will stop power to the radio system. The sound level on the headset can exceed the 85 db threshold if the volume is turned up. Prolonged exposure to high volume on the headset could cause hearing loss. Adjust the volume to a comfortable level before using the headset for prolonged periods.

To avoid serious RF burns, do not touch an antenna or stand near an antenna when transmitting. Antennas radiate RF energy that can cause internal burns without causing any sensation of heat. Ensure power is off before working on antennas, RF cables, or RF connections.

CAUTION

Inadequate or defective grounding could damage the equipment.

If the AUX MG/VEHICLE/VEHICLE OVERRIDE switch is placed in the VEHICLE OVERRIDE position and the HMMWV engine is not running, it is possible to rapidly discharge the vehicle battery system. Care should be taken when using the PDU in this mode.

Initiating or performing MCSU BIT during normal operation will CAUSE DISRUPTIONS OF SYSTEM OPERATION. Performing MCSU BIT will terminate/interrupt all communications in progress on the MCSU executing BIT.

The operating limits of the PLGR is from -4 to +158 degrees F (-20 to +70 degrees C). The PLGR will not function properly when ambient temperatures are less than -4 degrees F or more than 158 degrees F. To ensure accurate timing outputs when operating the PLGR in the HMMWV, set the vehicle heater to maintain the interior temperature above -4 degrees F. When the vehicle will be parked for extended periods in ambient temperatures of -4 degrees F or lower, remove the PLGR from the HMMWV and store it indoors. The PLGR stored (non-operating) limits are from -76.2 to +158 degrees F (-57 to 70 degrees C) (without batteries).

Follow all cautions when setting up and disassembling SATCOM Antenna, or damage may result. Follow all cautions when setting up and disassembling VHF/UHF-AM Antenna, or damage may result.

Do not key the VHF-AM or UHF-AM RT until it has recognized the VAU, or damage could occur to both units.
Ensure the VHF/UHF-AM/FM radios are turned off before attaching the VHF or UHF remote antenna cables to radios.

Power the VHF, UHF, and SATCOM Radio RT off before connecting or disconnecting the DTE interface cable to J3 DATA connector as damage to the equipment could result.

The thumbscrews on the VHF-AM and UHF-AM VAU must be firmly tightened to ensure good connection between the VAU and the rt. If the connection is loose, improper operation between the RT and VAU could occur, causing damage to both units.

**Conditions:** In an operational environment (OE), repair the Tactical Terminal Control System (TTCS) AN/TSQ-198(*), returning it to fully mission capable status, given the AN/TSQ-198(*), replaceable module(s) or component(s), access to all assigned tools, test, measurement, and diagnostic equipment (TMDE), Tool Kit TK-105/G, Digital Multimeter AN/USM-486, Test Set Radio Frequency Power AN/URM-213; Technical Manual (TM) 11-5810-256-12, TM 11-5895-1831-13, TM 11-5895-1831-13P; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA)), DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request (EGA)), Department of Defense (DD) Form 314 (Preventive Maintenance Schedule and Record), Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log), Technical Bulletin (TB) 385-4, DA Pamphlet 750-8; and a ball-point pen.

**Standards:** Restore AN/TSQ-198(*) to fully mission capable status using TM 11-5810-256-12, TM 11-5895-1831-13, TM 11-5895-1831-13P. Correctly close out all associated maintenance forms and records.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** Your supervisor has directed you to repair a non-mission capable Tactical Terminal Control System AN/TSQ-198(*) that has been submitted to your C&E shop.

**Note:** (*) Annotates applicable version of AN/TPN-198.

AN/TPN-198 (NSN 5895-01-388-1454)
AN/TPN-198A (NSN 5895-01-551-0892) TM 11-5895-1831-13

**Performance Steps**

2. Complete appropriate blocks on maintenance request forms using DA PAM 750-8.

3. Perform visual inspection.

4. Properly set up test equipment.


   
   a. Remove component and parts to be replaced and those that prevent access to them.
   
   b. Disassemble components and parts to be replaced.
   
   c. Clean all components or parts that were dusty, dirty, or corroded.
   
   d. Replace serviceable parts and/or components, if necessary.


10. Complete appropriate blocks on maintenance request form using DA PAM 750-8 to close out maintenance.

11. Tag defective part(s) for turn-in using DA PAM 750-8.

12. Notify supervisor upon completion of task.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

**Performance Measures**

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<td>4. Appropriately set up test equipment.</td>
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<tr>
<td>11. Tagged defective part(s) for turn-in using DA PAM 750-8.</td>
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<tr>
<td>12. Notified supervisor upon completion of task.</td>
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Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier fails any performance measure, show the Soldier what was done wrong and how to do it correctly.

References

Required
DA FORM 2404
DA FORM 2407
DA FORM 5988-E
DA FORM 5990-E
DA PAM 750-8
DD FORM 314
FAA FORM 6030-1
TB 385-4
TM 11-5810-256-12
TM 11-5895-1831-13
TM 11-5895-1831-13P
WARNING

ASPHYXIATION HAZARD The truck and generator set produce toxic fumes. Failure to observe this warning can result in serious injury or death by asphyxiation. Operating the fire extinguisher inside the shelter exposes the operator to unsafe levels of Carbon oxide (CO2). Fight fires only from outside the shelter and completely ventilate the shelter prior to reentry.

HIGH VOLTAGE HAZARD This equipment has been tested, validated, and verified to operate safely when properly connected to the issued tactical generator or properly installed and grounded commercial 208 vac “pole” power. Locally procured or developed power generation equipment, such as transformers, must be tested and certified by the TAIS Materiel Developer (MATDEV) and the TAIS Original Equipment Manufacturer (OEM)/Prime Contractor before operation. Failure to observe this warning can result in serious injury, death, or damage to equipment. This equipment contains lethal voltages. Remove power from equipment before handling. Failure to observe this warning can result in serious injury or death. High voltage is produced by the generator set. Do not connect or disconnect power cables when generator is running. Do not cap or uncap power cable connectors when generator is running. Do not leave disconnected power cable connectors uncapped when generator is running. Failure to observe this warning can result in serious injury or death.

ELECTRICAL STORM HAZARD Electrical storms can cause the outside of Tactical Airspace Integration System (TAIS) equipment to be charged to high voltages. Do not touch outside of truck, shelter, generator, trailer, or grounding wires and rods during electrical storms. Do not enter or exit shelter and keep shelter door closed and properly latched during electrical storms. Failure to observe this warning can result in serious injury or death.

WARNINGS FREEZING HAZARD Avoid contacting metal items with bare skin in extremely cold weather. Failure to observe this warning can result in serious injury.

BATTERY EXPLOSION HAZARD Ensure laptop batteries are installed in BFT laptop during air transport. Failure to observe this warning may result in laptop battery explosion.

BURN HAZARD Equipment and generator may be hot to touch. Allow unit to cool before handling or use gloves when handling. Serious injury or death from burns or scalding could result from contact with high-pressure steam and/or liquid. Failure to observe this warning can result in serious injury.

HEAVY EQUIPMENT HAZARD The (common name) weighs (weight) pounds. (Number) team members are required to support and lift the equipment. Failure to observe this warning can cause serious injury.

CAUTION

PROPER CLEANING HAZARD This equipment can be damaged by improper
cleaning. Use only soft cloth slightly dampened with water or mild glass cleaner. Do not scrape. with hard plastic or metal tools. Do not use alcohol, toluene, acetone, methyl ethyl ketone (MEK), volatile liquids, or harsh cleaning agents. Do not use scouring powder or other gritty cleansers. Failure to observe this caution can cause equipment damage.

HEARING INJURY HAZARD This equipment produces loud noises that can cause hearing loss. Wear hearing protection when near operating equipment. Failure to observe this caution can cause injury.

EYE INJURY HAZARD Some antenna elements are spring loaded. Be careful to open elements away from face. Failure to observe this warning can result in eye injury. Fiber-optic cables can be degraded or damaged by dust, dirt, oils, and misalignment. Use care to insert and remove connectors straight in and out without angling. Keep cable connectors capped when not connected. Do not connect dusty, dirty, or oily connectors. Do not coil or knot cables tightly. Failure to observe this caution can cause damage to equipment.

Conditions: You are in an operational environment (OE), with a non-mission capable Tactical Airspace Integration System (TAIS), AN/TSQ-221; and a maintenance request form that has been submitted to your shop. Your supervisor has assigned the workorder to you for repair. At your workstation you have the following items: Tool Kit TK-100/G or TK-105/G; a Multimeter; Radio Frequency Power Test Set AN/URM-213; Technical Manual (TM) 11-5895-1887-10, TM 11-5895-1887-23, TM 11-5895-1887-23P; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA); DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request (EGA); Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log); DA Pamphlet 750-8, local standing operating procedure (SOP), and a replaceable component, module, or chassis.


Special Condition: None

Special Standards: If equipment listed is not available, equivalent equipment may be substituted.

Special Equipment:

Cue: Your supervisor has directed you to repair a non-mission capable Tactical Airspace Integration System (TAIS) AN/TSQ-221(*) that was brought to the C&E shop.

Note: (*) Annotates applicable version of AN/TSQ-221A AN/TSQ-221A(V)1, NSN 5895-01-574-6798 (EIC: N/A) AN/TSQ-221A(V)2, NSN 5895-01-574-6816 (EIC: N/A)
AN/TSQ-221A(V)3, NSN 5895-01-574-6811 (EIC: N/A)
AN/TSQ-221A(V)4, NSN 5895-01-574-6821 (EIC: N/A)

**Performance Steps**

1. Obtain all required tools, test equipment, references and materials using TM 11-5895-1887-23.

2. Complete and initial appropriate blocks on maintenance request forms using DA PAM 750-8.

3. Perform visual inspection.

4. Properly set up test equipment.

5. Verify faults listed on maintenance forms using appropriate troubleshooting chart in TM 11-5895-1887-23.

6. Perform troubleshooting procedures on the AN/TSQ 221(*) using the troubleshooting chart in TM 11-5895-1887-23.

7. Identify defective part(s) using TM 11-5895-1887-23.

8. Replace defective part(s) using TM 11-5895-1887-23P.
   a. Remove component and parts to be replaced and those that prevent access to them.
   b. Disassemble components and parts to be replaced.
   c. Clean all components or parts that were dusty, dirty, or corroded.
   d. Replace serviceable parts and/or components, if necessary.


11. Tag defective part(s) for turn-in using DA PAM 750-8.

12. Notify supervisor upon completion of task.

**Evaluation Preparation:** Ensure all items required in the condition statement are on hand or there are appropriate substitutions. Meet all safety requirements.
<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials using TM 11-5895-1887-23.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Completed initial appropriate blocks on maintenance request forms using DA PAM 750-8.</td>
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<td></td>
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<tr>
<td>3. Performed visual inspection.</td>
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<tr>
<td>4. Properly set up test equipment.</td>
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<tr>
<td>5. Verified faults listed on maintenance forms using appropriate troubleshooting chart in TM 11-5895-1887-23.</td>
<td></td>
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<tr>
<td>6. Performed troubleshooting procedures on the AN/TSQ 221(*) using the troubleshooting chart in TM 11-5895-1887-23.</td>
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<tr>
<td>7. Identified defective part(s) using TM 11-5895-1887-23.</td>
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<tr>
<td>8. Replaced defective part(s) using TM 11-5895-1887-23P.</td>
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</tr>
<tr>
<td>11. Tagged defective part(s) for turn-in using DA PAM 750-8.</td>
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</tr>
<tr>
<td>12. Notified supervisor upon completion of task.</td>
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</tbody>
</table>

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

**References**

- DA FORM 2404
- DA FORM 2407
- DA FORM 5988-E
- DA FORM 5990-E
- DA PAM 750-8
- FAA FORM 6030-1
- TB 385-4
Subject Area 7: Digital Voice Recorder DVRS

091-94D-1880
Repair Digital Voice Recorder System (DVRS)

**WARNING**

Heed all warnings listed in the manufacturer's manual.

**CAUTION**

Heed all cautions listed in the manufacturer's manual.

**Conditions:** In an operational environment (OE), repair a Digital Voice Recorder System (DVRS) by removing a defective lowest replaceable unit (LRU) and installing new LRU given the following: Technical Instruction (TI) 6670.12, TK-100/G Tool Kit, Department of the Army (DA) Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request (EGA)), Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log), and the DVRS.

**Standards:** Replaced defective unit and returned system to fully mission capable status. Filled out DA Form 2407 or DA Form 5990-E and annotated maintenance activity on FAA Form 6030-1. Observed all safety instructions in accordance with technical instructions in TI 6670.12. Notified supervisor and returned system to operators.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** None

**Performance Steps**

1. Obtain all required tools, test equipment, references and materials needed in accordance with TI 6670.12 and manufacturer's manual.

**NOTE:** Follow removal/replace procedures in TI 6670.12 and manufacturer's manual. Read safety instruction before any work begun.

2. Complete the appropriate initial blocks on maintenance request forms using DA PAM 750-8.
3. Perform visual inspection.

4. Properly set up test equipment, if applicable.

5. Refer to removal replacement procedures in manual.

6. Performance test replaceable unit by running diagnostic maintenance procedures in log data processor.

7. Notify operators to bring system back on line.

8. Complete the appropriate blocks on maintenance request forms using DA PAM 750-8.

9. Tag defective part(s) for turn-in IAW DA PAM 750-8.

10. Notify supervisor upon completion of task.

**Evaluation Preparation:** Ensure all items required in the condition statement are on hand or there are appropriate substitutions. Meet all safety requirements.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials needed in accordance with TI 6670.12 and manufacturer's manual.</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>2. Completed the appropriate initial blocks on maintenance request forms using DA PAM 750-8.</td>
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<tr>
<td>3. Performed visual inspection.</td>
<td>_____</td>
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<tr>
<td>4. Properly set up test equipment, if applicable.</td>
<td>_____</td>
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<tr>
<td>5. Referred to removal replacement procedures in manual.</td>
<td>_____</td>
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<tr>
<td>6. Performance tested replaceable unit by running diagnostic maintenance procedures in log data processor.</td>
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<tr>
<td>7. Notified operators to bring system back on line.</td>
<td>_____</td>
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<tr>
<td>8. Completed the appropriate blocks on maintenance request forms using DA PAM 750-8.</td>
<td>_____</td>
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</tbody>
</table>
Performance Measures

9. Tagged defective part(s) for turn-in in accordance with DA PAM 750-8.

10. Notified supervisor upon completion of task.

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

References

DA FORM 2407
DA FORM 5990-E
DA PAM 750-8
FAA FORM 6030-1
TI 6670.12
Subject Area 8: Commercial-off-the-Shelf (COTS) Computers

091-94D-1106
Repair Commercial Off the Shelf (COTS) Air Traffic Control (ATC) Automation Systems

**WARNING**
Follow all warnings in the equipment specific manuals to avoid injury.

**CAUTION**
Follow all cautions in the equipment specific manuals to avoid equipment damage.

**Conditions:** You are in an operational environment (OE), with a request to troubleshoot a Commercial Off the Shelf (COTS) Automation System, which has failed an operations check. Your supervisor directs you to begin troubleshooting the piece of equipment. Given access to all assigned Test, Measurement, and Diagnostic Equipment (TMDE) tools; Unit Standard Operating Procedure (SOP); operator's manual; DA Pam 750-8; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet); and DA Form 2407 (Maintenance Request), TM 11-5840-381-23, TM 11-5895-1880-23&P, TM 11-5895-1887-23, TM 11-5895-1979-13&P-1. If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** Identify hardware and software failures using the troubleshooting procedures from the operator's manual as stated in the Unit SOP. When faulty component is found refer to the operators manual and the Unit SOP for action to be taken. Hardware or software should be repaired in accordance with the Unit SOP to 100% accuracy. Observe all safety precautions required by TB 385-4 and equipment manuals. Use DA Pamphlet 750-8 to correctly fill out DA Form 2404 or DA Form 2407 showing work accomplished. Complete maintenance forms In Accordance With DA Pam 750-8 and SOP's.

