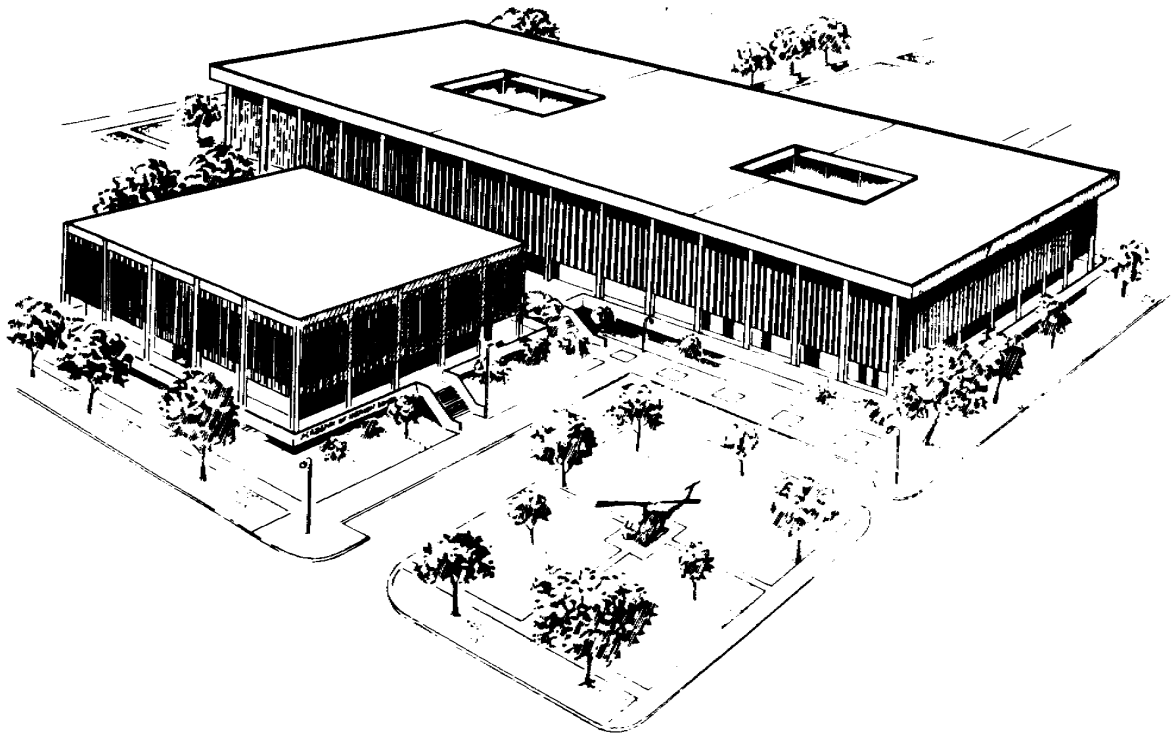

**U.S. ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS 78234-6100**



MEDICAL MAINTENANCE AND SUPPLY PROCEDURES

SUBCOURSE MD0358 EDITION 100

DEVELOPMENT

This subcourse is approved for resident and correspondence course instruction. It reflects the current thought of the Academy of Health Sciences and conforms to printed Department of the Army doctrine as closely as currently possible. Development and progress render such doctrine continuously subject to change.

ADMINISTRATION

Students who desire credit hours for this correspondence subcourse must enroll in the subcourse. Application for enrollment should be made at the Internet website: <http://www.atrrs.army.mil>. You can access the course catalog in the upper right corner. Enter School Code 555 for medical correspondence courses. Copy down the course number and title. To apply for enrollment, return to the main ATRRS screen and scroll down the right side for ATRRS Channels. Click on SELF DEVELOPMENT to open the application; then follow the on-screen instructions.

For comments or questions regarding enrollment, student records, or examination shipments, contact the Nonresident Instruction Branch at DSN 471-5877, commercial (210) 221-5877, toll-free 1-800-344-2380; fax: 210-221-4012 or DSN 471-4012, e-mail accp@amedd.army.mil, or write to:

NONRESIDENT INSTRUCTION BRANCH
AMEDDC&S
ATTN: MCCS-HSN
2105 11TH STREET SUITE 4191
FORT SAM HOUSTON TX 78234-5064

Be sure your social security number is on all correspondence sent to the Academy of Health Sciences.

CLARIFICATION OF TERMINOLOGY

When used in this publication, words such as "he," "him," "his," and "men" are intended to include both the masculine and feminine genders, unless specifically stated otherwise or when obvious in context.

USE OF PROPRIETARY NAMES

The initial letters of the names of some products may be capitalized in this subcourse. Such names are proprietary names, that is, brand names or trademarks. Proprietary names have been used in this subcourse only to make it a more effective learning aid. The use of any name, proprietary or otherwise, should not be interpreted as endorsement, deprecation, or criticism of a product; nor should such use be considered to interpret the validity of proprietary rights in a name, whether it is registered or not.

TABLE OF CONTENTS

<u>Lesson</u>		<u>Paragraphs</u>
	INTRODUCTION	
1	MAINTENANCE FORMS	1-1 -- 1-7
	Exercises	
2	TECHNICAL REPORTS	2-1 -- 2-4
	Exercises	
3	SUPPLY PROCEDURES.....	3-1 -- 3-7
	Exercises	
4	ADDITIONAL SUPPLY MANAGEMENT TASKS	4-1 -- 4-4
	Exercises	
	APPENDIX, Extract (Appendix B) from TB MED 7, .Maintenance Expenditure Limits for Medical Materiel.	

**CORRESPONDENCE COURSE OF
THE U.S. ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL**

SUBCOURSE MD0358

MEDICAL MAINTENANCE AND SUPPLY PROCEDURES

INTRODUCTION

This subcourse contains detailed instructions on the use of forms necessary for the management of maintenance on medical equipment. Use these forms to show the results of inspections, PMCS, calibrations, verifications, and unscheduled maintenance performed.

Subcourse Components:

This subcourse consists of four lessons and an appendix.

Lesson 1, Maintenance Forms.

Lesson 2, Technical Reports.

Lesson 3, Supply Procedures.

Lesson 4, Additional Supply Management Tasks.

Appendix, Extract (Appendix B) from TB MED 7, Maintenance Expenditure Limits for Medical Material.

Here are some suggestions that may be helpful to you in completing this subcourse:

--Read and study each lesson carefully.

--Complete the subcourse lesson by lesson. After completing each lesson, work the exercises at the end of the lesson, marking your answers in this booklet.

--After completing each set of lesson exercises, compare your answers with those on the solution sheet that follows the exercises. If you have answered an exercise incorrectly, check the reference cited after the answer on the solution sheet to determine why your response was not the correct one.

Credit Awarded:

Upon successful completion of the examination for this subcourse, you will be awarded 8 credit hours.

