

**081-68A-1036**  
**Maintain Medical Refrigeration Devices**  
**Status: Approved**

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**Security Classification: U** - Unclassified

**Distribution Restriction:** Approved for public release; distribution is unlimited.

**Destruction Notice:** None

**Foreign Disclosure: FD1** - This training product has been reviewed by the training developers in coordination with the Joint Base San Antonio, Fort Sam Houston/US Army Medical Center of Excellence (MEDCoE) foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

**Conditions:** You are in an operational environment and are required to maintain medical refrigeration devices. You must perform and document maintenance-level services on this medical device/medical device system (MD/MDS). You are provided with an internal maintenance management system; Technical Bulletin (TB) 38-750-2, Maintenance Management Procedures for Medical Equipment; TB MED 7, Maintenance Expenditure Limits for Medical Materiel; Department of Defense (DD) Form 2163, Medical Equipment Verification/Certification; Army Techniques Publication (ATP) 4-02.1, Army Medical Logistics; local standard operating procedures (SOP); manufacturer's service literature; manufacturer's test equipment; tool kit (medical equipment organizational maintenance); individual toolbox; and any additional tools recommended by the manufacturer. This task should not be trained in MOPP 4.

**Standards:** Maintain medical refrigeration devices in accordance with (IAW) manufacturer's service literature while adhering to all performance steps with 100% accuracy, utilizing GO/NO-GO criteria.

**Special Conditions:** None

**Safety Risk:** Low

**MOPP 4:** Never

<b>Task Statements</b>
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**Cue:** None

**DANGER**

None

**WARNING**

Risk of electric shock.

**CAUTION**

Risk of exposure to biohazard material. Ensure unit has been decontaminated before servicing.

**Remarks:** None

**Notes:** For non-Army Publishing Directorate (APD), contact your training non-commissioned officer (NCO) and/or check with the military occupational specialty (MOS) library.

## Performance Steps

Cue: Upon receipt of a scheduled service work order:

### 1. Perform an inspection on a medical refrigeration system.

a. Perform inspection procedures as listed in the manufacturer's service literature.

b. Perform operational checkout procedures IAW the manufacturer's service literature.

Note: The operational checkout procedure in this step may be omitted if it will be performed during a preventive maintenance (PM) or calibration procedure in the same work request.

c. Correct minor deficiencies.

d. Record uncorrected deficiencies on the organizational maintenance work request form and complete the appropriate reports and forms IAW local SOP.

e. Remove the unit from service if any uncorrected deficiencies could present danger to the operator, the patient, or if the machine may be damaged due to continued use.

### 2. Perform PM on a medical refrigeration system.

Note: This procedure should include cleaning the condenser coils or manufacturer's equivalent procedure.

a. Perform PM procedure as listed in manufacturer's service literature.

b. Perform operational checkout procedures IAW the manufacturer's service literature.

Note: The operational checkout procedure in this step may be omitted if it will be performed during a calibration procedure in the same work request.

c. Correct minor deficiencies.

d. Record uncorrected deficiencies on the organizational maintenance work request form and complete the appropriate reports and forms IAW local SOP.

e. Remove the unit from service if any uncorrected deficiencies could present danger to the operator, the patient, or if the machine may be damaged due to continued use.

### 3. Perform calibration verification certification (CVC) on a medical refrigeration system.

Note: This procedure should include verifying temperature of unit or manufacturer's equivalent procedure.

a. Perform operational checkout procedure IAW manufacturer's service literature.

b. Perform calibration procedure as listed in the manufacturer's service literature.

c. Correct minor deficiencies.

d. Update DD Form 2163.

e. Record uncorrected deficiencies on the appropriate reports and forms IAW local SOP.

f. Remove the unit from service if any uncorrected deficiencies could present danger to the operator, the patient, or if the machine may be damaged due to continued use.