**Special Condition:** MIL-PRF-32216 and MIL-M-82376B are used as a guide to help evaluate the manufacturer's operator manual.

**Special Standards:** None

**Special Equipment:**

**Cue:** Your supervisor has given you a request to troubleshoot a Commercial Off the Shelf (COTS) Operating System, which has failed an operations check.

**Note:** None
Performance Steps

1. Obtain all required tools, test equipment, references and materials needed in accordance with associated manuals.

2. Complete the appropriate blocks on Maintenance Request Form using DA PAM 750-8.

3. Properly set up test equipment, if applicable.

4. Obtain equipment history from equipment operators by reading DA Form 2404 and/or DA Form 2407.

5. Perform diagnostic programs using the manufacturer's operator manual.

6. Perform Built-In-Test Equipment (BITE) using the manufacturer's operator manual.

7. Localize the fault to a portion or stage using the troubleshooting procedures in the manufacturer's operator manual.

8. Isolate the fault to the defective part using the troubleshooting procedures in the manufacturer's operator manual.

9. Observe all safety precautions during the task using TB 385-4 and the manufacturer's operator manual.

10. Complete the appropriate blocks on the Maintenance Request Form using DA PAM 750-8.

11. Notify supervisor upon completion of task.

Evaluation Preparation: Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

Performance Measures

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
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<tbody>
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<td>1. Obtained all required tools, test equipment, references and materials needed.</td>
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<tr>
<td>2. Completed the appropriate blocks on Maintenance Request Form using DA PAM 750-8.</td>
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<tr>
<td>3. Properly set up test equipment, if applicable.</td>
<td></td>
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<tr>
<td>4. Obtained equipment history from equipment operators by reading DA Form 2404 and/or DA Form 2407.</td>
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</tr>
<tr>
<td>Performance Measures</td>
<td>GO</td>
<td>NO GO</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>5. Performed diagnostic programs using the manufacturer's operator manual.</td>
<td></td>
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</tr>
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<td>6. Performed Built-In-Test Equipment (BITE) using the manufacturer's operator manual.</td>
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<tr>
<td>7. Localized the fault to a portion or stage using the troubleshooting procedures in the manufacturer's operator manual.</td>
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<tr>
<td>8. Isolated fault to the defective part using the troubleshooting procedures in the manufacturer's operator manual.</td>
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<tr>
<td>9. Observed all safety precautions during the task using TB 385-4 and the manufacturer's operator manual.</td>
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<tr>
<td>10. Completed the appropriate blocks on the Maintenance Request Form using DA PAM 750-8.</td>
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<tr>
<td>11. Notified supervisor upon completion of task.</td>
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**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

DA FORM 2404  
DA FORM 2407  
DA PAM 750-8  
MIL-M-82376B  
MIL-PRF-32216  
TB 385-4  
TM 11-5840-381-23  
TM 11-5895-1880-23&P  
TM 11-5895-1887-23  
TM 11-5895-1979-13&P-1  
UNIT SOP
091-94D-1910
Maintain Chicago Manufacturing (CM) Receiver/Transmitter Radio Set (*)

**DANGER**
Observe all Danger Labels within the Manual.

**WARNING**
Observe all Warning Labels within the Manual.

**CAUTION**
Observe all Caution Labels within the Manual.

**Conditions:** In an operational environment, you are given a Tool Kit TK-100; Multimeter AN/USM-486; Wattmeter AN/URM-213; CM-300 VDR-S VHF Receiver; CM-300 VDT-S VHF Transmitter; CM-300 UT-S UHF Transmitter; CM-300 UR-S UHF Receiver; Transmitter; Maintenance Form, DA Form 2404, General Dynamics Document No: 68-P40181G, TI 6620.8 Instruction Book Receiver, Radio UHF, CM-300 UR. If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** You are tasked with maintaining the CM-300 receiver/transmitter systems. You are to perform Preventative Maintenance Checks and Services (PMCS) on the equipment within 100% accuracy In Accordance With (IAW) Doc No: 68-P40181G and TI 6620. Annotate all deficiencies on DA Form 2404 and Report back to your supervisor when task is completed.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** Observe all Notes within Doc No: 68-P40181G and TI 6620.

**Performance Steps**

1. Gather all equipment required IAW Doc No: 68-P40181G and TI 6620.
2. Check operation of the receiver.
3. Check and adjust the frequency.
NOTE: If tuning the UHF Receiver, follow the guidance provided by Air Traffic Services Command (ATSCOM).

4. Conduct the receiver Co-Location Filter Tuning procedure.

5. Follow the Squelch Action and Adjustment procedures.

6. Perform the procedures for Audio Automatic Gain Control (AGC) Stability.

7. Perform the Receiver Sensitivity Check.


evaluation preparation: Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

Performance Measures

1. Gathered all equipment required Doc No: 68-P40181G and TI 6620. ___________ ___________

2. Checked operation of the receiver. ___________ ___________

3. Checked and adjusted the frequency. ___________ ___________

4. Conducted the receiver Co-Location Filter Tuning procedure. ___________ ___________

5. Followed the Squelch Action and Adjustment procedures. ___________ ___________

6. Performed the procedures for Audio Automatic Gain Control (AGC) Stability. ___________ ___________

7. Performed the Receiver Sensitivity Check. ___________ ___________

8. Performed the IF Selectivity Check. ___________ ___________

9. Filled out proper maintenance forms IAW DA Pam 750-8. ___________ ___________

Evaluation Guidance: Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

References
Subject Area 9: AN/ASM-146B or AN/USM-147B

091-94D-1450
Operate Electronic Shop, Shelter Mounted, Avionics AN/ASM-146B or AN/ASM-147B

**WARNING**

Be careful when working on the 115-volt ac line connections. Serious injury or death may result from contact with these terminals.

VENTILATION IS ESSENTIAL

To prevent axphyxiation, Electronic Shops, Shelter Mounted, Avionics AN/ASM-146B and AN/ASM-147B must be ventilated at all times when occupied.

The fumes of trichlorethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichlorethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

Operator and maintenance personnel should be familiar with the requirements of TB SIG 291 before attempting installation or operation of the equipment covered in this manual. Failure to follow requirements of TB SIG 291 could result in injury or DEATH.

DO NOT TAKE CHANCES!

**Conditions:** In an operational environment (OE), given an Electronic Avionics Shop AN/ASM-146B or AN/ASM-147B shelter due preventive maintenance checks and services (PMCS) prepare for operational use; given a Tool Kit TK-100/G or TK-105/G, Technical Manual (TM) 11-4940-238-14-1, TM 43-0139, Department of the Army (DA) Pamphlet 750-8, Technical Bulletin (TB) 43-0118, Department of the Army Supply Bulletin (SB) 11-573, DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet (EGA)), and Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log); and Trichlorethane, lint-free cloth, lens cloth or lens paper, lens cleaner, lubricating oil, lubricating oil (OE-10), fine sandpaper, electrical tape, and grease graphite, and aircraft.

**Standards:** Prepared the AN/ASM-146B or AN/ASM-174B for operation using TM 11-4940-238-14-1. Noted all deficiencies on DA Form 2404 or DA Form 5988-E and FAA Form 6030-1. Turned in all forms to maintenance supervisor.

**Special Condition:** None

**Special Standards:** None
Special Equipment:

Cue: Your supervisor has directed you to prepare an AN/ASM-146B or AN/ASM-147B for operation.

Note: None

Performance Steps

1. Obtain all required tools, test equipment, references and materials needed using TM 11-4940-238-14-1.

2. Complete the appropriate initial blocks on maintenance request forms using DA PAM 750-8.

NOTE: Use TM 11-4940-238-14-1 to perform PMCS on this system. In some instances, systems may be in the desert, operating in extreme environmental conditions and high operating tempo (OPTEMPO). During desert operating conditions, the standard PMCS "frequency" schedule shall exceed the TM required scheduled services in order to maintain a high level of readiness.

3. Perform visual inspection.

4. Perform step-by-step procedures using TM 11-4940-238-14-1, Table 4-1 for DAILY interval checks.

5. Perform step-by-step procedures using TM 11-4940-238-14-1, Table 4-2 for MONTHLY interval checks, if applicable.

6. Perform step-by-step procedures using TM 11-4940-238-14-1, Table 4-3 for QUARTERLY interval checks, if applicable.

7. Perform starting procedures for Repair Shelter, para 3-3 or Storage Shelter, para 3-4.

8. Perform operating procedures for Repair Shelter, para 3-5 or Storage Shelter, para 3-6.

9. Perform stopping procedures for Repair Shelter, para 3-7 or Storage Shelter, para 3-8.

10. Complete the appropriate blocks on the Maintenance Request Form using DA PAM 750-8.

11. Notify supervisor upon completion of task.
**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

**Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
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<tbody>
<tr>
<td>1. Obtained all required tools, test equipment, references and materials needed using TM 11-4940-238-14-1.</td>
<td>_____</td>
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<tr>
<td>2. Completed the appropriate initial blocks on maintenance request forms using DA PAM 750-8.</td>
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<tr>
<td>3. Performed visual inspection.</td>
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<td>_____</td>
</tr>
<tr>
<td>4. Performed step-by-step procedures using TM 11-4940-238-14-1, Table 4-1 for DAILY interval checks.</td>
<td>_____</td>
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</tr>
<tr>
<td>5. Performed step-by-step procedures using TM 11-4940-238-14-1, Table 4-2 for MONTHLY interval checks, if applicable.</td>
<td>_____</td>
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</tr>
<tr>
<td>6. Performed step-by-step procedures using TM 11-4940-238-14-1, Table 4-3 for QUARTERLY interval checks, if applicable.</td>
<td>_____</td>
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<tr>
<td>7. Performed starting procedures for Repair Shelter, para 3-3 or Storage Shelter, para 3-4.</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>8. Performed operating procedures for Repair Shelter, para 3-5 or Storage Shelter, para 3-6.</td>
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<td>9. Performed stopping procedures for Repair Shelter, para 3-7 or Storage Shelter, para 3-8.</td>
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<td>10. Completed the appropriate blocks on the Maintenance Request Form using DA PAM 750-8.</td>
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<td>11. Notified supervisor upon completion of task.</td>
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**Evaluation Guidance:** Score the Soldier GO, if all performance measures are passed. Score the Soldier NO-GO, if any performance measure is failed. If the Soldier fails any performance measure, show the Soldier what was done wrong and how to do it correctly.

**References**

DA FORM 2404
DA FORM 5988-E
DA PAM 750-8
FAA FORM 6030-1
TB 43-0118
TM 11-4940-238-14-1
TM 43-0139
Subject Area 10: Mobile Tower System (MOTS) AN/MSQ-135

091-94D-1190
Repair Mobile Tower System (MOTS) AN/MSQ-135*

Conditions: In an operational environment (OE), repair an AN/MSQ-135 which has failed an operational check. Given the replaceable module or component; access to all assigned tools and test, measurement, and diagnostic equipment (TMDE); Tool Kit TK-105/G; Digital Multimeter AN/USM-486; WATT Meter URM-213; Technical Manual (TM) 11-5895-1880-10 / 23&P; Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet - EGA); DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request (EGA); Department of Defense (DD) Form 314 (Preventive Maintenance Schedule and Record); Federal Aviation Administration (FAA) Form 6030-1 (Facility Maintenance Log); Technical Bulletin (TB) 385-4; DA Pamphlet 750-8, and local standing operating procedure (SOP).

Standards: Restored the AN/MSQ-135 to fully mission capable per TM 11-5895-1880-10 / 23&P. Close out all associated maintenance forms and records.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

WARNING

HIGH VOLTAGE is used in the operation of this equipment DEATH ON CONTACT may result if personnel fail to observe safety precautions when performing functional and troubleshooting procedures on the test set. Shut down equipment and disconnect power supply before beginning work on equipment. Do not be misled by the term low voltage. Potentials as low as 50 volts may cause death under adverse conditions. For Artificial Respiration, refer to FM 4-25.11. • Death or serious injury may result from failure to observe safety precautions when performing functional test procedures.

1. Observe all safety precautions during the task in accordance with in accordance with TB 385-4 and equipment TM.
NOTE: Use applicable procedures from TM 11-5895-1880-10 and TM 11-5895-1880-23&P to troubleshoot the system.

2. Obtain equipment history by reviewing DA Form 2404 or DA Form 5988-E.

3. Perform a preliminary examination to detect:
   a. Abnormal front panel indications.
   b. Abnormal equipment operation.
   c. Any odor of burned parts or insulation.
   d. High voltage arcing or other abnormal sounds.

4. Sectionalize trouble to the faulty chassis or sub chassis.

5. Localize the fault to a portion or stage using the troubleshooting aids and procedures found in TM 11-5895-1880-10 and TM 11-5895-1880-23&P, as necessary:
   a. Unit/organizational symptom troubleshooting chart.
   b. Wiring diagram.
   c. RF Output Power Checks
   d. Antenna Feedline
   e. Data and RF

6. Isolate fault to the defective part using the troubleshooting aids and procedures found in TM 11-5895-1880-10 and TM 11-5895-1880-23&P, as necessary:
   b. Complete schematic diagram.
   c. Voltage and resistance diagram.
   d. Receptacle and plug pin connections.
   e. Isolating by parts substitution.