To receive credit hours, you must be officially enrolled and complete an examination furnished by the Nonresident Instruction Branch at Fort Sam Houston, Texas.

You can enroll by going to the web site <http://atrrs.army.mil> and enrolling under "Self Development" (School Code 555).

A listing of correspondence courses and subcourses available through the Nonresident Instruction Section is found in Chapter 4 of DA Pamphlet 350-59, Army Correspondence Course Program Catalog. The DA PAM is available at the following website: <http://www.usapa.army.mil/pdffiles/p350-59.pdf>.

LESSON ASSIGNMENT

LESSON 1

Maintenance Forms.

TEXT ASSIGNMENT

Paragraphs 1-1 through 1-7.

TASKS TAUGHT

Prepare and Maintain DD Form 314, Preventive Maintenance Schedule and Record.

Prepare and Maintain DA Form 2405, Maintenance Request Register.

Prepare and Maintain DA Form 2406, Materiel Condition Status Report.

Prepare and Maintain DA Form 2407-1, Maintenance Request and Continuation Sheet.

Prepare and Maintain DA Form 2409, Equipment Maintenance Log, Consolidated.

Prepare and Maintain DA Form 2402, Equipment Exchange Tag.

LESSON OBJECTIVES

When you complete this lesson, you should be able to:

- 1-1. Describe the concept of not mission capable (NMC) maintenance and supply.
- 1-2. Identify recording procedures used to request, schedule, and track routine and unscheduled maintenance on medical equipment.

SUGGESTION

Work the lesson exercises at the end of his lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.

LESSON 1

MAINTENANCE FORMS

1-1. NOT MISSION CAPABLE DEFINED

Before the completion of the various maintenance forms is discussed, the concept of "not mission capable" (NMC) and "fully mission capable" (FMC) must be thoroughly understood.

a. **Not Mission Capable.** Most simply defined, NMC equipment is any equipment which cannot perform any one of its combat missions. For medical equipment, substitute "design functions" for combat missions.

(1) Equipment is NMC when the equipment has a fault appearing in the "not ready" column of the operator's preventive maintenance checks and services (PMCS) guide in the equipment's technical manual (TM) as shown in figure 1-1. If PMCS procedures have not been published, use the equipment serviceability criteria (ESC) or a similar item's PMCS procedures as a guide. Some new equipment may not have an ESC or there may not be a similar item with PMCS procedures. For those items, and whenever other faults are considered, the unit commander judges whether the equipment is able or not able to perform its combat mission.

(2) Equipment at organization/unit or support maintenance for only normal scheduled PMCS or inspection is FMC. Equipment with faults not affecting its operational ability, like painting or minor body work, is also FMC. Support will tell the owning unit if the equipment should be carried NMC.

(3) Some publications other than the PMCS guide may describe faults as deficiencies. Unless those faults are also in the operator's PMCS guide in the "not ready" column, do not count them as NMC on the Materiel Condition Status Report, Department of the Army (DA) Form 2406 (refer to paragraph 1-4).

b. **Not Mission Capable/Maintenance.** Equipment unable to perform its combat mission because of maintenance work underway or needed, is classified as not mission capable/maintenance (NMCM).

(1) Not Mission Capable/Maintenance time starts when the equipment has an NMC fault and is under the control of an organizational or any other maintenance activity. Do not count time spent on regularly scheduled maintenance services and inspections or minor repairs (like painting and body work). Equipment is FMC when a unit is told it is ready for pickup, even though the equipment is still physically at support. Equipment is normally FMC on the day it is inspected and signed out.

ITEM NO	INTERVAL				ITEM TO BE INSPECTED AND PROCEDURE	EQUIPMENT IS NOT READY/AVAILABLE IF:
	B	D	A	S		
1.	X	X	X	X	Warming cabinet. Inspect for damage to the panels, door, controls, indicators, cabinet control chassis, or interior components.	The unit cannot be operated.
2.	X			X	Control module. a. Verify its performance by following the procedures in paragraph 2-2 and paragraph 3-11. b. Inspect for an accumulation of dirt or dust on electrical/electronic components.	The unit overheats or does not control the temperature. The dust contributes to incorrect operation of the unit.
3.	X	X	X	X	Electrical power cable. Inspect for damage or wear.	The cable is damaged or frayed resulting in an electrical hazard.
4.	X	X	X	X	Shelf filter. Ensure that the shelf filter is not clogged.	A clogged filter prevents improper air circulation or the uncontrolled warming of materials.
5.				X	Fans and vents. Inspect the air circulating fans and vents for an excessive accumulation of dust.	The collection of dust may result in a fire.

Figure 1-1. Example of a PMCS guide.

(2) Count NMCM time until all work on the deficiencies is done and/or the lack of a needed part stops the work. When the lack of a part is the only reason the equipment cannot be made FMC, not mission capable/supply (NMCS) time starts. See paragraph c below.

(3) Unit NMCM covers all time used at the unit level for NMC maintenance. Unit NMCM includes time needed to deliver equipment and wait for acceptance of equipment sent to support maintenance.

(4) Support NMCM covers all time used at support for maintenance, inspection, and awaiting shop delays on NMC faults. Normal scheduled services and inspections and minor repair work for other than an NMC fault do not count as NMC for the DA Form 2406.

c. **Not Mission Capable/Supply.** Equipment unable to perform its combat missions because of a supply shortage is placed in this classification.

(1) Not Mission Capable/Supply time starts when no more maintenance work can be done on NMC fault because a needed part is not on hand.

(2) Not Mission Capable/Supply covers time spent waiting for repair parts, chassis, assemblies and subassemblies, and components. Not Mission Capable/Supply time also includes time waiting for delivery of direct-exchange items when an exchange item is not available.

(3) Both NMCS and NMCM time can occur on an item or system on the same day. Count the entire day for the classification with the most hours that day. Subsystem NMCS and NMCM or organization and support NMC days can overlap. When that happens, charge the whole day to the condition/classification which has existed the longest time.

(4) Unit NMCS covers the time your equipment is in unit control and "awaiting parts" for an NMC fault.

(5) Support NMCS covers the time the equipment is under support's control and is awaiting parts for an NMC fault.

d. **Fully Mission Capable.** Equipment is FMC when it can perform all its combat missions without endangering lives.

(1) The FMC equipment must be complete and fully operable with no deficiencies listed in the "equipment not ready/available if" column of the operator's PMCS guide in the TM.

(2) The terms "ready" and/or "available" refer to the same status: the equipment is on hand and able to perform its combat missions.

1-2. DD FORM 314, PREVENTIVE MAINTENANCE SCHEDULE AND RECORD

a. **Purpose.** The DD Form 314 supplies a means of scheduling unit PMCS and documenting NMC time. Use the DD Form 314 to schedule maintenance on medical equipment as required by the TM or the manufacturer's literature. Use it to show NMC days on equipment to be reported on the DA Form 2406. Overall, the DD Form 314 is used to manage maintenance, services, or inspections locally as directed by the unit commander.