Cue: Upon receipt of an unscheduled repair work order:

### 4. Repair a medical refrigeration system.

a. Review the maintenance work request form for the operator's description of the equipment's malfunction.

b. Determine the maintenance expenditure limits (MEL) for definite life equipment utilizing guidance in TB MED 7.

Note: Under certain conditions the MEL may be waived. (See TB MED 7.)

c. Perform a visual inspection (e.g. wires, knobs, lamps, damage, etc.).

d. Perform a function check to confirm symptoms listed on the maintenance work request form.

Note: If the unit operates normally and no malfunctions are detected, complete the organizational maintenance work request form and return the unit to the user.

e. Isolate (troubleshoot) the malfunction to the lowest maintenance level (component/module/board) IAW SOP.

Note: Refer to the manufacturer's literature for schematics.

f. Determine if the repair cost exceeds the MEL.

g. Repair or replace the malfunctioning item.

h. Perform electrical safety test.

i. Perform a function check IAW the manufacturer's literature.

j. Determine disposition of the unit.

(1) Prepare to release the unit to the user if the function check is satisfactory.

(2) Take the unit out of service if uncorrected deficiencies are present and they present a danger to patients or the operator, or if the machine could be damaged due to continued use.

(3) Refer to the next higher echelon of maintenance, if necessary.

k. Complete and file the organizational maintenance work request form IAW local SOP.

(1) Obtain the hand receipt copy of the maintenance work request form from the user if the equipment was repaired in the shop.

(2) Obtain the user's signature for receipt of the unit, as appropriate.

(3) Release the unit to the user.

(4) Release medical device from service.

(Asterisks indicates a leader performance step.)

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

**Evaluation Preparation:** Ensure that all materials, parts, manuals, forms and equipment (or appropriate substitutions) required in the condition statement are available to the Soldier. Ensure all equipment and materials are available before evaluation.

Brief the Soldier: Tell the Soldier what is expected by reviewing the task standard. Evaluate this task using the performance measures listed. This evaluation method is appropriate if the performer performs the task on the job. Allow the performer to practice until the performer feels qualified and prepared for the evaluation. Have the performer perform the task using the materials listed in the condition statement.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Performed an inspection on a medical refrigeration system.			
2. Performed PM on a medical refrigeration system.			
3. Performed CVC on a medical refrigeration system.			
4. Repaired a medical refrigeration system.			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary	Source Information
	ATP 4-02.1	Army Medical Logistics	Yes	No	
	DD FORM 2163	MEDICAL EQUIPMENT VERIFICATION/CERTIFICATION	Yes	No	
	LOCAL SOP	LOCAL SOP	Yes	No	
	MFG MANUALS	Manufacturer's manuals, issued with initial issue of equipment	Yes	Yes	
	TB 38-750-2 (Change 005, August 01, 2013)	MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT (REPRINTED W/BASIC INCL C1-3) <a href="https://www.logsa.army.mil">https://www.logsa.army.mil</a>	Yes	No	
	TB MED 7	MAINTENANCE EXPENDITURE LIMITS FOR MEDICAL MATERIEL	Yes	No	

**TADSS :** None

**Equipment Items (LIN):**

LIN	Name
T61791	Tester Current Leakage
M05023	Multimeter AN/GSM-437:()

**Materiel Items (NSN) :**

Step ID	NSN	LIN	Title	Qty
	6625-01-142-8233		Tester, Current Leakage	1
	5180-00-611-7923	W45334	Tool Kit, Medical Equipment Repairman	1
	5180-01-483-1431		Tool Kit Medical Equipment Maintenance and Repair: Organizational Maintenance	1
	6515-01-360-2148		THERMOMETER,DIGITAL	1

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :** None

**Supported Individual Tasks :** None

**Supported Collective Tasks :** None

**Knowledges :**

Knowledge ID	Knowledge Name
K-551-G-0010	How to identify faults or deficiencies during a maintenance inspection
551-K-0086	How to read and interpret maintenance forms and records

**Skills :**

Skill ID	Skill Name
S0155	Apply basic electronic troubleshooting procedures

**ICTL Data :** None