7. Fill out DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1, showing work accomplished in accordance with DA Pamphlet 750-8.
8. Take appropriate action to begin repair process IAW TM 11-5895-1880-10 or TM 11-5895-1880-23&P. Refer to last entry on DA Form 2407 or DA Form 5990-E to identify parts and/or actions needed to repair faulty AN/MSQ-135* and took appropriate action, as follows:

   a. Equipment requires parts available on site. Prepare a supply request and obtained replacement parts in accordance with local SOP.

   b. Equipment requires parts not available on site. Contact surrounding sites, Area Maintenance Supply Facility (AMSF), or other units to locate parts.

      (1) Coordinate to obtain parts in accordance with local SOP if parts were available.

      (2) Initiate the appropriate high priority parts request in accordance with local SOP if parts were not available.

   c. Equipment Not Repairable This Station (NRTS). Prepare DA Form 2407 or DA Form 5990-E and evacuate equipment requiring repair to the appropriate support maintenance facility in accordance with local SOPs.

9. Replace faulty component or module.

10. Conduct performance test on repaired component.

11. Initiate DA Form 2404 or DA Form 5988-E and gather equipment needed to perform PMCS.

**NOTE:** In some instances, systems will be in the desert, operating in extreme environmental conditions and high operating tempo (OPTEMPO). During desert conditions, the standard PMCS"frequency" schedule shall exceed the TM required scheduled services in order to maintain a high level of readiness.

12. Perform PMCS on the AN/MSQ-135* system to ensure the system is fully mission capable in accordance with TM 11-5895-1880-10 and TM 11-5895-1880-23&P.

13. Spot-painted, when necessary and weather permits. Performed weekly/quarterly checks and services in accordance with TM 11-5895-1880-10 PMCS chart, in accordance with TB 43-0118 and TM 43-0139.

14. Update DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1.

15. Request final inspection.

16. Close out maintenance forms and records.
17. Turn in completed DA Form 2404 or DA Form 5988-E to maintenance supervisor and logged maintenance activity on FAA Form 6030-1.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td></td>
<td>Observed all safety precautions during the task in accordance with TB 385-4 and equipment TMs.</td>
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<td>2</td>
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<tr>
<td></td>
<td>Obtained equipment history by reviewing DA Form 2404 or DA Form 5988-E.</td>
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<td>3</td>
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<td></td>
<td>Performed a preliminary examination.</td>
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<tr>
<td></td>
<td>Sectionalized trouble to the faulty chassis or sub chassis.</td>
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<tr>
<td></td>
<td>Localized the fault to a portion or stage using the troubleshooting aids and procedures found in TM 11-5895-1880-10 and TM 11-5895-1880-23&amp;P, as necessary.</td>
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<td>6</td>
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<tr>
<td></td>
<td>Isolated fault to the defective part using the following troubleshooting aids and procedures, as necessary.</td>
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<td>7</td>
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<tr>
<td></td>
<td>Filled out DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1, showing work accomplished in accordance with DA Pamphlet 750-8.</td>
<td></td>
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<tr>
<td>8</td>
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<tr>
<td></td>
<td>Took appropriate action to begin repair process. Referred to last entry on DA Form 2407 or DA Form 5990-E to identify parts and/or actions needed to repair faulty AN/MSQ-135 and took appropriate action, as follows:</td>
<td></td>
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<td>9</td>
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<tr>
<td></td>
<td>Replaced faulty component or module.</td>
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<td>10</td>
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<tr>
<td></td>
<td>Conducted performance test on AN/MSQ-135*.</td>
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<tr>
<td>11</td>
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<tr>
<td></td>
<td>Initiated DA Form 2404 or DA Form 5988-E and gather equipment needed to perform PMCS.</td>
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<tr>
<td>12</td>
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<tr>
<td></td>
<td>Performed regular PMCS (including weekly/quarterly) to ensure equipment readiness.</td>
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</table>
## Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>13.</td>
<td>Updated DA Form 2404 or DA Form 5988-E, DA Form 2407 or DA Form 5990-E, and FAA Form 6030-1.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Spot-painted, when necessary and weather permits. Performed weekly/quarterly checks and services in accordance with TM 11-5895-1880-10 PMCS chart, in accordance with TB 43-0118 and TM 43-0139.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Requested final inspection.</td>
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</tr>
<tr>
<td>16.</td>
<td>Closed out maintenance forms and records.</td>
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</tr>
<tr>
<td>17.</td>
<td>Turned in completed DA Form 2404 or DA Form 5988-E to maintenance supervisor and logged maintenance activity on FAA Form 6030-1.</td>
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</tr>
</tbody>
</table>

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

**References**

DA Form 2404  
DA Form 5988-E  
DA Form 2407  
DA Form 5990-E  
DA PAM 750-8  
DD Form 314  
FAA Form 6030-1  
TB) 385-4
Subject Area 11: TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE)

091-94D-1900
Operate General Purpose Test Equipment

DANGER
Follow all danger labels in the equipment specific manuals to avoid equipment damage.

WARNING
Follow all warnings in the equipment specific manuals to avoid injury.

CAUTION
Follow all cautions in the equipment specific manuals to avoid equipment damage.

Conditions: In an operational environment (OE), your supervisor has requested you to set up test equipment to run the necessary tests on the Air Traffic Control (ATC) systems in accordance with TM 11-6625-3276-14&P (AN/URM-213); TM 11-6625-3055-14 (AN/USM-486/U); TM 43-6625-915-12 (OSCILLOSCOPE, OS-303/G) and Local Standard Operating Procedure (SOP). Given access to Local Standard Operating Procedure (SOP); Operator's Manuals; and all assigned test equipment. If any of the above equipment is obsolete or not available, use equivalent equipment.

Standards: Correctly set up the test equipment in accordance with TM 11-6625-3276-14&P (AN/URM-213); TM 11-6625-3055-14 (AN/USM-486/U); TM 43-6625-915-12 (OSCILLOSCOPE, OS-303/G) to 100% accuracy. When task is complete, test equipment must be able to perform functional tests on (ATC) systems to 100% accuracy. Notify supervisor when completed.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Obtain all required references needed for the specific test equipment.
3. Complete proper setup of test equipment in accordance with associated manual.

4. Perform functional tests in accordance with the manual without error.

5. Annotate test results on DA Form 2404.

6. Notify supervisor upon completion of task.

**Evaluation Preparation:** Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>1. Obtained all required references needed for the specific test equipment.</td>
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<tr>
<td>2. Gathered any materials needed in accordance with associated manual.</td>
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<tr>
<td>3. Completed proper setup of test equipment in accordance with associated manual.</td>
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<tr>
<td>4. Performed functional test in accordance with manual without error.</td>
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</tr>
<tr>
<td>5. Annotated test results on DA Form 2404.</td>
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<td></td>
</tr>
<tr>
<td>6. Notified supervisor upon completion of task.</td>
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<td></td>
</tr>
</tbody>
</table>

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

- LOCAL SOP
- TM 11-6625-3055-14
- TM 11-6625-3276-14&P
- TM 43-6625-915-12
Skill Level SL2

Subject Area 12: Tactical Radar Supervision

091-94D-2010
Manage Preparation of Air Traffic Navigation, Integration, and Coordination System (ATNAVICS) AN/TPN-31 (*)

### DANGER

Observe all Dangers within this manual.

### WARNING

Observe all Warnings within this manual.

### CAUTION

Observe all Cautions within this manual.

**Conditions:** In an operational environment, you are tasked with ensuring your Soldiers perform the preparation of Air Traffic Navigation, Integration and Coordination System (ATNAVICS) AN/TPN-31(*) in accordance with Technical Manual (TM) 11-5840-381-10 and Training Circular (TC) 3-04.81. Given Maintenance forms, DA Pam 750-8, and local Standard Operating Procedure (SOP). If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** Ensured Soldiers performed the preparation of the ATNAVICS AN/TPN-31(*) IAW TM 11-5840-381-10 to 100% accuracy. When the task is completed the AN/TPN-31(*) must be fully mission capable. Complete maintenance forms in accordance with DA Pam 750-8 without error.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** None

**Performance Steps**

1. Observe all safety precautions and warnings in accordance with TM 11-5840-381-10 and local SOP.
2. Read siting considerations in TM 11-5840-381-10.

3. Verify that the Soldier(s) correctly performed sensor pallet siting requirement in accordance with TM 11-5840-381-10.

4. Ensure that the Soldier(s) verify survey data prior to radar deployment in accordance with TM 11-5840-381-10.

5. Ensure that the Soldier(s) assisted in performing radar alignment and additional data measurement in accordance with TM 11-5840-381-10.

6. Ensure that the Soldier(s) properly grounded the sensor pallet, operations (OPS) shelter, and generator trailer in accordance with TM 11-5840-381-10.

7. Ensure that the Soldier(s) prepared the shelter for use in accordance with TM 11-5840-381-10.

8. Ensure that the Soldier(s) retrieved the sensor power cable, OPS power cable and fiber optic cable for installation in accordance with TM 11-5840-381-10.

9. Ensure that the Soldier(s) assisted controllers with the OPS and sensor generator startup procedures in accordance with TM 11-5840-381-10.

10. Verify that the Soldier(s) monitor step-by-step operating procedures, TM 11-5840-381-10.

11. Verify that the Soldier(s) correctly performed initial adjustment, checks, and self-test procedures in accordance with TM 11-5840-381-10.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

**Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Observed all safety precautions and warnings in accordance with TM 11-5840-381-10 and local SOP.</td>
<td>___</td>
</tr>
<tr>
<td>2.</td>
<td>Read siting considerations.</td>
<td>___</td>
</tr>
<tr>
<td>3.</td>
<td>Verified that the Soldier(s) correctly performed sensor pallet siting requirement.</td>
<td>___</td>
</tr>
<tr>
<td>4.</td>
<td>Ensured that the Soldier(s) verified survey data prior to radar deployment.</td>
<td>___</td>
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</tbody>
</table>
Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>5.</td>
<td>Ensured that the Soldier(s) assisted in performing radar alignment and additional data measurement.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Ensured that the Soldier(s) properly grounded the sensor pallet, operations (OPS) shelter, and generator trailer.</td>
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</tr>
<tr>
<td>7.</td>
<td>Ensured that the Soldier(s) prepared the shelter for use.</td>
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<tr>
<td>8.</td>
<td>Ensured that the Soldier(s) retrieved the sensor power cable, OPS power cable and fiber optic cable for installation.</td>
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</tr>
<tr>
<td>9.</td>
<td>Ensured that the Soldier(s) assisted controllers with the OPS and sensor generator startup procedures.</td>
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<tr>
<td>10.</td>
<td>Verified that the Soldier(s) monitored step-by-step operating procedures.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Verified that the Soldier(s) correctly performed initial adjustment, checks, and self-test procedures.</td>
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</tr>
</tbody>
</table>

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

**References**

- DA Pam 750-8
- LOCAL SOP
- TM 11-5840-381-10
### Subject Area 13: Mobile Tower System (MOTS) AN/MSQ-135

091-94D-2020

Manage Preparation of Mobile Tower System (MOTS) AN/MSQ135 (*)

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
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<tbody>
<tr>
<td>High Voltage Hazard. This equipment contains lethal voltages. Avoid Contact with energized components. Ensure all power is disconnected before making connections. Failure to comply with this warning may result in serious injury or death.</td>
</tr>
<tr>
<td>Personnel Injury Hazard. Remove all rings, bracelets, necklaces, metal frame eyeglasses, and other jewelry from fingers, wrists, and neck to avoid snagging or electrical shock. Failure to comply with this warning may result in serious injury or death.</td>
</tr>
<tr>
<td>High Voltage Hazard. ATC Generator/Equipment Trailer ground point must be used to perform this work package. Do not use ground points for generators. Failure to comply with this warning may result in serious injury or death.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>CAUTION</th>
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</thead>
<tbody>
<tr>
<td>Equipment damage possible. Incorrect power cable connection and voltage selection can damage the power vault equipment inside the ATC Tower. When connecting the power cable to generator or commercial power connectors, do not turn on the power distribution PRIME PWR circuit breaker(CB1) on the power vault power distribution panel until A-N, B-N, and C-N voltages are verified to be less that 132 VAC. Failure to comply with this caution may cause equipment damage.</td>
</tr>
</tbody>
</table>

**Conditions:** In an operational environment, you are tasked with ensuring your Soldiers deploy the Mobile Tower System (MOTS) AN/MSQ-135(*). You are given the (MOTS); DA Form 2404; DA PAM 750-8; Technical Manual (TM) 11-5895-1880-10 and Training Circular (TC) 3-04.81. If any of the above equipment is obsolete or not available, use equivalent equipment.

**Standards:** Ensured that the Soldiers correctly deploy the MOTS in accordance with (IAW) TM 11-5895-1880-10 to 100% accuracy. When task is completed the MOTS should be Fully Mission Capable (FMC). Report any errors on maintenance forms IAW DA Pam 750-8.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None
Note: None

Performance Steps

1. Install the Air Traffic Control (ATC) Group Generator Intercabling in accordance with TM 11-5895-1880-10.

NOTE: Use cable support loop to support weight of cable. It does not matter if the communication cable is connected from COM-A to COM-B on either generator, as long as the ports being used are set to active and the unused ports are set to inactive.

2. Install second Meteorological Measuring System (MMS).


4. Install Battery Box and Solar Panel.

NOTE: Position solar panel so that it will be out of tripod shadow as much as possible.

5. Extend and secure Meteorological Measuring System (MMS) Tripod mast.

WARNING

Power Line Voltage Hazard. Never set up or fully extend antennas directly under power line. If fully extended antennas are near power lines, power line poles or towers, or buildings with overhead power line connections ensure antennas are positioned at least two times the antenna height from the base of the power line, pole tower, or building.


WARNING

Power Line Voltage Hazard. Never set up or fully extend antennas directly under power line. If fully extended antennas are near power lines, power line poles or towers, or buildings with overhead power line connections ensure antennas are positioned at least two times the antenna height from the base of the power line, pole tower, or building.

7. Setup Guard UHF/VHF/HF Antenna Mast.

NOTE: During the raising of the mast, use hook-and-loop fasteners to secure the antenna cables to the mast.
8. Open Air Traffic Control Tower Door Vent.


**NOTE:** Deploying the ATC utility port is optional and only necessary when cabling is required for additional equipment coming from or going to the ATC Tower.