NOTE: The NMC time is not kept on equipment that is not reported on DA Form 2406 separately or as a subsystem.

b. **General Instructions.** Refer to figure 1-2.

(1) Normally one DD Form 314 covers a single item of equipment. Several like items may be covered on one DD Form 314 if the services are scheduled and performed on the same date, or the items are in the same container or general location. When scheduling services on more than one item, put each item's serial number in the "Remarks" block. However, you cannot combine like items of equipment which are reportable on DA Form 2406 on one DD Form 314.

Figure 1-2. Blank DD Form 314, Preventive Maintenance Schedule and Record.

(2) Use the front side of the DD Form 314 to schedule services. Use the back side to show NMC time.

(3) Schedule services at least one month or one servicing in advance, whichever is greater. The practice of scheduling one month or one servicing in advance is only a minimum. You may schedule beyond that.

(4) When the next scheduled service due date falls in a following year, put the date due in the remarks block until a new DD Form 314 is started.

(5) Schedule services in pencil.

(6) You may mark out weekends and holidays.

(7) Use the following symbols to show the type of service scheduled.

(a) Any PMCS--PM.

(b) Calibration--CL.

- (c) Safety test--ST.
- (d) Preventive maintenance checks and services and calibration--P/C.
- (e) Preventive maintenance checks and services and safety test--P/S.
- (f) Calibration and safety test--C/S.
- (g) Preventive maintenance checks and services, calibration, and safety test--AA.

(8) You can use other symbols or subsymbols as long as they do not conflict with the symbols required above. Explain the symbols used in the remarks block of the DD Form 314 or in your standing operating procedure (SOP).

(9) To schedule a service, mark the symbol (see paragraph 1-2b(7) above) in pencil in the date-due block (the calendar grid in the middle of the form with the months indicated on the left and days indicated on top of the form). You may not always be able to perform a service when it is scheduled. There will normally be a variance stated in the PMCS section of the equipment's TM.

(10) When you perform a service within the variance time period, ink in the symbol on the date it was scheduled. When you complete a service outside the variance time period, erase the symbols on the scheduled date. Ink in the symbol on the actual date you completed the service. Schedule the next service from the new date. Use the variance to perform as many services as possible at the same time.

(11) Equipment reported on a DA Form 2406 will need a record of NMC time. Record NMC days on the back of the DD Form 314.

(12) Show organizational NMCM days with the symbol 0. Put an S inside the 0 for organization NMCS. Post organizational NMCM/NMCS days as they occur. Use the letter X for each day the equipment is NMCM at support. Put the letter S over an X on the days it was NMCS at support. If support does not give a day-by-day breakout, put the total number NMCM/NMCS days in the remarks block.

(13) Not mission capable equipment at the end of the day is counted NMC for the whole day. Equipment which is FMC at the end of the day is counted FMC for the whole day. A day is the normal workday for your command.

(14) When equipment reportable on a DA Form 2406 is loaned to another unit, the borrowing unit will inform the owning unit of any NMC time on the equipment. It is the owning unit's responsibility to ensure the data required for properly maintaining the DD Form 314 is collected.

c. **Preparation.** Complete a DD Form 314 using the instructions below described by block title. Refer to figure 1-3.

REGISTRATION NUMBER		ADMINISTRATION NO.		NOMENCLATURE		MODEL		ASSIGNED TO	
214117-101		6575-00-782-2625		SUCTION APPARATUS		9700		OPERATING ROOM	
JAN	/	/	/	/	/	/	/	/	/
FEB	/	/	/	/	/	/	/	/	/
MAR	/	/	/	/	/	/	/	/	/
APR	/	/	/	/	/	/	/	/	/
MAY	/	/	/	/	/	/	/	/	/
JUN	/	/	/	/	/	/	/	/	/
JUL	/	/	/	/	/	/	/	/	/
AUG	/	/	/	/	/	/	/	/	/
SEP	/	/	/	/	/	/	/	/	/
OCT	/	/	/	/	/	/	/	/	/
NOV	/	/	/	/	/	/	/	/	/
DEC	/	/	/	/	/	/	/	/	/
REMARKS / - WEEKENDS AND HOLIDAYS									
DATE RECEIVED		RECEIVED FROM				DISPOSITION			

Figure 1-3. DD Form 314 (front).

(1) Date. Write the last two digits of the calendar year in the shaded box at the upper or lower left of the card, for example, 94.

NOTE: For steps (2) through (6) below, use either the block at the top or bottom of the cards.

(2) Registration number. Enter the serial number of the item, for example, 214117-101.

(3) Administration number. Enter the national stock number (NSN) of the item, for example, 6515-00-782-2625.

(4) Nomenclature. Enter the noun abbreviation, for example, Suction Apparatus. For items reportable on DA Form 2406, enter the equipment category code (ECC) and line-item number (LIN).

(5) Model. Enter the model number, for example, 9700.

(6) Assigned to. Enter the designation of the activity or section in which the equipment is located, for example, OR.

d. Disposition.

(1) Destroy the DD Form 314 after transferring header information to a new form. Transfer the information from the following blocks.

(a) Registration number.

(b) Administration number.

(c) Nomenclature.

(d) Model.

(e) Assigned to.

(f) Remarks. Note any NMC time for the current DA Form 2406 report, symbols and subsymbols, manufacturer's name and unit cost, and needed maintenance data. Schedule, in pencil, any services needed.

(2) The current DD Form 314 will go with the equipment when it is transferred. The losing unit keeps a record of NMC time for the current DA Form 2406 report period up to the day the equipment is dropped from the property book. The gaining unit starts a new DD Form 314 and reports equipment NMC time after the item is added to its property book.

(3) Destroy the DD Form 314 when the equipment is sent to salvage. The losing unit keeps a record of NMC time for the current DA Form 2406 reporting period.

(4) The system DD Form 314 is used for one year. Transfer any NMC time from the current DA Form 2406 reporting period to the new DD Form 314. Destroy the old DD Form 314.

1-3. DA FORM 2407, MAINTENANCE REQUEST AND DA FORM 2407-1, MAINTENANCE REQUEST--CONTINUATION SHEET

a. **Purpose.** The DA Form 2407 serves primarily as a means of requesting maintenance support from higher-level maintenance activities. It is also a source of information for all levels of maintenance management.

b. **Use.** Refer to figure 1-5. The DA Form 2407 is used by all levels of maintenance management and activities requiring their services. They use the form to accomplish the following.