**WARNING**

Personnel injury or equipment damage hazard. Loaded ACS transit case (all equipment in side) weighs 100 pounds and requires a two team member lift to transport. Ensure personnel lifting case meet lift requirements. Failure to comply with this warning may result in serious injury and/or damage to equipment. Personnel injury or equipment damage hazard. ACS assembly weighs 42 pounds and requires a two team member lift. Ensure personnel lifting assembly meet lifting requirements. Failure to comply with this warning may result in serious injury and/or damage to equipment. Personnel injury or equipment damage hazard. ACS transit case with ACS assembly removed weighs 45 pounds and requires a two team member lift. Ensure personnel lifting battery meet lift requirements. Failure to comply with this warning may result in serious injury and/or damage to equipment. Personnel injury or equipment damage hazard. ACS assembly weighs 42 pounds and requires a two team member lift. Ensure personnel lifting assembly meet lifting requirements. Failure to comply with this warning may result in serious injury and/or damage to equipment.

10. Prepare the Air Traffic Control Common Simulator (ACS) for use.

**WARNING**

Personnel injury or equipment damage hazard. ACS assembly weighs 42 pounds and requires a two team member lift. Ensure personnel lifting assembly meet lift requirements. Failure to comply with this warning may result in serious injury and/or damage to equipment.

11. Install Air Traffic Control Common Simulator (ACS) in the Mobile Tower System (MOTS).

**NOTE:** ACS and laptop are connected to power using AC power outlet under flight strip holder between Workstations 2 and 3.

**WARNING**

Power Line voltage hazard. Never set up or fully extend antennas directly under power lines. If you must set up or fully extend antennas near power lines, power line poles or towers, or buildings with overhead power line connections, never come closer than two times the antenna height from the base of the power line, pole tower,
or building. Failure to comply with this warning may result in serious injury or death. For additional safety information, refer to TB 43-0129. Personnel Injury Hazard. When antennas and masts are raised and lowered, ballistic helmets, protective eye-wear and gloves are to be worn at all times. Antennas and masts pose a falling hazard. Metal-to-metal labor poses a hazard to unprotected eyes. Moving parts, hot equipment, manual labor and guy ropes pose hazards for uncovered hands. For proper safety, one Team member per guy rope should be assigned. Failure to comply with this warning may result in serious injury.

**CAUTION**

RF cable damage possible. Before pulling RF cables, remove all loops and twists to prevent kinking. Twist to straighten cables as they uncoil. Failure to comply with this caution may weaken RF cables and may cause them to break. Equipment damage possible. Do not over tighten wing nut when fastening adapter to mast section. You may deform section so that it can no longer be extended or retracted. Failure to comply with this caution may result in serious equipment damage.

12. Deploy ground antenna on local UHF/VHF antenna mast.

**NOTE:** Not required for setup. Ground UHF/VHF antenna can be installed on local UHF/VHF antenna mast to improve LOS. The halfway-up adapter with mounted UHF/VHF antenna fits best at the green guy ring level. At this position, the antenna is higher than halfway up the mast, but there will still be enough clearance between it and the antenna at the top of the mast.

**WARNING**

Equipment damage possible. Never use the lightning arrestor as a driving cap for the ground rod. This will damage the lightning arrestor and present an electrocution hazard to personnel.

**CAUTION**

Equipment damage possible. Ensure ground rod and coupler threads are clean and not damaged prior to connecting rods and coupler together. Avoid cross-threading the coupler onto the rod. Failure to comply with this caution may result in damage to the ground rod or coupler.

13. Install the ground rods and lightning arrestor for the HF Antenna.

**CAUTION**

RF cable damage possible. Before pulling RF cables, remove all loops and twists to
prevent kinking. Failure to comply with this caution may weaken RF cables and may cause them to break.


**NOTE:** Take care when unwinding antenna wires to ensure antenna wires are above guy ropes attached to black guy plate.

**WARNING**
Radio Frequency radiation hazard. Antennas can emit harmful radio frequencies that may cause shock or burn when transmitting. Avoid physical contact with any bare metal or wire surfaces of antennas by maintaining a distance of 1 meter from the antennas when transmitting. Ensure there is no power to radio before working on antenna or antenna cable. Failure to comply with this RF emission warning may result in serious injury or death.

**CAUTION**
RF cable damage possible. Before pulling RF cables, remove all loops and twists to prevent kinking. Failure to comply with this caution may weaken RF cables and may cause them to break.

15. Setup up Ground-Mounted SATCOM Antenna.

**NOTE:** Some versions of the SATCOM antenna are not provided with extension elements.

**WARNING**
Electrical Shock hazard. High voltage warning, ensure ARC-220 is powered down WP 0031 before performing these steps. Failure to comply with this warning may result in serious injury or death.

**CAUTION**
RF cable damage possible. Before pulling RF cables, remove all loops and twists to prevent kinking. Failure to comply with this caution may weaken RF cables and may cause them to break.


**NOTE:** The conventional Fanlite HF antenna setup is modified in one way for MOTS: the balun is erected halfway up the mast using the Green Guy Ring instead of at the top.
of the mast, so that the Triband UHF/VHF Antenna for Guard frequencies can occupy the top position.


**NOTE:** Removing the vehicle-mounted UHF/VHF antennas is optional if radio operations are going to conducted during system operation.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
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<tbody>
<tr>
<td>1. Installed the ATC Group Generator Intercabling in accordance with TM 11-5895-1880-10.</td>
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<tr>
<td>2. Installed the second MMS Station.</td>
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<tr>
<td>3. Relocated the First MMS Station.</td>
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<tr>
<td>4. Installed Battery Box and Solar Panel.</td>
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<tr>
<td>5. Extended and Secured MMS Tripod Mast.</td>
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<tr>
<td>6. Setup the ATC Local UHF/VHF Antenna Mast.</td>
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<tr>
<td>7. Setup of the Guard UHF/VHF Antenna Mast Complete Setup.</td>
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<tr>
<td>8. Opened ATC Tower Door Vent.</td>
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<tr>
<td>10. Prepared the Air Traffic Control Common Simulator (ACS) for use.</td>
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<tr>
<td>11. Installed ACS in the MOTS.</td>
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<tr>
<td>12. Deployed Ground Antenna on Local UHF/VHF Antenna Mast.</td>
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<tr>
<td>13. Installed Ground Rods and Lightning Arrestor for HF Antenna.</td>
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<tr>
<td>15. Setup Ground-mounted SATCOM Antenna.</td>
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<tr>
<td>Performance Measures</td>
<td>GO</td>
<td>NO GO</td>
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<td>--------------------------------------------------------------------------------------</td>
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</tbody>
</table>

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

**References**

DA FORM 2404  
DA PAM 750-8  
TM 11-5895-1880-10
Subject Area 14: Tactical Airspace Integration System AN/TSQ-221

091-94D-2040
Manage Preparation of Tactical Airspace Integration System (TAIS) AN/TSQ-221 (*)

<table>
<thead>
<tr>
<th>DANGER</th>
<th>Observe all Dangers IAW this TM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING</td>
<td>Observe all Warnings in accordance with this TM.</td>
</tr>
<tr>
<td>CAUTION</td>
<td>Observe all Cautions in accordance with this TM.</td>
</tr>
</tbody>
</table>

Conditions: In an operational environment, you have been tasked to supervise the deployment of the Tactical Airspace Integration System (TAIS) AN/TSQ-221(*) to the field. You are given the Tactical Airspace Integration System (TAIS) AN/TSQ-221, DA Form 2404; Technical Manual (TM) 11-5895-1887-10, and Training Circular (TC) 3-04.81; Local SOP; DA Pam 750-8. If any of the above equipment is obsolete or not available, use equivalent equipment.

Standards: Ensured the Soldiers set up the TAIS in accordance with TM 11-5895-1887-10 to 100% accuracy. When the task is completed the TAIS should be Fully Mission Capable (FMC). Report any errors on maintenance forms IAW DA Pam 750-8.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: Observe all notes in accordance with this TM.

Performance Steps

1. Ensure the Soldiers select the best optimal site in accordance with TM 11-5895-1887-10 for operation.

2. Ensue the Soldiers install the Shelter Ladder.
3. Ensure the Soldiers ground the equipment in accordance with TM 11-5895-1887-10.

4. Ensure the Soldiers connect the power to the equipment.

5. Ensure the Soldiers setup External Signal Intercabling.

6. Ensure the Soldiers setup antennas.

7. Ensure Soldiers prepare the Environmental Control Unit (ECU) for use.

8. Ensure Soldiers set up remote workstations.

9. Ensure the Soldiers setup the Blue Force Tracking (BFT) Laptop.

10. Ensure the Soldiers power up the TAIS.

11. Ensure Soldiers report deficiencies on DA Form 2404.

12. Ensure Soldiers report to you when tasks are complete.

**Evaluation Preparation:** Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ensured the Soldiers selected the best optimal site in accordance with TM 11-5895-1887-10 for operation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ensured the Soldiers installed the Shelter Ladder.</td>
<td></td>
<td></td>
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<tr>
<td>3. Ensured the Soldiers grounded the equipment IAW TM 11-5895-1887-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ensured the Soldiers connected the power to the equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ensured the Soldiers setup the External Signal Intercabling.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ensured the Soldiers setup the antennas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Ensured the Soldiers prepared the Environmental Control Unit (ECU) for use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Ensured the Soldiers setup remote workstations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Ensured the Soldiers setup the Blue Force Tracking (BFT) Laptop.</td>
<td></td>
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</tbody>
</table>
Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Ensured the Soldiers powered up the TAIS.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Ensured the Soldiers report deficiencies on DA Form 2404.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Ensured Soldiers report to you when tasks are completed.</td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

- DA FORM 2404
- DA PAM 750-8
- LOCAL SOP
- TM 11-5895-1887-10
Subject Area 15: AN/TSQ-198

091-94D-2030
Manage Preparation of Tactical Terminal Control System (TTCS) AN/TSQ-198 (*)

DANGER
Observe all Dangers within this manual.

WARNING
Observe all Warnings within this manual.

CAUTION
Observe all Cautions within this manual.

Conditions: In an Operational environment, you are tasked with ensuring your Soldiers set up the Tactical Terminal Control System (TTCS) AN/TSQ-198(*) for operation. You are given the TTCS; Technical Manual (TM) 11-5895-1831-13; TM 11-5895-357-13; DA PAM 750-8; DA Form 2404; Local SOP.

Standards: Ensured set up of the TTCS is complete In Accordance With TM 11-5895-1831-13 to 100% accuracy. When the task is completed the system must be Fully Mission Capable (FMC). Complete maintenance forms in accordance with DA PAM 750-8 and Local SOP without error.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: Observe all Notes within the manual.

Performance Steps

1. Verify that the Soldier(s) select a site to set up the TTCS clear from obstructions.

2. Ensure that the Soldier(s) unpack the TTCS Remote Equipment.
   a. Unpack the HMMWV.
   b. Unpack the Trailer.
c. Inspect the unpacked equipment.

3. Verify that the Soldier(s) assemble the Meteorological Measuring System (MMS) in accordance with TM 11-5895-1831-13.

**NOTE:** The MMS comes with manufacturer's instructions. Do not lose them. Always return them to the MMS case when finished.

The MMS sensor is equipped with an internal flux-gate antenna -- there is no need to orient it to north.

Make sure MMS circuit breaker is turned OFF before connecting MMS remote cable.

4. Verify that the Soldier(s) assemble the Satellite Communications (SATCOM) Antenna in accordance with TM 11-5895-1831-13.

5. Verify that the Soldier(s) assemble the Remote VHF/UHF-AM Antenna in accordance with TM 11-5895-1831-13.

6. Verify that the Soldier(s) assemble the Remote VHF-FM Antenna.

7. Ensure that the Soldier(s) properly install the Surface Wire Grounding System (SWGS).

8. Verify that the Soldier(s) install the Signal Light.

9. Observe the Soldier(s) prepare the TTCS for operation in accordance with TM 11-5895-1831-13.

10. Ensure that the Soldier(s) fill out all necessary maintenance forms in accordance with DA PAM 750-8 and Local SOP.

**Evaluation Preparation:** Provide the Soldier with all material(s) and/or equipment listed in the condition statement.

**Performance Measures**

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Verified that the Soldier(s) selected a site for the TTCS clear of Obstructions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ensured that the Soldier(s) unpacked the TTCS Remote Equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Verified that the Soldier(s) assembled the MMS in accordance with TM 11-5895-1831-13.</td>
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</tbody>
</table>
### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Verified that the Soldier(s) assembled the SATCOM Antenna in accordance with Tm 11-5895-1831-13.</td>
<td>_____</td>
</tr>
<tr>
<td>5.</td>
<td>Verified that the Soldier(s) assembled the Remote VHF/UHF-AM Antenna in accordance with TM 11-5895-1831-13.</td>
<td>_____</td>
</tr>
<tr>
<td>6.</td>
<td>Verified that the Soldier(s) assembled the Remote VHF-FM Antenna in accordance with TM 11-5895-1831-13.</td>
<td>_____</td>
</tr>
<tr>
<td>7.</td>
<td>Ensured that the Soldier(s) properly installed the Surface Wire Grounding System (SWGS).</td>
<td>_____</td>
</tr>
<tr>
<td>8.</td>
<td>Verified that the Soldier(s) installed the Signal Light.</td>
<td>_____</td>
</tr>
<tr>
<td>9.</td>
<td>Observed that the Soldier(s) prepared the TTCS for operation in accordance with TM 11-5895-1831-13.</td>
<td>_____</td>
</tr>
<tr>
<td>10.</td>
<td>Ensured that the Soldier(s) filled out all necessary maintenance forms in accordance with DA PAM 750-8 and Local SOP.</td>
<td>_____</td>
</tr>
</tbody>
</table>

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

- DA FORM 2404
- DA PAM 750-8
- LOCAL SOP
- TM 11-5895-1831-13
- TM 11-5985-357-13
Subject Area 16: Shop Operations Administration

091-94D-2060
Administer Maintenance Certification Records and Forms

Conditions: You are in an operational environment with an Air Traffic Control (ATC) Equipment Repairer (94D), AR 95-2; DA Form 3479-10, Responsibility Assignment and ATC Equipment. You have just been appointed as the ATC Maintenance Chief and are tasked with administering ATC maintenance certification records and forms. If any of the above equipment is obsolete or not available, use equivalent equipment.

Standards: You are to ensure that the Certification records are completed without error In Accordance With AR 95-2 without error. When completed, The technician should receive their certification.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Ensure the Soldier meets the criteria as outlined in AR-95-2.

2. Ensure the Soldiers are entered into the Training Program.

3. Ensure to request the examination from Air Traffic Services Command (ATSCOM).

4. Ensure to administer the examination in two parts.
   a. Ensure to administer the theory portion of the exam.
   b. You will administer the Hands-on portion of the exam.