- (1) Request organizational maintenance service at the unit level.
- (2) Request maintenance agency services from higher level support activities.
- (3) Report warranty claims actions.
- (4) Request and report the application of modification work orders (MWOs).
- (5) Record work accomplished and repair parts used, except common hardware and bulk material.
- (6) Request repair of components, assemblies, and subassemblies in the Direct Exchange Program.
- (7) Report work accomplished on DA data sampling items.
- (8) Report "onsite" or "repair and return to user" actions.

c. **Preparation.** There are several reasons for preparing the DA Form 2407. Items (1)(a) through (ae) below will be the same for all uses.

- (1) Request support maintenance. Refer to figure 1-6.

MAINTENANCE REQUEST				PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL
For use of this form, see TM 38-750, the procuring agency is OCSLOG				1	1	CE02-1047(R)1
SECTION I - EQUIPMENT DATA						
CONTROL NUMBER 180296		WORK ORDER NUMBER 5050-0001		WESDC	ORG PD 13	PD AUTHENTICATION
<input checked="" type="checkbox"/> WORK REQUEST <input type="checkbox"/> MWO <input type="checkbox"/> WARRANTY CLAIM	1a. ORGANIZATION OBERNE HOSP		1b. LOCATION FT TANEY, Md.		1c. UNIT IDENT CODE R4K222	
2. SERIAL NO. 90-1000	3. HOUR NOMENCLATURE DENTAL OPERATING UNIT		4. LINE NO. E9561	5. MODEL 305G1	6. NATIONAL STOCK NUMBER 652e-00-140-7663	
7. MAINTENANCE ACTIVITY MAINT DIV TRACY CA	8. LEVEL D	9. UTILIZATION CODE O	10. MCR ITEM Y	11. ERC A	12. PACING ITEM	13. HOURS 14. MILES 15. POUNDS 16. STARTS
14. FAILURE DETECTED DURING (Select one - use F or X) <input checked="" type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Test <input type="checkbox"/> Storage <input type="checkbox"/> Flight <input type="checkbox"/> Inoperative <input type="checkbox"/> Overheating <input type="checkbox"/> Out of Adjustment <input type="checkbox"/> Handling <input type="checkbox"/> Normal Op <input type="checkbox"/> Inspection <input type="checkbox"/> Other <input type="checkbox"/> Noisy <input checked="" type="checkbox"/> Low Performance <input type="checkbox"/> Other				15. FIRST INDICATION OF TROUBLE (Select one - use F or X)		
16. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM 100 FOR PREVENTIVE REPAIR						
MULTIPLE LEAKS IN UNIT HOSES						
17a. REMARKS AU 343-7187 PDC POC Jones PI item PI DAY NCM						
17b. REPAIR ORGANIZATION				18. TYPE ORGANIZATION		

Figure 1-6. DA Form 2407, Section I.

- (a) Page number. Enter the sequential page number of the page you are preparing.
- (b) Number of pages. Enter the total number of pages in the request.
- (c) Work order number. Enter the local work order number if one has been assigned. You will find it on the DA Form 2405.
- (d) WESDC. If the item is reportable (on DA Form 2406), enter the end-item code from Appendix B of Army Regulation (AR) 700-138 (WESDC codes are obsolete). Otherwise, leave the block blank.
- (e) Organization priority designator. Enter the priority designator (PD) for the request. Routine PDs are 12 and 13.
- (f) Priority designator authentication. The commander or the commander's representative must sign all 01 through 10 priority requests. This signature serves to approve the use of the particular PD. (If the PD comes from an already signed DA Form 2407, leave this space blank.)
- (g) Work request. Place a mark in the appropriate box, work request, MWO, warranty claim.
- (h) Block 1a, Organization. Enter the name of the unit requesting the maintenance.
- (i) Block 1b, Location. Enter the location of the unit listed in 1a. Units positioned overseas enter the Army Post Office (APO) only.
- (j) Block 1c, Unit identification code (UIC). Enter the Department of Defense activity address code (DODAAC) of the unit listed in 1a.
- (k) Block 2, Serial number. Enter the serial number of the equipment. (If the equipment has more than one serial number or if the form is used for more than one item, leave this space blank.)
- (l) Block 3, Noun nomenclature. Enter the name of the item as shown on the property book.
- (m) Block 4, Line no. Enter the equipment category code (ECC) and LIN when the equipment is reportable on DA Form 2406. If the item is not reportable, leave this block blank.
- (n) Block 5, Model. Enter the item's model number.

(o) Block 6, National stock number. Enter the NSN of the item listed in block 3. (If the form covers items with different NSNs, leave this block blank.)

(p) Block 7, Maintenance activity. Enter the name of the supporting activity.

(q) Block 7a, Level. Enter the symbol, from the list below, of the maintenance level of the unit that will be accomplishing the repair.

1 O -- Unit.

2 F -- Intermediate direct support.

3 H -- Intermediate general support.

4 D -- Depot.

(r) Block 8, Utilization code. Enter the utilization code as shown in figure 1-7, that applies to your unit and equipment.

(s) Block 9, materiel condition status reportable (MCSR) item. Enter the letter Y for yes if the item is MCSR on DA Form 2406. If the item is not reportable, leave this block blank.

(t) Block 9a, ERC. Enter the equipment readiness code (ERC) applying to the item as listed in the table of organization and equipment (TOE). (Not all items will have an ERC.)

(u) Block 9b, Pacing item. Leave the space blank (local option). Pacing items are major weapons or equipment systems of such importance they are subject to continuous monitoring and management at all levels of command.

(v) Block 10, Hours. Leave blank (local option).

(w) Block 11, Miles. Leave blank (local option).

(x) Block 12, Rounds. Leave blank (local option).

(y) Block 13, Starts. Leave blank (local option).

(z) Block 14, Failure detected during. Place a check in the appropriate box. If no failure occurred, leave this area blank.

(aa) Block 15, First indication of trouble. Place a check in the appropriate box.

Code	Description
*0	Active components.
1	Depot stock.
*4	Operational readiness float (ORF).
5	Installation maintenance and service equipment.
*7	Army National Guard (ARNG) except mobilization and training equipment site (MATES).
*8	ARNG (MATES)
*A	United States Army Reserve (USAR) units, except equipment pools.
B	Army Reserve units, equipment pools.
D	Army ROTC.
G	Defense Atomic Support Agency.
N	Prepositioned stock in Europe except prepositioning of materiel configured to unit sets (POMCUS).
R	Military assistance program (MAP)
X	Repair cycle float (RCF).
Y	Prepositioning of materiel configured to unit sets in Europe.
*Denotes equipment utilization codes requiring separate DA Form 2406 to be submitted by the reporting activities and units.	

Figure 1-7. Utilization codes for DA Form 2407.