5. Grade the examination.

6. Maintain records of the Soldiers training and examinations.

Evaluation Preparation: Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.
### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ensured the Soldier met the criteria as outlined in AR 95-2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Ensured the Soldiers are entered into the Training Program.</td>
<td></td>
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<tr>
<td>3.</td>
<td>Ensured to Request the examination from ATSCOM.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Ensured to administer the examination in two parts.</td>
<td></td>
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<tr>
<td>5.</td>
<td>Graded the examination.</td>
<td></td>
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<tr>
<td>6.</td>
<td>Maintained records of the training and examinations.</td>
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</tbody>
</table>

**Evaluation Guidance:** Score the Soldier GO if all Performance Measures are passed. Score the Soldier a NO-GO if any Performance Measure is failed. If the Soldier fails any Performance Measure, show what was done wrong and how to do it properly. Have the Soldier perform the Performance Measure(s) until they are done correctly.

**References**

AR 95-2
DA Form 3479-10
091-94D-2050
Conduct Air Traffic Control (ATC) Logistical Operations

Conditions: You are in an operational environment and tasked with managing work centers, reporting maintenance workflow, man hours, bench stock, shop stock, Parts Request, and work orders. You are given access to a computer with Global Combat Support Systems (GCSS-Army); GCSS-Army End User's Manual Plus (EUM+); DA Pam 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

Standards: Verify the Logistical Operations of work centers, reporting maintenance workflow, man hours, bench stock, shop stock, Parts Request, and work orders in accordance with GCSS-Army EUM+ with 100% accuracy. When tasks are completed, you should be able to perform Logistical Operations without error.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: You can gain access to GCSS-Army EUM+ by following the link below.

https://www.gcss.army.mil/Training/

Performance Steps

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Managed work orders.</td>
<td></td>
<td></td>
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<tr>
<td>2. Managed work centers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Managed bench stock.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Managed shop stock.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Managed man hour reporting.</td>
<td></td>
<td></td>
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<tr>
<td>6. Managed maintenance workflow reporting.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Managed part requests.</td>
<td></td>
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</tr>
</tbody>
</table>

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

**References**

DA PAM 750-8  
GCSS-Army EUM+  
LOCAL SOP
Skill Level SL3

Subject Area 17: Maintenance Operations I

091-LCST-3005
Maintain Hand Receipts

Conditions: In an operational environment, while assigned as a Platoon Sergeant, or in a supervisor position. Given a copy of the platoon or section hand receipt; AR 710-2; AR 735-5; AR 750-1; DA Pam 710-2-1; DA Pam 710-2-2; Local Standard Operating Procedure (SOP), a computer and access to government information systems, conduct the inventory. Standard MOPP conditions do not exist for this task.

Standards: Maintain hand receipts with 100% accuracy in accordance with Army Regulation (AR) 710-2. The steps in this task may not be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Conduct inventory.

2. Manage shortage annex.

3. Sub hand receipt equipment.


Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conducted inventory.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Managed shortage annex.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sub hand receipted equipment.</td>
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</tbody>
</table>

13 April 2020
Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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<tbody>
<tr>
<td>4.</td>
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</tbody>
</table>

Conducted turn-in 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, how to do it correctly, and have the Soldier repeat the task.

**References**

AR 710-2  
AR 735-5  
AR 750-1  
DA Pam 710-2-1  
DA Pam 710-2-2
Conduct a Military Briefing

**Conditions:** In an operational environment given the requirement conduct a military type briefing on a given topic.

**Standards:** Conduct a military brief that will last between 5 to 7 minutes and arrange main idea in logical sequence. Prepare, perform and formulate the military briefing in accordance with performance measures. The steps in this task may not be performed out of sequence.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** None

**Performance Steps**

1. Analyze the situation.

2. Construct the briefing.
   a. Research.
   b. Organize.
   c. Draft.

3. Conduct a practice briefing with others observing.
   a. Revise briefing. (if required)
   b. Conduct more rehearsals after making changes to briefing content. (if required)

4. Deliver the briefing.

5. Follow Up.
**Evaluation Preparation:** Be sure all applicable equipment is available before evaluation. All initial setup and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

**Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analyzed the Situation.</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>2. Constructed the Briefing.</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>3. Soldier presented the selected military briefing topic.</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>4. Delivered briefing.</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>5. Presenter followed up by requesting feedback from observers.</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

- ADP 5-0
- ADRP 6-22
- AR 25-50
- FM 6-22
- ST 22-2
091-LCST-3004
Administer Training Programs at the Platoon Level

Conditions: In an operational environment, while assigned as a Platoon Sergeant, or in a supervisor position. Given a platoon or section to manage, applicable publications and forms, a computer and access to government information systems.

Standards: Develop a Training Program that encompasses 100% of all required information, in accordance with local SOP. The steps in this task may be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Identify training requirements.
2. Evaluate current training status (T, P, U).
3. Develop a training plan/schedule.
4. Provide assessment on key individual tasks conducted.
5. Observe and receives feedback from squad leader on status of individual training.
6. Ensures individual training supports company collective tasks.
7. Briefs status of specific essential pre-execution checks. (if required)

Evaluation Preparation: Ensure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identified training requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Evaluated current training status (T, P, or U)</td>
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</tbody>
</table>

3-80 13 April 2020
### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>3. Developed a training plan or schedule.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Provided assessment on key individual tasks conducted.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Observed and received feedback from squad leader on status of individual training.</td>
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<td></td>
</tr>
<tr>
<td>6. Ensured individual training supported company collective tasks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Briefed status of specific essential pre-execution checks. (if required)</td>
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</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

- ADP 6-22
- ADP 7-0
- ADRP 7-0
- TC 7-22.7
**091-LCST-3003**  
**Conduct Administrative Procedures at the Platoon Level**

**Conditions:** In an operational environment, while assigned as a Platoon Sergeant, or in a supervisor position. Given a platoon or section to manage, applicable publications and forms, a computer and access to government information systems.

**Standards:** Consolidate key information on each assigned Soldier within your Platoon. Some of the topics that you should include within your administrative Tracking System (spread sheet) are individual Army Physical Fitness Test APFT score, Non-Commissioned Officer Evaluation Reporting dates, Military Education School completed and or civilian education just to name a few subject areas. All information consolidated on assigned Soldiers will be safe guarded in accordance within local Standing Operating Procedure (SOP) and Army policies with handling personally identifiable information (PII).

**Special Condition:** None

**Special Standards:** None

**Special Equipment:** None

**Cue:** None

**Note:** None

**Performance Steps**

1. Develop a paper draft administrative data worksheet to be used in tracking platoon or section personnel subject areas.

2. Review the Army policies on personally indentifiable information (PII) usage.

3. Develop a digital spreadsheet version of your platoon or section personnel data worksheet. Some areas to consider including within your spreadsheets are listed below.

   a. Ensure Soldier is compliance within standards listed within AR 600-9 for weight control.

   b. Army Physical Fitness Test (APFT) score and date.

   c. MED PRO’s.

      (1) Dental Data current.

      (2) Periodic Health Assesment (PHA).
d. License (as required)

e. Non-Commissioned Officer Evaluation Reporting (NCOER).

   (1) Counseling dates.

   (2) Date of last NCOER.

f. Training

   (1) Military Education School completed (WLC, ALC, SSD1, Common Core, SLC, SSD3...)

   (2) Civilian Education Completed.

   (3) Review American Counsel Education (ACE) credits given for completed training.

g. Qualifications (if required)

**Evaluation Preparation:** Ensure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Developed a paper draft administrative data worksheet to be used in tracking platoon or section personnel subject areas.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Reviewed the Army policies on personally identifiable information (PII) usage.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Developed a digital spreadsheet version of your platoon or section personnel data worksheet. Some areas to consider including within your spreadsheets are listed below.</td>
<td></td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

AR 25-1
AR 350-1
AR 600-9
Subject Area 18: Maintenance Management

091-MCST-3005
Perform Battle Damage Assessment and Repair

**DANGER**

Leaders have an inherent responsibility to conduct Composite Risk Management to ensure the safety of all Soldiers and promote mission accomplishment.

**WARNING**

Composite Risk Management is the Army's primary decision-making process to identify hazards, reduce risk and prevent both accidental and tactical loss. All Soldiers have the responsibility to learn and understand the risks associated with this task.

**CAUTION**

Identifying hazards and controlling risks across the full spectrum of Army functions, operations and activities is the responsibility of all Soldiers.

**Conditions:** Given an item of equipment that requires Battle Damage Assessment and Repair, tool kit; Personal Protective Equipment (PPE); DA Form 5988-E/2404; DD form 1577, Unserviceable (Condemned) Tag - Material and applicable Technical Manual (TM).

**Standards:** Supervise Battle Damage Assessment and Repair (BDAR) on a damaged piece of equipment in accordance with applicable TM Maintenance Allocation Chart (MAC) procedures and specifications; without causing further damage to equipment or injury to personnel.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** Item of construction equipment requires Battle Damage Assessment and repair.

**Note:** None

**Performance Steps**

1. Supervise the use applicable publications by repair team.
   a. Identify which Technical Manual (TM) will be used.
b. Follow steps outlined in TM for deficiency.

2. Advise the extent of the repairs.
   a. Determine if self-evacuation/recovery is possible.
   b. Determine if recovery assets are required.
   c. Determine if repairs warrant destruction of the equipment in place.

3. Ensure repair team uses correct tools and tools needing calibration have been through Test Measurement and Diagnostic Equipment (TMDE).
   a. Identify applicable tools in basic issue items (BII).
   b. Ensure tools are serviceable.
   c. Calibration items have current annotation markings.

4. Follow prescribed safety procedures.
   a. Follow prescribed safety procedures outlined in the TM.
   b. Follow prescribed safety procedures outlined in the unit standing operating procedure (SOP).
   c. Follow safety guidelines outline in motor pool.
   d. Ensure proper safety equipment is utilized.

5. Validate performance of Battle Damage Assessment and Repair Procedures as required.
   a. Ensure proper tools are used.
   b. Ensure vehicle and work area is free of any Environmental Protection Agency (EPA) violations

6. Review DD form 1577 (Unserviceable [Condemned] Tag) and DA Form 5988-E/2404 annotating BDAR actions that have been completed.

**Evaluation Preparation:** Be sure all equipment and specials tools are available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.
## Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
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<tbody>
<tr>
<td>1.</td>
<td>Supervised the use of applicable publications.</td>
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<tr>
<td>2.</td>
<td>Advised the extent of the repairs.</td>
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<tr>
<td>3.</td>
<td>Ensured repair team uses correct tools and tools needing calibration have been through Test Measurement and Diagnostic Equipment (TMDE).</td>
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<tr>
<td>4.</td>
<td>Followed prescribed safety procedures.</td>
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<tr>
<td>5.</td>
<td>Validated performance of Battle Damage Assessment and Repair Procedures as required.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Reviewed DD form 1577 (Unserviceable [Condemned] Tag) and DA Form 5988-E/2404 annotating BDAR actions that have been completed.</td>
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</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

- AR 200-1
- AR 385-10
- AR 750-1
- ATP 3-34.5
- ATP 4-31
- ATP 4-33
- ATP 5-19
- DA PAM 385-10
- DA PAM 710-7
- DA PAM 750-1
- DA PAM 750-3
- TM 5-2350-262-10
- TM 5-2350-262-20-1
- TM 5-2350-262-20-2
- TM 5-2350-262-20-3
- TM 5-2350-262-24P
- TM 5-2350-262-34
- TM 5-2410-233-10
TM 5-2410-237-10
TM 5-2410-237-23
TM 5-2410-237-23P
TM 5-2410-241-10
TM 5-2410-241-23-1
TM 5-2410-241-23-2
TM 5-2410-241-23-3
TM 5-2410-241-24P
TM 5-2420-224-10
TM 5-2420-224-20-1
TM 5-2420-224-20-2
TM 5-2420-224-24P-1
TM 5-2420-224-24P-2
TM 5-2420-224-34
TM 5-2420-230-10
TM 5-2420-230-24-1
TM 5-2420-230-24-2
TM 5-2420-230-24P
TM 5-2420-232-10
TM 5-2430-200-10
TM 5-2430-200-24
TM 5-2430-200-24P
TM 5-3805-248-10
TM 5-3805-248-23-1
TM 5-3805-248-23-2
TM 5-3805-248-23P
TM 5-3805-261-10
TM 5-3805-261-23-1
TM 5-3805-261-23-2
TM 5-3805-261-23P
TM 5-3805-262-10
TM 5-3805-262-20
TM 5-3805-262-24
TM 5-3805-262-34
TM 5-3805-280-10
TM 5-3805-280-24-1
TM 5-3805-280-24-2
TM 5-3805-280-24P
TM 5-3805-290-10
TM 5-3805-290-23-1
TM 5-3805-290-23P
TM 5-3805-292-10
TM 5-3805-292-23
TM 5-3805-292-23P
TM 5-3805-293-10
TM 5-3805-293-23-1
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<tr>
<td>TM 5-3805-293-23-2</td>
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<td>TM 5-3805-293-23-3</td>
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<td>TM 5-3805-293-23-4</td>
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<tr>
<td>TM 5-3805-293-23-5</td>
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<tr>
<td>TM 5-3805-293-24P</td>
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<td>TM 5-3805-294-10</td>
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<td>TM 5-3805-294-23-1</td>
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<td>TM 5-3805-294-23-5</td>
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<td>TM 5-3805-294-24P</td>
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<td>TM 5-4310-452-14</td>
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<td>TM 5-4310-452-24P</td>
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<td>TM 9-243</td>
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<td>TM 9-4940-568-10</td>
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<td>TM 9-8000</td>
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</table>
Conduct Quality Assurance/Quality Checks (QA/QC) for Maintenance Operations

Conditions: In an Operational Environment (OE), given applicable technical manuals (TMs), the equipment to be inspected, Department of the Army (DA) Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E (Equipment Inspection Maintenance Worksheet [EGA]), DA Form 2407 (Maintenance Request) or DA Form 5990-E (Maintenance Request [EGA]), DA Pamphlet 750-8, and DA Pamphlet 738-751.

Standards: Perform the required type of inspections using the applicable references to ensure each piece of equipment job ordered within the maintenance shop. Inspects the equipment job order packet forms to ensure the forms are being completed according to the type of work being conducted in accordance with technical manuals and DA Pamphlets.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Perform Initial Inspection.
   a. Check submitted paperwork for equipment classification, completeness and accuracy.
   b. Inspect the equipment for physical damage and determined if it is feasible to repair the equipment.
   c. Determine if estimated cost of damage (ECOD), DD Form 200 Financial Liability Investigation of Property Loss.
   d. Ensure that operator maintenance have been performed on the equipment.
   e. Inventory the equipment to ensure that it is complete.
   f. Ensure all modification work orders (MWOs) have been applied to the equipment using Modification Management Information System (MMIS) is complete using Logistics
Army Enterprise Portal (AESP). AESIP website requires a user name and password.

g. Perform self-tests or checks on the equipment, if necessary.

2. Conduct In–process Inspections.

   a. Check for proper tools and equipment during in-process inspection.

   b. Verify the proper technical manual repair procedures are being used during in-process inspection.

   c. Visually check that authorized repair parts and supplies are available.

   d. Supervise that only authorize repairs are performed on the equipment.

   e. Verify that only authorize personnel make the repairs.

   f. Check that all safety rules and warnings are used.

   g. Review all forms for completeness particularly the man-hours spend working on the equipment.

   h. Make an oral or written report of the inspection to the repair section chief and the quality control section supervisor.

3. Perform Final Inspection.

   a. Check the equipment to determine if it is complete and that all defects found on the initial and in-process inspections are complete.

   b. Review that all forms and records are complete and correct. (i.e. Account for Man-hours).

   c. Verify any additional defects are recorded on DA Form 2404 or DA Form 5988-E and return the equipment to production control.

   d. Sign and date the DA Form 2407 or DA Form 5990-E when the equipment passes its final inspection.

**Evaluation Preparation:** Be sure all equipment and specials tools are available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.
## Performance Measures

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<tbody>
<tr>
<td>1.</td>
<td>Performed Initial Inspection.</td>
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<tr>
<td>2.</td>
<td>Conducted In–process Inspections.</td>
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<tr>
<td>3.</td>
<td>Performed Final Inspection.</td>
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</tbody>
</table>

### 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, how to do it correctly, and have the Soldier repeat the task.

### References
- AR 750-1
- ATP 4-33
- DA FORM 2404
- DA FORM 2407
- DA FORM 2407-1
- DA FORM 3999-4
- DA PAM 750-3
- DD FORM 200
- TM 750-245-4
Develop a Maintenance Standing Operating Procedure (SOP)

**Conditions:** In an operational environment (OE), given the unit's old Standard Operating Procedure (SOP), Army Regulation (AR) 750-1, Department of the Army (DA) Pamphlet 750-3, Army Techniques Publication (ATP) 4-33, Army Doctrine Publication (ADP) 5-0, and Training Circular (TC) 43-4 and all other required publications. This task can be performed in a field or garrison environment.

**Standards:** Develop Standard Operating Procedures (SOPs) to an approved standard without loss of effectiveness to the unit and is accepted by the approving authority in accordance with applicable references without error.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:** None

**Cue:** None

**Note:** None

**Performance Steps**

1. Develop a new SOP.
   a. Purpose
   b. Scope
   c. Organization
   d. Responsibility
   e. Conformity
   f. References
   g. Annexes as required

2. Review format and contents within the SOP for updating according to guidance given.
   a. Personnel administration
b. Security

c. Security and intelligence

d. Area security

e. Physical security of weapons and property

f. Safety program

g. Maintenance operations

h. Management of hand receipts

i. Standard warnings

j. Alert procedures

k. Chemical, biological, radiological, nuclear (CBRN) warfare

l. Defense against nuclear attack

m. Logistics

n. Motor pool operations

o. Motor movement and traffic control

p. Tactical operations

3. Ensure that all references used are current.

4. Process the draft SOP through your supervisor/commander for comments.

5. Implement changes identified by your supervisor/commander during their review process.

6. Staff the final draft SOP with your supervisor/commander for approval.

7. Issue all end users a copy of the new SOP.

**Evaluation Preparation:** Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.
### Performance Measures

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<tbody>
<tr>
<td>1.</td>
<td>Developed a new SOP.</td>
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<tr>
<td>2.</td>
<td>Reviewed format and contents within the SOP for updating according to guidance given.</td>
<td></td>
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<tr>
<td>3.</td>
<td>Ensured references used are current.</td>
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<tr>
<td>4.</td>
<td>Processed the draft SOP through your supervisor/commander for comments.</td>
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<td>5.</td>
<td>Implemented changes identified by your supervisor/commander during their review process.</td>
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<tr>
<td>6.</td>
<td>Staffed the final draft SOP with your supervisor/commander for approval.</td>
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<tr>
<td>7.</td>
<td>Issued all end users a copy of new SOP.</td>
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</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

### References

- ADP 5-0
- AR 750-1
- ATP 4-33
- DA PAM 750-3
Conduct Shop Operations

Conditions: In an operational environment (OE), given the responsibility to manage shop operations, applicable references, computer with internet access, user ID and password to Army Enterprise Portal (AESIP) portal programs, plan shop work flow and other shop programs.

Standards: Manage the shop programs and priorities workload by prioritizing from the oldest to newest workable job.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: NONE

Note: None

Performance Steps

1. Manage shop workload according to work request priority designators then by the oldest work request in the shop for repairs.

2. Research current supply status of requested repair parts using the Logistics Information System’s Part Tracker program located within Army Enterprise Portal (AESIP).

3. Provide technical assistance as need.

4. Perform in-process inspection on equipment while in shop.

5. Review completed Equipment Improvement Recommendations (EIR) or Quality Deficiency Report (QDR) if required.


7. Manage Shop Safety program.

8. Manage the Shop Calibration program.

9. Manage all request for Combat Support Team (CST) operations.

10. Manage Shop Property accountability.
11. Manage maintenance on shop assigned equipment.

**Evaluation Preparation:** Be sure all equipment and specials tools are available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

<table>
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<tr>
<th>Performance Measures</th>
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<tbody>
<tr>
<td>1. Managed shop workload according to work request priority designators then by the</td>
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<tr>
<td>oldest work request in the shop for repairs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Researched current supply status of requested repair parts using the Logistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information System’s Part Tracker program located within Army Enterprise Portal</td>
<td></td>
<td></td>
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<tr>
<td>(AESIP).</td>
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<tr>
<td>3. Provided technical assistance as need.</td>
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<tr>
<td>4. Performed in-process inspection on equipment while in shop.</td>
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<tr>
<td>5. Reviewed completed Equipment Improvement Recommendations (EIR) or Quality</td>
<td></td>
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<tr>
<td>Deficiency Report (QDR) if required.</td>
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<tr>
<td>7. Managed Shop Safety program.</td>
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<tr>
<td>8. Managed the Shop Calibration program.</td>
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<tr>
<td>9. Managed all request for Combat Support Team (CST) operations.</td>
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<tr>
<td>10. Managed Shop Property accountability.</td>
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<tr>
<td>11. Managed maintenance on shop assigned equipment.</td>
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**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, how to do it correctly, and have the Soldier repeat the task.

**References**

AR 190-11
AR 190-13
AR 710-2
AR 750-1
ATP 3-39.32
ATP 4-33
EM 0090
DA PAM 710-2-1
DA PAM 710-2-2
DA PAM 750-1
DA PAM 750-8
091-MCST-3008
Administer Logistics Information Systems

**Conditions:** In an Operation environment (OE) use logistics information programs within Army Enterprise Portal (AESIP) site to improve shop operations.

**Standards:** Manage different logistics information programs within Army Enterprise Portal (AESIP) site to improve shop operations.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** To locate the reference needed to perform this task Soldiers need to go to Army Enterprise Portal (AESIP) site and gain access.

AESP website is https://enterprise.armyerp.army.mil

**Performance Steps**

1. Check requested repair parts status using Parts Tracker program in AESIP.

2. Verify parts NSNs using FedLOG program in AESIP.

3. Use AESIP Ground Equipment Tracker and Ground Equipment Verifier programs verify unit equipment assigned.

4. Use Sets, Kits, Oufits (SKO) program in AESIP to locate copies of the different shop tools kits for your shop.

5. Use Electronic Technical Manuals (ETM) program in AESIP to locate current Technical manuals (TM) for assigned unit equipment and for job ordered equipment.

6. Check the Modification Management Information System (MMIS) program within AESIP to verify all required MWOs have been applied to assigned equipment and job ordered equipment in for repairs.

7. Verify all tools and equipment that need calibration are enrolled using the Test, Measurement, and Diagnostic Equipment (TMDE) application in AESIP.

8. Verify level of work required using LORANAL (level of repair) application in AESIP.
**Evaluation Preparation:** Be sure all equipment and special tools are available before evaluation. All initial setup and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

**Performance Measures**

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<th></th>
<th>GO</th>
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<tbody>
<tr>
<td>1. Checked requested repair parts status using Parts Tracker program in AESIP.</td>
<td></td>
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<tr>
<td>2. Verified parts NSNs using FedLOG program in AESIP.</td>
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<tr>
<td>3. Used AESIP Ground Equipment Tracker and Ground Equipment Verifier programs verify unit equipment assigned.</td>
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<tr>
<td>4. Used Sets, Kits, Outfits (SKO) program in AESIP to locate copies of the different shop tools kits for your shop.</td>
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<tr>
<td>5. Used Use Electronic Technical Manuals (ETM) program in AESIP to locate current Technical manuals (TM) for assigned unit equipment and for job ordered equipment.</td>
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<tr>
<td>6. Checked the Modification Management Information System (MMIS) program within AESIP to verify all required MWOs have been applied to assigned equipment and job ordered equipment in for repairs.</td>
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<tr>
<td>7. Verified all tools and equipment that need calibration are enrolled using the Test, Measurement, and Diagnostic Equipment (TMDE) application in AESIP.</td>
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<tr>
<td>8. Verified level of work required using LORANAL (level of repair) application in AESIP.</td>
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**References**
Implement Command Maintenance Discipline Program (CMDP)

Conditions: Using DA PAM 750-1 to establish a Command Maintenance Discipline Program (CMDP) supervisory and managerial procedures and checklists to meet regulatory requirements and validate the units are adhering to existing Army policies.

Standards: Check to ensure the unit maintenance policies are being adhered to using the Commander’s guidance, Local Maintenance / Shop Standard Operating Procedures (SOP) and DA PAM 750-1 Ch 10.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: None

Note: None

Performance Steps

1. Appoint a CMDP coordinator on orders and ensure they understand the responsibilities and coordination requirements.

2. Read commander’s interest and direction to establish an effective CMDP.

3. Check the existing resources are integrated to avoid redundancy and complement unity of effort.

4. Utilize the requirements listing in the normal performance of their duties.

5. Notify higher command when requirements listing are not complete.

6. Schedule formal and informal inspections and staff assisted visits.

Evaluation Preparation: Be sure all equipment and specials tools are available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

1. Appointed CMDP coordinator on orders and ensure they understand the responsibilities and coordination requirements.  
   
   GO  NO GO
## Performance Measures

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<tr>
<td>2.</td>
<td>Read commander's interest and direction to establish an effective CMDP.</td>
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<tr>
<td>3.</td>
<td>Checked the existing resources are integrated to avoid redundancy and complement unity of effort.</td>
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<tr>
<td>4.</td>
<td>Utilized the requirements listing in the normal performance of their duties.</td>
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<tr>
<td>5.</td>
<td>Notified higher command when requirements listing is not complete.</td>
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<td>6.</td>
<td>Scheduled formal and informal inspections and staff assisted visits.</td>
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**References**

DA PAM 750-1
Skill Level SL4

Subject Area 19: Maintenance Operations II

091-LCST-4003
Conduct Administrative Procedures at the Company Level

Conditions: In an operational environment, while assigned as a Company Operations Sergeant, or in a supervisor position. Given a company to manage, applicable publications and forms, a computer and access to Government Information Systems.

Standards: Consolidate key information on each assigned Soldier within your Company. Some of the topics that you should include within your administrative Tracking System (spread sheet) are legal actions, separation actions, individuals Army Physical Fitness Test (APFT) score and test date, Unit Rating Scheme for assigned personnel, Military and Civilian Education just to name a few subject areas. All information consolidated on assigned Soldiers will be safeguarded in accordance with local Standing Operating Procedure (SOP) and Army policies with handling personally identifiable information (PII).

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Monitors unit personnel readiness [(Army Physical Fitness Test (APFT), Height/Weight (HT/WT) and Medical Personnel Records (MEDPROs)].

2. Reviews Noncommissioned Officer Evaluation Reporting System (NCOERS), counseling form and rating scheme.

3. Reviews separations and legal actions.

4. Monitors assigned Soldiers for completing their required Professional Military Education (PME) courses and civilian education.

5. Establishes the Company Non-Commissioned Officer Development Program (NCODP).

6. Conducts required company level ceremonies.
7. Reviews company level reports [unit manning report (UMR), unit commanders finance report (UCFR), AAA 162, Promotions, Good Conduct Medal (GCM)].

8. Manages the units appointed duty rosters.

9. Develop a web based administrative spread sheet with 100% Soldiers information.

**Evaluation Preparation:** Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

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<tr>
<th>Performance Measures</th>
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<tbody>
<tr>
<td>1. Monitored personnel readiness (APFT, HT/WT and MEDPROs).</td>
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<tr>
<td>2. Reviewed NCOERS, counseling form and rating scheme.</td>
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<tr>
<td>3. Reviewed separations and legal actions.</td>
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<td>4. Monitored assigned Soldiers for completing their required Professional Military Education (PME) courses and civilian education.</td>
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<tr>
<td>5. Established Company NCODP.</td>
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<tr>
<td>6. Conducted required company level ceremonies.</td>
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<tr>
<td>7. Reviewed company level reports (UMR, UCFR, AAA 162, Promotions, GCM).</td>
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<tr>
<td>8. Managed the units appointed duty rosters.</td>
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<td>9. Developed a web based administrative spread sheet with 100% Soldiers information.</td>
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**References**

- FM 7-22
- TC 3-21.5
091-LCST-4004
Facilitate Training Programs at the Company Level

Conditions: In an operational environment, while assigned as an Ordnance Company First Sergeant, or in a First Sergeant position. Given a company to manage, provided with copies of the company’s current Mission Essential Task List (METL) in support Battalion mission and its METL, applicable publications, forms, a computer and access to government information systems. This task should not be trained in MOPP.

Standards: Develop a comprehensive program for training an Ordnance Company to successfully accomplish its assigned mission in support of the Battalion mission and METL with no damage to equipment and no injury to personnel.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: To get the user manual for DTMS you have to log into your AKO. Once you log in go to Self Service and click on My Training, once that appears click on the ATN Logo, then go to search ATN upper right corner and type in DTMS user manual in the box and click GO. Another window will open and you will then click on Number 2 The DTMS user Manual from there it will show you the manual which is broke down into chapters and appendixes.