(ab) Block 16, Describe deficiencies or symptoms on the basis of complete checkout and diagnostic procedures in equipment TM. Briefly describe the fault or symptom listed on the DA Form 2404. When the form is used to request maintenance on more than one item, list the number of items and their serial numbers. If they are like items with different NSNs, list the NSNs in this block. (Equipment reported on DA Form 2406 must have separate forms.) When the form is for components or assemblies with a recoverability code of A, D, F, H, L, O, or Z, give the end item NSN. Enter the NSN on the last line of block 16. Recoverability codes are located in the RC code column on the Army Master Data File (AMDF), or as part of the item's source, maintenance, and recoverability (SMR) code in the parts manual. If more space is needed, use DA Form 2407-1, Maintenance Request, Continuation Sheet, to continue.

(ac) Block 16a, Remarks.

1 The owning unit will put its point of contact telephone number in this block.

2 If the fault makes the reportable equipment or systems NMC, print NMC in the right corner.

3 Support maintenance uses this block to note any items listed, but not received and to note the status of equipment. Not Mission Capable/Maintenance and NMCS time for items reportable on the DA Form 2406 will be noted here. Components and subsystems or reportable items will also have NMC time noted. Support will show starting and stopping days for both NMCM and NMCS.

4 When the item in block 3 needs "onsite" or "deferred" repairs, support will note that action here. One of the following entries will be made for onsite or deferred work.

a Maintenance request received on (date).

b Onsite repair scheduled for (date).

c Owner to return item on (date) for repair.

5 Block 24, Received by. Refer to figure 1-8. Filled in by support only when the onsite repair is started or the deferred item is brought back to support.

The image shows a DA Form 2407, Maintenance Request (bottom). The form is a rectangular document with a grid-like structure. At the top, there are two main sections: 'E. TOTAL MANHOOURS' with a handwritten value of '3.0' and 'F. TOTAL PARTS COST' with a handwritten value of '\$ 45.00'. Below these are several rows of data entry fields. The first row contains checkboxes for 'Parts', 'Manpower', 'Facilities', 'Funds', and 'Tools'. The second row contains fields for '25. DELAY (Select one)', '26. DATA TRANSCRIBED', and '28. DISPOSITION (Select one)'. The third row contains fields for '25. SUBMITTED BY', '26. RECEIVED BY', '25. WORK STARTED BY', '26. INSPECTED BY', '27. ACCEPTED BY', and '28. DISPOSITION (Select one)'. The fourth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The fifth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The sixth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The seventh row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The eighth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The ninth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The tenth row contains fields for 'JULIAN DATE' and '28. DISPOSITION (Select one)'. The form is filled out with handwritten text. The bottom left corner of the form has the text 'DA FORM 2407 MAY 61' and the bottom right corner has the text 'EDITION OF JUL 78 IS OBSOLETE. FILE COPY 5'.

Figure 1-8. DA Form 2407, Maintenance Request (bottom).

6 The unit commander or his or her designated representative will note the time and date support was told onsite repair was needed on an NMC item. NMCM time will be based on this date and time.

7 Send the receipt copy to the support unit. The owning unit keeps all other copies until on-site repair is started or the deferred item is taken back to support.

8 Enter the name of the manufacturer and the quantity of the item submitted.

(ad) Block 23, Submitted by. Refer to figure 1-8. The person submitting the DA Form 2407 signs in this block and enters the Julian date.

(ae) Block 24, Received by. Refer to figure 1-8. The person receiving the request signs in this block and enters the Julian date.

(2) Work accomplished by support maintenance. The unit performing the work checks the entries in Section I and fills in Section II. Refer to figures 1-6, 1-8, and 1-9.

(a) Block 16, Describe deficiencies or symptoms on the basis of complete checkout and diagnostic procedure in equipment TM. (Previously filled in.)

(b) Block 16a, Remarks.

1 This block is used to note any items listed, but not received, and show the status of equipment. Note any NMCM and NMCS time for items reportable on the DA Form 2406 here. Components and subsystems of reportable items will also have NMC time noted. The starting and stopping days for both NMCM and NMCS are also shown. You do not need this information if you are under an automated system which collects NMC time for you.

2 When the item in block 3 needs "onsite" or "deferred" repairs, explain that. Make the applicable entry from those shown in paragraph 1-3c(1)(ac)4 above for onsite or deferred work.

NOTE: Block 24 is filled in only when the onsite repair is started or the deferred item is brought back.

(c) Block 17a, Repair organization/activity. Enter the designation of the unit or activity doing the work.

(d) Block 17b, Location. Enter the location of the unit or activity doing the work.

(e) Block 17c, Unit identity code. Enter the DODAAC of the organization listed in 17a.

(f) Block 18, Type organization/activity accomplishing work. Place a mark in the appropriate block.

(g) Block 19, Army management structure (AMS) account code. Leave blank.

(h) Block 20a, Act code. Leave blank.

NOTE: Both TOE and tables of distribution and allowances (TDA) units use the DA Form 2407. Its use is advantageous for TDA units to account for manhours.

(l) Block 20h, National stock number. Enter the NSN or part number for each part, component, or assembly in column 20c. Leave blank for adjustment or when NSNs or part numbers cannot be identified.

(m) Block 20i, Part source code. Place a mark in this column only if the part came from cannibalization.

(n) Block 20j, Qty. Enter the total number of parts required to accomplish the task.

(o) Block 20k, Parts cost. Enter the cost of each part.

(p) Block 20l, Total manhours. Enter the total number of manhours required in hours and tenths.

(q) Block 20m, Total manhours cost. Leave this block blank (local option).

(r) Block 20n, Total parts cost. Enter the total cost of all parts installed.

(s) Block 21, Delay. Place a mark in the appropriate box. If no delay occurred, leave it blank.

(t) Block 22, Data transcribed. Place a mark in this box only when the information has been transferred to another form (DA Form 2409).

(u) Block 23, Submitted by. Previously entered.

(v) Block 24, Received by. The person receiving the request signs this block and enters the Julian date.

(w) Block 25, work started by/Julian date. The person starting the job signs this block and enters the Julian date.

(x) Block 26, inspected by/Julian date. The person inspecting the work signs this block and enters the Julian date.

(y) Block 27, accepted by/Julian date. The person accepting the equipment for the owner signs this block and enters the Julian date.

(z) Block 28, disposition. Place a mark in the appropriate box.

(3) Request or report a MWO. Refer to figures 1-6 and 1-8.

(a) Block 16, describe deficiencies or symptoms.

1 Enter the MWO numbers. If more than one MWO is listed, make sure all the MWOs apply to each component or end item covered by the form.

2 Give the serial number of each component or end item you have needing these MWOs. If you need more room, use DA Form 2407-1.

3 When you are asking to have MWOs applied to components, list the component's end-item NSN. If you do not know the end-item NSN, print "UNK."

4 Items and components of items cannot be combined on one form. Make out a separate DA Form 2407 for those needing MWOs.

(b) Block 16a, Remarks.

1 The owning unit writes its telephone number in this block.

2 Support maintenance uses this block to note any items listed, but not received, and note the status of equipment. Not Mission Capable/Maintenance and NMCS time for items reportable on the DA Form 2406 are noted here. Components and subsystems of reportable items will also have NMC time noted. Support will show starting and stopping days for both NMCM and NMCS.

3 List the procurement request order number (PRON). The fiscal station number, Product Improvement Program number (PIP), and Materiel Fielding Plan (MFP) identification number when they apply, are also listed here.

4 Enter the name of the manufacturer and the quantity of the item submitted.

(c) Block 23, Submitted by. The person submitting the DA Form 2407 signs in this block and enters the Julian date.

(d) Block 24, Received by. The person receiving the request signs in this block and enters the Julian date.

(4) Warranty claim actions. Warranty claims actions for other than locally purchased and nonstandard medical equipment will be reported to United States Army Medical Materiel Agency (USAMMA) (ATTN: SGMMA-M) Fort Detrick, Frederick, MD 21701-5001. On DA Form 2407, Block 16, describe deficiencies or symptoms with the information listed below. Refer to figures 1-6 and 1-8.

available. (a) The manufacturer's name, address, and telephone number if

(b) All technical specifications.

(c) Date manufactured and put in service.

(d) Defense Logistics Agency, (DLA) contract number.

(e) The cause of performance failure.

d. Disposition.

(1) Receipt copy (number 1). Destroy when the equipment is returned to the unit.

(2) AIMP copy (number 2). Handle as directed by your local command.

(3) Control copy (number 3). Handle as directed by your local command.

(4) Organization copy (number 4). The unit requesting the maintenance keeps this copy for 90 days after the equipment is repaired. For items under a DA approved sampling plan, hold this copy as directed by the plan. The unit may keep the DA Form 2407 showing services, such as calibration and load or proof test, until the next service is performed.

(5) File copy (number 5). The maintenance activity keeps this copy for 90 days after the equipment is repaired and returned to the user. The data from this copy must be transcribed to DA Form 2409 for those items of equipment requiring an equipment maintenance history.

1-4. DA FORM 2406, MATERIEL CONDITION STATUS REPORT

a. **Purpose.** A blank DA Form 2406 is shown in figure 1-10. The materiel condition status report (MCSR) provides the following benefits.

(1) It gives DA staff and equipment managers readiness information on reportable items of equipment, systems, and subsystems.

(2) Local commanders can analyze and predict equipment readiness and availability and be aware of the equipment status of their supported equipment.

(3) The DA Form 2406 is a worksheet for unit commanders to compute equipment mission capable (EMC) time.

MATERIEL CONDITION STATUS REPORT <small>For use of this form, see AR 700-138, the program agency is DDC&L DG</small>				Requirement Control Symbol CSGID-1942 (RM)													
1 PERIOD OF REPORT FROM TO		2 DATE PREPARED	3 UTILIZATION CODE	4a PAGE NO	4b NO PAGES												
5 TO ADDRESS INCLUDING OFF CODE		6 FROM ADDRESS INCLUDING OFF CODE		7 UNIT IDENTIFICATION CODE													
8 TOE NO																	
9 AVAILABILITY STATUS (REQUIRED)																	
10 REQ NO	11 NOMENCLATURE			12 ECC NR	13 DENSITY				14 EQUIPMENT AVAILABILITY				15 FOR FIELD USE ONLY				
	11a MOUN	11b TDB	11c MODEL		13a ACTV CITY	13b ON HAND QTY	13c POSSIBLE CATE	13d ACTV DATE	14a NONAVAILABILITY DATE				15a REQ CITY	15b REQ DATE	15c ECC	15d ER	15e ECC
								14b				14c					
								14d				14e					
								14f				14g					
								14h				14i					
								14j				14k					
								14l				14m					
								14n				14o					
								14p				14q					
								14r				14s					
								14t				14u					
								14v				14w					
								14x				14y					
								14z				14aa					
								14aa				14ab					
								14ab				14ac					
								14ac				14ad					
								14ad				14ae					
								14ae				14af					
								14af				14ag					
								14ag				14ah					
								14ah				14ai					
								14ai				14aj					
								14aj				14ak					
								14ak				14al					
								14al				14am					
								14am				14an					
								14an				14ao					
								14ao				14ap					
								14ap				14aq					
								14aq				14ar					
								14ar				14as					
								14as				14at					
								14at				14au					
								14au				14av					
								14av				14aw					
								14aw				14ax					
								14ax				14ay					
								14ay				14az					
								14az				14ba					
								14ba				14bb					
								14bb				14bc					
								14bc				14bd					
								14bd				14be					
								14be				14bf					
								14bf				14bg					
								14bg				14bh					
								14bh				14bi					
								14bi				14bj					
								14bj				14bk					
								14bk				14bl					
								14bl				14bm					
								14bm				14bn					
								14bn				14bo					
								14bo				14bp					
								14bp				14bq					
								14bq				14br					
								14br				14bs					
								14bs				14bt					
								14bt				14bu					
								14bu				14bv					
								14bv				14bv					

Figure 1-10. Blank DA Form 2406.

b. **Reporting Activities.** Only units and activities operating under utilization codes 0, 4, 7, 8, A, H, K, or Q are required to submit DA Forms 2406 to the Materiel Readiness Support Agency (MRSA). Make separate reports when more than one utilization code applies to the unit's on-hand equipment.

c. **Reporting Frequency.**

- (1) Active Army. Active units make monthly DA Form 2406 reports covering a one-month period ending on the 15th day of each month.
- (2) Reserve units. United States Army Reserve and ARNG, including MATES, make quarterly DA Form 2406 report. The report covers a three-month period ending 15 DEC, 15 MAR, 15 JUN, and 15 SEP.

d. **Reportable Equipment.** Equipment is reportable on the DA Form 2406 if it falls within any of the following classifications.

- (1) Equipment whose LIN is listed in Appendix B of AR 700-138 that are authorized on the TOE/MTOE/TDA.

(2) Equipment that is on-hand and on the unit's property book.

(3) When a model is not listed in Appendix B of AR 700-138, it is reported in the following situations.

(a) When the LIN for the model is listed in Appendix B of AR 700-138.

(b) When the model has a Logistics Control Code (LCC) A, B, F, T, or U listed in Supply Bulletin (SB) 700-20.

(4) If the equipment is authorized or on-hand and the LIN is not listed in Appendix B, report the item in the following situation.

(a) If the LIN is a "pacing" item in the unit.

(b) If the model on-hand has an LCC of A, B, F, T, or U.

(5) List equipment that is being used solely for military occupational specialty (MOS) training at TRADOC schools or other training centers only if it is FMC for its intended use and is configured as it would be in a combat environment.

e. Equipment Not Reported. Equipment falling within the following classifications is not reportable on the DA Form 2406.

(1) The equipment should not be reported if its LIN is not listed in Appendix B of AR 700-138.

(2) Do not report the equipment if it was developed, made, bought, or is being used solely for MOS training at TRADOC schools or other training centers and is not configured as it would be in a combat environment.