Performance Steps

1. Review battalion commanders mission and METL.

2. Develops Unit Mission Essential Task List (METL).

3. Identify collective task that support the companys restated mission.
   a. Select task critical for mission accomplishment.
   b. Back-brief battalion commander and obtain approval of companys METL.
   c. Provide approved METL to platoon leaders and subordinate leaders.

4. Monitors Digital Training Management System (DTMS). Army physical fitness test (APFT), Weapons Qualification (WQ)and Mandatory Training.
5. Prepares and briefs Quarterly Training Brief / Yearly Training Brief (QTB/YTB).

**Evaluation Preparation:** Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reviewed battalion commanders mission and METL.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. METL developed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Identified collective task that support companys restated mission.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. DTMS monitored. Army physical fitness test (APFT), Weapons Qualification (WQ) and Mandatory Training.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. QTB/YTB prepared and briefed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

ADP 6-22  
ADP 7-0  
ADRP 7-0
091-LCST-4005
Conduct Logistical Operations at the Brigade Level and Higher

Conditions: In an operational environment, while assigned as a Senior Leader in a Brigade level or higher position. Given a logistics mission, applicable publications and forms, a computer and access to government information systems.

Standards: Manage 100% of all mission assets and requirements at a Brigade or higher logistical operation, in accordance with local SOP and current regulations. The steps in this task may be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Determine availability of supplies by classification.

2. Determine medical evacuation and hospitalization requirements to include procedures to be used for chemical casualties.

3. Determine transportation capabilities, requirements, and shortages.

4. Determine maintenance capabilities, requirements, and location of facilities, collection points, and priority of maintenance for combat systems.

5. Determine the personnel services available and location of sites.

6. Determine the field services available and location of sites.

Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

| GO | NO GO |
|-----------------------------|
| 1. Determined availability of supplies by classification. |   |   |

13 April 2020

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### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Determined medical evacuation and hospitalization requirements to include procedures to be used for chemical casualties.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Determined transportation capabilities, requirements, and shortages.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Determined maintenance capabilities, requirements, and location of facilities, collection points, and priority of maintenance for combat systems.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Determined personnel services available and location of sites.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Determined field services availability and location of sites.</td>
<td></td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

- AR 40-13
- AR 40-5
- AR 708-1
- AR 740-1
- AR 750-1
- DA PAM 708-1
- DA PAM 750-1
- DA PAM 750-3
Apply Critical Thinking as a Senior Leader

Conditions: Given a problem set, ATP 2-33.4, and references relevant to the problem. As a Platoon Sergeant prepare a Company level briefing based on the Eight Elements of Thought.

Standards: Identify a solution to the given problem using the eight elements of thought as identified in paragraph 2-7, ATP 2-33.4 with a score between 7 - 9 using the Scoring Guide for Critical Thinking. Include information, assumptions and viewpoints relevant and significant to the problem. Provide an outline on paper to show all steps.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Express the purpose clearly.
   a. Distinguish the purpose from similar purposes.
   b. Check regularly to ensure the analysis is still on target.
   c. Choose meaningful and realistic purposes.

2. Identify the fundamental question.
   a. State the question at issue clearly and precisely.
   b. Express the question in several ways to clarify its meaning and scope.
   c. Break the question down into subquestions.
   d. Determine if the question has only one correct answer; decide if it is a fact or an assumption; assess whether it requires reasoning from more than one point of view.

   a. Identify assumptions and determine if they are justifiable.
b. Consider how assumptions are forming the point of view.

c. Ensure the facts are true.

d. Verify facts with multiple sources if possible.

4. Identify a point of view.

   a. Evaluate other points of view and identify strengths and weaknesses.

   b. Strive to be open-minded in evaluating all points of view.

5. Reason using raw data and information.

   a. Restrict claims to those supported by the data.

   b. Search for information that opposes the position as well as information that supports it.

   c. Make sure that all information used is clear, accurate, and relevant to the question at hand.

   d. Make sure sufficient information is collected.

6. Form reasoning using concepts and ideas.

   a. Identify key concepts and explain them logically.

   b. Consider alternative concepts or alternative definitions to concepts.

   c. Develop ideas clearly and precisely.

7. Infer only what the information implies.

   a. Confirm assumptions which lead to inferences.

   b. Verify inferences for their consistency with each other.

8. Trace the implications and consequences that follow from reasoning.

   a. Search for negative and positive implications.

   b. Consider all possible consequences.

9. Resolve Solution using the eight elements of thought.
Scoring Guide for Critical Thinking

Purpose: This guide provides criteria for evaluating student papers and oral presentations in accordance with the elements of reasoning and standards of thinking.

<table>
<thead>
<tr>
<th>Scoring Level</th>
<th>1 - Beginning</th>
<th>2 - Developing</th>
<th>3 - Competent</th>
<th>4 - Accomplished</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpretation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falls to question data</td>
<td>Ignores bias</td>
<td>Identifies some questions</td>
<td>Asks insightful questions</td>
<td>Analyzes insightful questions</td>
</tr>
<tr>
<td>Misses major content areas</td>
<td>Detects some bias</td>
<td>Notes some bias</td>
<td>Detects bias</td>
<td>Refutes bias</td>
</tr>
<tr>
<td>Detects no inconsistencies</td>
<td>Recognizes basic content</td>
<td>Recognizes basic content</td>
<td>Categories content</td>
<td>Critiques content</td>
</tr>
<tr>
<td>Chooses biased sources</td>
<td>States some inconsistencies</td>
<td>Identifies inconsistencies</td>
<td>Examines inconsistencies</td>
<td>Examines inconsistencies</td>
</tr>
<tr>
<td></td>
<td>Selects sources adequately</td>
<td>Recognizes content</td>
<td>Values information</td>
<td></td>
</tr>
<tr>
<td><strong>Analysis &amp; Evaluation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falls to draw conclusions</td>
<td>Sees no arguments</td>
<td>Identifies some conclusions</td>
<td>Formulates conclusions</td>
<td>Examines conclusions</td>
</tr>
<tr>
<td>Sees no differences</td>
<td>Identifies some arguments</td>
<td>Sees some differences</td>
<td>Recognizes arguments</td>
<td>Uses reasonable judgment</td>
</tr>
<tr>
<td>Repeats data</td>
<td>Paraphrases data</td>
<td>Notices differences</td>
<td>Evaluates data</td>
<td>Discriminates rationally</td>
</tr>
<tr>
<td>Omit research</td>
<td>Assumes information is valid</td>
<td>Seeks out information</td>
<td>Synthesizes data</td>
<td>Synthesizes data</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omit argument</td>
<td>Misrepresents statements</td>
<td>Argues clearly</td>
<td>Argues succinctly</td>
<td></td>
</tr>
<tr>
<td>Excludes data</td>
<td>Generalizes issues</td>
<td>Identifies issues</td>
<td>Identifies issues</td>
<td></td>
</tr>
<tr>
<td>Draws faulty conclusions</td>
<td>Citizes sources</td>
<td>Attributes sources</td>
<td>Attributes sources</td>
<td></td>
</tr>
<tr>
<td>Shows intellectual dishonesty</td>
<td>Presents few options</td>
<td>Suggests solutions</td>
<td>Justifies decisions</td>
<td></td>
</tr>
<tr>
<td>Overlooks some information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Grade Sheet

Scoring Guide

Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

1. Expressed the purpose clearly.  
   GO: _____  NO GO: _____

2. Identified the fundamental question.  
   GO: _____  NO GO: _____

   GO: _____  NO GO: _____

4. Identified a point of view.  
   GO: _____  NO GO: _____

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### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Reasoned using raw data and information.</td>
<td>_____</td>
</tr>
<tr>
<td>6.</td>
<td>Formed reasoning using concepts and ideas.</td>
<td>_____</td>
</tr>
<tr>
<td>7.</td>
<td>Inferred only what the information implied.</td>
<td>_____</td>
</tr>
<tr>
<td>8.</td>
<td>Traced the implications and consequences that followed from reasoning.</td>
<td>_____</td>
</tr>
<tr>
<td>9.</td>
<td>Solution resolved using the eight elements of thought.</td>
<td>_____</td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

ATP 2-33.4
091-LCST-4007
Conduct a Military Decision Briefing

Conditions: In an operational environment, given the topic "Conduct a Military Decision Briefing".

Standards: Conduct a Military Decision Briefing lasting between 7 to 10 minutes long and arrange main idea in logical sequence. The steps in this task may not be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment: None

Cue: None

Note: None

Performance Steps

1. Determine the subject.

2. Construct the Briefing.
   a. Research
   b. Organize
   c. Draft
   d. Revising, proofing and rehearsing.

3. Deliver the Briefing.

4. Complete with follow up.

Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

GO NO GO

1. Determined the subject. _____ _____
Performance Measures

2. Constructed the Briefing.  
   GO  NO GO
   _____  _____

3. Delivered brief.  
   GO  NO GO
   _____  _____

4. Completed with follow up.  
   GO  NO GO
   _____  _____

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, how to do it correctly, and have the Soldier repeat the task.

References

ADP 5-0
FM 6-22
DA PAM 25-40
Conduct Tactical Operations at the Battalion Level and Higher

Conditions: In an operational environment, while assigned as a Senior Leader in a Battalion level or higher position. Given a tactical mission, applicable publications and forms, a computer and access to government information systems.

Standards: Manage 100% of all mission assets and requirements at a Battalion or higher tactical operation, in accordance with local Tactical Standing Operating Procedures (TACSOP) and current regulations. The steps in this task may be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Establish Tactical Operation Center (TOC).
2. Prepare and publish Operation Orders (OPORDS).
4. Perform Battle Tracking.
5. Forecast Land/Ammo Requirements.
6. Coordinate Force Mod/NEF.

Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Established Tactical Operation Center (TOC).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Prepared and published Orders (OPORDS).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13 April 2020
Performance Measures

3. Updated Unit Status Report (USR).
GO NO GO

4. Performed Battle Tracking.
GO NO GO

5. Forecasted Land/Ammo Requirements.
GO NO GO

6. Coordinated Force Mod/NEF.
GO NO GO

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, how to do it correctly, and have the Soldier repeat the task.

References

ADP 5-0
AR 700-4
ATP 4-90
ATP 5-19
FM 3-96
DANGER
None

WARNING
None

CAUTION
None

Conditions: Given the requirement to ensure compliance with Command Supply Discipline Program (CSDP) by using existing assets to avoid duplication or fragmentation of effort and stewardship of resources. Given AR 710-2, AR 735-5, and local unit standing operating procedures (SOP).

Standards: Enforce 100% CSDP by taking prudent actions to properly use, care for and safeguard all Government property issued for, acquired for, or converted to a person’s exclusive use, with or without receipt in accordance with AR 710-2 and AR 735-5.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: Prior to a Command Inspection

Note: None

Performance Steps

1. Maintain the CSDP in accordance with AR 710-2 and AR 735-5.
   a. Develop measures to enforce supply discipline.
   b. Continue command emphasis on supply discipline by unit leadership.
   c. Provide training to unit personnel on supply requirements, procedures, and methods.
d. Take administrative measures to account for lost, damaged, or destroyed property.

2. Take disciplinary measures to deter and/or correct fraud, waste, negligent damage, and/or loss of government property.
   
   a. Update SOP and CSDP to align with changing unit requirements
   
   b. Submit to the commander any systemic problems that cannot be resolved.

**Evaluation Preparation:** This task can be evaluated during routine unit operations.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maintained the CSDP.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Taken disciplinary measures to deter and or correct fraud, waste, negligent damage, and or loss of government property. |   |   |

**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, how to do it correctly, and have the Soldier repeat the task.

**References**

AR 710-2
AR 735-5
Maintain Automated Maintenance Records

Conditions: In an operational environment, while assigned as a Senior Leader in a Battalion level or higher maintenance position. Given applicable publications and forms, a computer with Global Combat Support System-Army (GCSS-Army) and access to government information systems.

Standards: Manage 100% of Maintenance records at Battalion level or higher, in accordance with current local Standing Operating Procedure (SOP) and current regulations. The steps in this task may be performed out of sequence.

Special Condition: None

Special Standards: None

Special Equipment:

Cue: None

Note: None

Performance Steps

1. Monitor Battalion level and higher management of maintenance records posture using GCSS-Army.

2. Extract information from Army Enterprise Portal (AESIP)/integrated logistics analysis program (ILAP).

3. Investigate Class IX high priority requisitions.

Evaluation Preparation: Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

Performance Measures

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monitored Battalion level and higher management of maintenance records posture using GCSS-Army.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Extracted information from the Army Enterprise Portal (AESIP)/integrated logistics analysis program (ILAP).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Investigated Class IX high priority requisitions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**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, how to do it correctly, and have the Soldier repeat the task.

**References**

GCSS-ARMY END USER’S MANUAL
AR 750-1
ATP 4-33
DA PAM 750-3
DA PAM 750-8
**091-MCST-4002**

**Lead Maintenance Production Control**

**Conditions:** In an operational environment, while assigned as Senior Leader in a Battalion level or higher maintenance position. Given the requirements of assigning priority of work, supervising the service schedule and managing Quality Control Inspectors. Given required maintenance forms, required publications (Regulations, DA Pamphlets, FM's TM's), a computer, and access to government information systems.

**Standards:** Manage Maintenance Production Control at Battalion level or higher, in accordance with local Standing Operating Procedure (SOP), current regulations and score a "GO" on 5 out of 6 performance measures listed. The steps in this task may be performed out of sequence.

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**Cue:** None

**Note:** None

**Performance Steps**

1. Determine the maintenance situation.

2. Manage the maintenance program.

3. Coordinate recovery operation of the Battalion equipment.

4. Manage PLL's evacuation of equipment, components, and parts.

5. Establish field maintenance status of all Battalion equipment.

6. Conduct maintenance meeting using the (AH0026) Non-Mission Capable Equipment in or Equipment status report in GCSS-ARMY.

**Evaluation Preparation:** Be sure all applicable equipment is available before evaluation. All initial set up and equipment conditions must be performed in accordance with appropriate references to successfully complete the task.

**Performance Measures**

<table>
<thead>
<tr>
<th>1. Determined the maintenance situation.</th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
### Performance Measures

<table>
<thead>
<tr>
<th></th>
<th>GO</th>
<th>NO GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Managed the maintenance program.</td>
<td>_____</td>
</tr>
<tr>
<td>3.</td>
<td>Coordinated recovery operation.</td>
<td>_____</td>
</tr>
<tr>
<td>4.</td>
<td>Managed PLL's evacuation of equipment, components, and parts.</td>
<td>_____</td>
</tr>
<tr>
<td>5.</td>
<td>Established field maintenance status of all Battalion equipment.</td>
<td>_____</td>
</tr>
<tr>
<td>6.</td>
<td>Conducted maintenance meeting using the (AH0026) Non-Mission Capable Equipment in Equipment status report in GCSS-ARMY.</td>
<td>_____</td>
</tr>
</tbody>
</table>

**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, how to do it correctly, and have the Soldier repeat the task.

### References

- AR 385-10
- AR 750-1
- AR 750-6
- ATP 4-31
- ATP 4-33
- DA PAM 385-1
- DA PAM 385-10
- DA PAM 385-11
- DA PAM 750-3
- DA PAM 750-8
- TB 385-10
- TB 385-4
- TB 43-0142
- TB 43-0156
CHAPTER 4

Duty Position Tasks

10-94D. MOS – Air Traffic Control Equipment Repairer (ATC Equip Rep), CMF 94

1. Major duties. The ATC equipment repairer performs or supervises field level maintenance and installation of TAC communication systems, navigational aid systems (NAVAIDS), and landing systems. Duties for MOS 94D at each skill level are:

   a. MOSC 94D10. Uses Test, Measurement, and Diagnostic Equipment (TMDE), Test Program Sets (TPS), and Interactive Electronic Technical Manuals (IETM) to determine the cause and location of malfunctions, extent of faults, and category of maintenance required. Inspects equipment for faults and completeness. Tests equipment to determine operational condition. Troubleshoots to determine location and extent of equipment faults. Repairs equipment by adjusting, aligning, repairing, or replacing defective components. Tests repaired equipment to ensure compliance with technical specifications. Evacuates equipment and components to higher level repair activities based on the Maintenance Allocation Chart (MAC). Prepares appropriate maintenance forms and records. Logs maintenance in accordance with The Army Maintenance Management System (TAMMS). Prepares ATC equipment for Federal Aviation Administration (FAA) flight inspection. Maintains authorized spare parts, supply stock, tool lists, technical manuals, and instructional material. Perform preventive maintenance checks and services (PMCS) on TMDE, vehicles, and power generators.

   b. MOSC 94D20. Performs duties shown in preceding skill level. Performs maintenance duties that are more complex and beyond the scope and experience of those encountered by the skill level one repairer. Supervises and leads and leads teams of ATC equipment repairers. Provides technical assistance to both subordinates and supported users. Supervises the operation and proper use of TMDE. Schedules and performs user maintenance on TMDE, tools, and special test equipment. Performs final or quality control inspection of repaired equipment and maintenance documents. Provides shop supervisor with equipment repair status, priorities, and necessity for bench stock resupply. Maintains maintenance facility technical library.

   c. Performs duties shown in preceding skill level. Performs maintenance duties that are more complex and beyond the scope and
experience of those encountered by the skill level two repairer. Supervises and leads sections of ATC equipment repairers. Establishes work load, work schedules, and repair priorities. Assigns priority of work for job requests. Supervises calibration and shop safety programs. Serves as principal maintenance NCO in an ATC company, platoon or section.

d. MOSC 94D40. Performs duties shown in preceding skill level. Manages maintenance facilities and leads platoons. Manages calibration, quality assurance, and quality control programs for maintenance facilities. Coordinates for maintenance and repair of ATC equipment. Provides input to unit systems status reports. Maintains applicable administrative and maintenance files and inspects TAMMS and repair parts records. Recommends Prescribed Load List (PLL), shop stock, and bench stock changes. Manages supply operations for maintenance facilities. Coordinates with organizations and contractors for maintenance support and assistance. Ensures regulatory compliance with Department of Defense (DoD) and national level directives governing Information Assurance (IA) policies and procedures. Prepares technical reports on ATC equipment.

2. Physical demands rating and qualifications for initial award of MOS. The air traffic control equipment repairer must possess the following qualifications:

a. A physical demands rating of heavy.

b. A physical profile of 211221.

c. Qualify scores.

(1) A minimum score of 105 in aptitude area EL in Armed Service Vocational aptitude Battery (ASVAB) tests administered prior to January 2002.

(2) A minimum score of 102 in aptitude area EL on ASVAB tests administered on and after 2 January 2002.

d. A security eligibility of SECRET.

e. A U.S. citizen.

f. Formal training by completion of the MOS 94D Course conducted under auspices of the U.S. Army Ordnance School in mandatory unless a waiver is granted by Commandant, U.S. Army Ordnance School, Ft Lee, VA 23801-2102.
g. ACASP qualification criteria must have 2 years of experience or combination of formal training and experience totaling 2 years performing maintenance on ATC communication systems, navigational aid systems (NAVAIDS), and landing systems.

h. Alcohol and drug abuse as defined below will disqualify and Soldier or potential enlistee from this MOS. This disqualification will not be waived, even though the Soldier or potential enlistee satisfactorily completes the Army alcohol or drug abuse rehabilitation program or a civilian equivalent, except as specified below.

(1) A medically diagnosed history of alcohol abuse as defined in the substance use disorder section of the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, (DSM 5) is disqualifying. Commander, Human Resources Command may waive this disqualification after a Soldier or potential enlistee in this MOS successfully completes the Army Alcohol and Drug Abuse Prevention and Control Program (ADAPCP) Track I, II or III, or its civilian equivalent, based on the recommendations of the chain of command and the Commander, U.S. Army Aeromedical Center. A Soldier/potential enlistee who completes any aspect of the ADAPCP program and is involved in an additional offense involving alcohol or alcohol abuse will be immediately reclassified or denied enlistment in this MOS as a high risk.

(2) Except as provided in (e) below, a wrongful or improper use of narcotic or other controlled substance, or dangerous drug as defined by 21 USC 801, et seq, is disqualifying.

(3) A positive result of urine test administered per AR 600-85 that leads to medical evaluation and a finding of “no diagnosis apparent, improper use” use disqualifying.

(4) Except as provided in (e) below, a documented instance of the use, sale, transfer, possession, manufacture of any narcotic or other controlled substance or dangerous drug as defined by 21 USC 801, et seq, is disqualifying. A documented instance includes conviction by any courts martial or any civilian court. Convictions include juvenile adjudication, nonjudicial punishment under article 31(b), Uniform Code of Military Justice.

(5) A Soldier or potential enlistee will not be disqualified for teenage civilian experimentation with marijuana or other cannabinoids disclosed in voluntary confessions of drug experimentation documented solely by information obtained from SF 2808, Designation of Beneficiary (CSRS) or DD 2807-2, Accessions Medical History Report. Experimentation is defined as one time use or casual use over a short period of time resulting from peer pressure. The use disclosed must have occurred prior to the individual’s 18th birthday, and prior to enlistment in any armed force.
3. Additional skill identifiers. (Note: refer to DA Pam 611-21, table 12-8 (Listing of universal ASI’s associated with all enlisted MOS)).

4. Physical requirements and standards of grade. Physical requirements and SG relating to each skill level are listed in the following tables:

   a. DA Pam 611-21, Table 10-94D-1. Physical requirements.

   b. DA Pam 611-21, Table 10-94D-2. Standards of grade TOE/MTOE.

   c. DA Pam 611-21, Table 10-94D-3. Standards of grade TDA.
APPENDIX A

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 DA Form 5164-R, which you may locally reproduce on 8 ½" x 11" paper.

2. Enter the task title and 10-digit number from the STP task summary.

3. In column a, enter the performance measure numbers from the task summary.

4. In column b, enter the performance measure corresponding to the number in column a (you may abbreviate this information if necessary).

5. Locally reproduce the partially completed form when evaluating more than one Soldier on the task or when evaluating the same soldier more than once.

During evaluation:

1. Enter the date just before evaluating the soldier's task performance.

2. Enter the evaluator's name, the soldier's name, and the unit.

3. For each performance measure in column b, enter a check in column c (PASS) or column d (FAIL), as appropriate.

4. Compare the number of performance measures the soldier passes (and, if applicable, which ones) against the task standards specified in the task summary. If the standards are met or exceeded, check the GO block under STATUS; otherwise, check the NO-GO block.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERFORMANCE STEP TITLE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select and use applicable technical procedures</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>Select and use applicable tools and TMDE</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>Practice shop safety and maintenance discipline</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>Replace elevation servo of the M1 series track vehicle</td>
<td>P</td>
</tr>
<tr>
<td>5</td>
<td>Maintain tools and equipment</td>
<td>P</td>
</tr>
</tbody>
</table>

**EVALUATOR'S NAME**
SSG Forest Cump

**UNIT**
515th BSB

**SOLDIER'S NAME**
SPC John Hammerhead

**STATUS**
X GO

Figure A-1. Sample of a completed DA Form 5164-R
APPENDIX B

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

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

Before evaluation:

1. Obtain a blank copy of DA Form 5165-R, 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.
### Figure B-1. Sample of a Completed DA Form 5165-R

<table>
<thead>
<tr>
<th>USER APPLICATION</th>
<th>SPC Wade, Timothy</th>
<th>SPC Johnson, William</th>
<th>SPC Hall, Regina</th>
<th>SPC McElroy, John</th>
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</thead>
<tbody>
<tr>
<td>091-94F-1001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair TS-395A-UV</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94F-1007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair AN/PHS-12</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94F-1008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair MBA1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-94F-1009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair CAM</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# GLOSSARY

## Section I

### Acronyms & Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAR</td>
<td>after action report</td>
</tr>
<tr>
<td>ACOM</td>
<td>Army Command</td>
</tr>
<tr>
<td>ADAPCP</td>
<td>Alcohol and drug abuse prevention and control program</td>
</tr>
<tr>
<td>AKO</td>
<td>Army Knowledge Online</td>
</tr>
<tr>
<td>AMSF</td>
<td>area maintenance supply facility</td>
</tr>
<tr>
<td>ATC</td>
<td>air traffic control</td>
</tr>
<tr>
<td>ATNAVICS</td>
<td>Air Traffic Navigation, Integration, and Control System</td>
</tr>
<tr>
<td>BITE</td>
<td>built-in test equipment</td>
</tr>
<tr>
<td>CAA</td>
<td>Clean Air Act</td>
</tr>
<tr>
<td>CBRN</td>
<td>chemical, biological, radiological, and nuclear</td>
</tr>
<tr>
<td>COE</td>
<td>contemporary operational environment</td>
</tr>
<tr>
<td>COEI</td>
<td>components of end item</td>
</tr>
<tr>
<td>DA FORM</td>
<td>Department of the Army Form</td>
</tr>
<tr>
<td>DA PAM</td>
<td>Department of the Army pamphlet</td>
</tr>
<tr>
<td>ECU</td>
<td>electronic control unit</td>
</tr>
<tr>
<td>EGA</td>
<td>extended graphics adapter</td>
</tr>
<tr>
<td>ETM</td>
<td>electronic technical manual</td>
</tr>
<tr>
<td>EUM+</td>
<td>End User's Manual Plus (GCSS-Army)</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>IAW</td>
<td>in accordance with</td>
</tr>
<tr>
<td>IETM</td>
<td>Interactive Electronic Technical Manual</td>
</tr>
<tr>
<td>LIN</td>
<td>line item number</td>
</tr>
<tr>
<td>MACOM</td>
<td>major Army command</td>
</tr>
<tr>
<td>MDS</td>
<td>mission data sheet</td>
</tr>
<tr>
<td>METL</td>
<td>mission essential task list</td>
</tr>
<tr>
<td>MOPP</td>
<td>mission-oriented protective posture</td>
</tr>
<tr>
<td>MWO</td>
<td>modification work order</td>
</tr>
<tr>
<td>NAVAIDS</td>
<td>Navagational aids</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air-Quality Standards</td>
</tr>
<tr>
<td>NBC</td>
<td>nuclear, biological, and chemical</td>
</tr>
<tr>
<td>NRTS</td>
<td>not repairable this station</td>
</tr>
<tr>
<td>NSN</td>
<td>national stock number</td>
</tr>
<tr>
<td>OEM</td>
<td>Oracle Enterprise Manager</td>
</tr>
<tr>
<td>OPTEMPO</td>
<td>Operating Tempo</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PMCS</td>
<td>preventive maintenance checks and services personal</td>
</tr>
<tr>
<td>PPE</td>
<td>protective equipment</td>
</tr>
<tr>
<td>PPI</td>
<td>plan position indicator</td>
</tr>
<tr>
<td>SME</td>
<td>subject matter expert</td>
</tr>
<tr>
<td>TAIS</td>
<td>Tactical Airspace Integration System</td>
</tr>
<tr>
<td>TAMMS</td>
<td>The Army Maintenance Management System</td>
</tr>
</tbody>
</table>
Section II Terms

air traffic control
A service operated by the appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

after action review
A method of providing feedback to units by involving participants in the training diagnostic process to increase and reinforce learning. The AAR leader guides participants in identifying deficiencies and seeking solutions.

air traffic controller
An air controller especially trained for and assigned to the duty of airspace management and traffic control of airborne objects.

Operating tempo (OPTEMPO)
The annual operating miles/hours for systems in a particular unit required to execute the commander's training strategy. It is stated in terms of the miles/hours for the major system in a unit; however, all equipment generating significant operating and support cost has an established operating tempo.

preventive maintenance
(DOD) The care and servicing by personnel for the purpose of maintaining equipment and facilities in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop major defects. Also called PM.

preventive maintenance checks and services
Operator-level maintenance conducted before, during, and after equipment operations to identify actual and potential problems and to make repairs in a timely manner to minimize equipment downtime.
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This section contains no entries.
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DA FORM 2407-1, Maintenance Request Continuation Sheet.
DA FORM 3479-10, Responsibility Assignment.

DA FORM 3999-4, Maintenance Work Request Envelope.
DA FORM 5165-R, Field Expedient Squad Book.
DA FORM 5988-E, Equipment Maintenance and Inspection Worksheet (EGA).
DA FORM 5990-E, Maintenance Request (EGA).

DD FORM 200, Financial Liability Investigation of Property Loss.

DD FORM 2807-2, Accessions Medical History Report.

DD FORM 314, Preventive Maintenance Schedule and Record.

DD FORM1577, Unserviceable (Condemned) Tag - Material.

FAA Form 6030-1, Facility maintenance Log. https://faa.gov/

SF 2808, Designation of Beneficiary (CSRS).

WEB SITES

Army Career Tracker at https://actnow.army.mil
Central Army Registry at https://atiam.train.army.mil/catalog/dashboard
GCSS-Army at http://gcss.army.mil/
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