(3) Do not report the equipment if it is reported as part of a system. When equipment is reported as part of a system, reduce the number authorized and on-hand by one for each reportable item used with a system.

EXAMPLE: A reportable truck used to tow a reportable howitzer (a system). The truck and tube are reported as a system, but reduce the inventory of trucks by one.

(4) Do not report equipment borrowed from another unit.

f. **Substitutes.** Equipment issued in place of an authorized item should be placed on the DA 2406 if the equipment is an authorized substitute LIN (see Appendix H, SB 700-20) and is also in Appendix B of AR 700-138. Report the substitute item under its own ECC and LIN.

g. **General Reporting Instructions.**

(1) Equipment on loan is reported by the unit having it on its property book. When equipment is on loan, the borrowing unit keeps a duplicate DD Form 314. The borrowing unit gives NMCS/NMCM data to the owning unit at the end of the report period. The duplicate DD Form 314 goes with the equipment when it is returned to its owner. Both units must ensure the owner gets the duplicate DD Form 314 when the loan is completed.

(2) Assets at MATES, unit training equipment sites (UTES), or equipment concentration sites (ECS) are not loaned equipment. The MATES keeps the DD Form 314 for ARNG units. But only the owning USAR or ARNG unit reports this equipment.

(3) Equipment on a DA Form 2407 or DA Form 5504 (Maintenance Request) at a support unit/activity is reported NMC only if it has an NMC fault. It is counted as FMC when the support unit/activity notifies the owning unit the equipment has been repaired and is awaiting pick-up.

(4) Equipment in a depot for repair or overhaul and return stays on the unit's property book. Report that equipment as NMC for support maintenance.

(5) Do not report NMC equipment as FMC because a usable subsystem is available to be shifted among system or end items unless the actual transfer or replacement has been made. Comply with AR 750-1 to keep equipment FMC by controlled exchanges.

(6) When reporting a system, the primary mission item (the reportable system LIN) must be on-hand on the unit property book before "possible days" can be reported. If the system LIN is authorized on the TOE/modified TOE (MTOE)/TDA but not on-hand, report the item as follows: "1 authorized, 0 on-hand." Do not enter data in the "possible days," "available days," and the remaining blocks. When the primary mission item is not on-hand, report subsystems as separate LINs if they are listed in AR 700-138, Appendix B-1. If it is not listed there, disregard it for readiness reporting purposes.

(7) The subsystem must be recorded as on-hand and FMC for the complete system to be recorded as FMC.

(8) The effect-on-system (EOS) codes are used to highlight the subsystem when a system is NMC because an authorized subsystem is not on-hand. List the requisition number for the subsystem on the back of the DA Form 2406 and ask the supporting United States (US) Army Materiel Command (AMC) logistics assistance office (LAO) for assistance with the requisition. The EOS codes are reported to provide information on those subsystems which most often fail and cause the system to be NMC. The EOS codes provide critical data to materiel managers about persistent, recurring equipment problems which should be focused on and fixed. They are listed as part of the data supplied in Appendix B-2 of AR 700-138.

h. Preparation of DA Form 2406. Refer to figure 1-11.

MATERIEL CONDITION STATUS REPORT <small>For use of this form, see AR 700-138, the proponent agency is DCCC/DG</small>			Requirement Control Symbol CSGLD-1042 (R4)	
1 PERIOD OF REPORT From: 4107 To: 4136	2 DATE PREPARED 4137	3 UTILIZATION CODE 0	4a PAGE NO 1	4b NO. PAGES 2
4 TO ADDRESS INCLUDING DF CODE Commander 123d (Arty, Inf, Armm, etc.) Fort Center, Kansas 0000-0000	5 FROM ADDRESS INCLUDING DF CODE Commander 101st Arty (Arty, Inf, Armm, etc.) Fort Center, Kansas 0000-0000	7 UNIT IDENTIFICATION CODE W229AA		
8 AVAILABILITY STATUS INDICATOR				

Figure 1-11. DA Form 2406, blocks 1 through 8.

(1) Block 1, Period of report.

(a) Enter the beginning and ending Julian dates of the reporting period, for example, From: 4107, To: 4136. Ensure the "To" date is greater than the "From" date.

(b) Ensure quarterly reports submitted by USAR and ARNG units are always either a 90-, 91-, or 92-day inclusive period.

(c) Ensure the periods of monthly reports for active units are always either 28, 29, 30, or 31 days.

(2) Block 2, Date prepared. By entering the Julian date when the report was completed, for example, 4137.

(3) Block 3, Utilization code. Use the utilization code or codes for the parent unit making the report as shown in figure 1-12, for example, zero.

(4) Block 4a, Page no. Fill in the number of the page you are on. Start with page 1 and number the pages sequentially, for example, one.

Code	Description
0	Active Component (except as otherwise listed).
4	ORF.
7	ARNG, except MATES.
8	ARNG (MATES).
A	USAR units.
H	US Army Intelligence and Security Command.
K	US Army Training and Doctrine Command.
Q	Equipment assigned to service schools and training centers.

Figure 1-12. Utilization codes for DA Form 2406.

(5) Block 4b, No. of pages. Entering the total number of pages in the report. Do not put this number in until the report is completed, for example, two.

(6) Block 5, To. Enter the name and address (with ZIP/APO code) of the parent unit, for example, Cdr, 9th Armor Rgt, Ft. Crumb. AL.

(7) Block 6, From. Enter the name and address (with ZIP/APO code) of your unit, for example, Cdr, 2-9th Armor, Ft. Crumb, AL.

(8) Block 7, Unit ident code. Enter the six-character UIC of the submitting unit, for example, WB29AA. This code always begins with a "W."

(9) Block 8, Toe no. Enter the numeric-alpha TOE or TDA number or leave blank as directed by your higher unit (local option).

(10) Block 9, Availability status (itemized). Refer to figure 1-13. Enter equipment in LIN order in columns 9a through 9c and complete columns a through f.

(a) Block 9a, Sequence no. This column must contain numeric entries and may be followed by alpha characters. An entry of numeric digits only, represents the "authorized line." An entry with both numeric digits and alpha characters represents the "issue line." Numeric entries must exceed two digits. Record numbers 1, 2, 3 through 9 as 01, 02, 03, and so forth. Put 01 on the first line and continue in numeric sequence. When alpha characters are added, the sequence is numeric/alpha, for example, 01, 01A, 01B, 02, 03, 03A, and so forth.

(b) Block 9b(1), Noun. Enter the noun abbreviation shown in Appendix B-1 of AR 700-138, for example, PN TL COMP.

Code	Description of Problems
A	Computer problems.
B	Shelter, trailer, or van problems.
C	Communication equipment problems.
D	NBC equipment problems.
E	Environmental control problems such as heaters or air conditioners.
F	Missile subsystem problems.
M	Prime mover problems.
N	Other subsystem problems.
P	External power source problems such as generators.
S	Shoot problems.
T	Maintenance/shop equipment problems such as built-in test equipment (BITE).
Z	Subsystem shortages.

Figure 1-14. EOS codes for DA Form 2406.

1 List first the EOS code for the subsystem affecting the most equipment, or failing most often.

2 List second the EOS code for the subsystem causing the next most problems.

(g) Identify the EOS of a subsystem in the first (primary) position and then list EOS "Z" in the second position when a system problem is primarily caused by a shortage of a particular subsystem. Never use EOS "Z" by itself; always use "Z" in the secondary position so the subsystem shortage is clearly identified.

(h) Use EOS whenever nonavailable time for system is reported.

(i) Use N (other subsystem problems) when problems occur with a mission critical subsystem not assigned a specific EOS code.

(11) Block 9b(3), Model. Enter the model number of the item.

(a) Leave block 9b(3) blank if the line is an authorized line with separate models below it.

(b) Leave block 9b(3) blank if the on-hand quantity of the item is zero.

(c) Use the exact equipment model number and identification in Appendix B of AR 700-138.

(12) Block 9c, ECC/LIN. Enter the equipment category code (ECC) and the line item number (LIN) of the equipment.

(a) Write the ECC first followed by the LIN as it appears in Appendix B, AR 700-138

(b) List the equipment in LIN order.

(13) Block 9d(1), Auth qty. Enter the number of items authorized on the unit's MTOE/TDA from column 9b(1), for example, one.

(a) Ensure block 9d(1) contains a numeric entry for every authorized line (numeric only in column 9a).

(b) Leave the authorization block for the on-hand line blank when more than one line shows the models on-hand.

(c) Enter zero if an item is on-hand, but not authorized.

(d) Remember to reduce the quantity when items are reported as subsystems.

(14) Block 9d(2), On hand quantity.

(a) Put in the number of the item on-hand as of the "To" date in block 1.

(b) Consider the day you actually got the equipment as a day that the equipment is on-hand.

(c) Enter a zero when an item is authorized, but not on-hand.

(d) Consider the equipment as no longer on-hand on the day that the equipment is dropped from the property book.

(e) Enter the quantity on-hand as a numeric quantity for each line.

(15) Block 9e(1), Possible days.

(a) Enter the total number of days the equipment could have been available during the period.

(b) Consider one equipment day to be a single item or system on-hand for one day.

(c) Include equipment on-hand for any part of the report period on the DA Form 2406 for that period.

(d) Determine the date the item arrived from the property book office.

(16) Block 9e(2), Available days.

(a) Enter the total number of days the equipment was FMC during the period. (Available days equal the possible days minus the nonavailable days.)

(b) Determine a system is FMC if each authorized subsystem in Appendix B2 of AR 700-138 is FMC and on-hand.

(c) Ensure there is an entry if column 9d(2) has an entry.

(d) To determine the FMC percentage, divide the total available days by the total possible days and multiply by 100.

(17) Block 9e(3), Nonavailability days.

(a) Using the DD Form 314 for the item of equipment, copy the total number of days the equipment was NMC at organization level for supply (NMCS) and maintenance (NMCM) during the report period to block 9e(3)(a) of the DA Form 2406.

(b) Using the DD Form 314 for the item of equipment, copy the total number of days the equipment was NMC at support level for supply (NMCS) and maintenance (NMCM) during the report period to block 9e(3)(b) of the DA Form 2406.

(c) Verify the sum of the entries in column 9e(3) equals the entry in column 9e(1) minus the entry in column 9e(2).

(d) Verify the entries in columns 9e(1) and 9e(2) are equal if there are no nonavailable days in column 9e(3).

(18) Use columns 9f(1) through 9f(5) as a worksheet for the Unit Status Report. See AR 220-1 for further explanation and figure 1-15 for a completed DA Form 2406.

MATERIEL CONDITION STATUS REPORT				Requirement Control Symbol													
For use of this form, see All Form 100, the procedure Agency is 0000-000				CS21D-7042 (R4)													
1. PERIOD OF REPORT FROM 4/1/87 TO 4/30/87		2. DATE PREPARED 4/30/87		3. ACTIVITY CODE 0		4. PAGE NO. 1											
5. TO ADDRESS (Including DP Code) Commander, 103d Arty Inf, Amargosa, etc.) Fort Carson, Kansas 66100-0000		6. FROM ADDRESS (Including DP Code) Commander 107th Inf (Arty Inf Amargosa, etc.) Fort Carson, Kansas 66100-0000		7. UNIT IDENTIFICATION CODE W82988													
8. AVAILABILITY STATUS (Itemized)																	
9. SEQ NO.	10. IDENTIFICATION			11. QTY	12. IDENTITY		13. EQUIPMENT AVAILABILITY				14. FOR FIELD USE ONLY						
	10a	10b(1)	10b(3)		12a	12b	13. NON-AVAILABILITY DATE				14a	14b	14c	14d	14e		
							13a	13b	13c	13d							
1				1	0												
2				8	2	60	50	4									
2a		M113A1		1	30	30											
2b		M113A2		1	30	26	4										
3				54	54	1620	1280	73	52	172	43					79	
3a	MS	M60A1R		10	300	115	18	2	150	15						38	
3b	MA	M60A1RP		25	750	635	35	40	17	23						75	
3c	CE	M60A1CS		19	570	530	20	10	5	5							
4	CM	M151A3		6	6	180	111	62	7							62	

DA FORM 2406, OCT 86

EDITION OF NOV 1981 BY GPO

Figure 1-15. Completed DA Form 2406.

(19) Reverse side of DA Form 2406. Refer to figure 1-16. Use the following descriptions to prepare the reverse side of DA Form 2406.


(a) Block 10, Nonavailable status (itemized). Prepare in accordance with local instructions. The following are examples of local instructions.

1 Block 10a, Seq. No. Enter the sequence number from block 9a on the front side of the DA Form 2406 for each item requiring explanation.

2 Block 10b(1), Noun. Enter the information in block 9b(1) for each item requiring explanation.

3 Block 10b(3), Model. Enter the information in block 9b(3) for each item requiring explanation.

4 Block 10c, Registration or serial no. Enter the item registration or serial number.

QTY	A. IDENTIFICATION		MODIFICATION OR SERIAL NO.	D. NON-AVAILABILITY REASON	E. DATE NON-AVAILABLE	F. DATE ADMITTED TO SHOP		G. SUPPORT SHOP JOB OR RQN NO.	H. PART NO.
	M/N	M/O				DATE	M/O		
20	TNK	M60A1R	ST10429	D	4043	4043	4044	40125	Transmission
20	TNK	M60A1R	ST11277	D	4044	4044	4045	40128	ENGINE
30	TNK	M60A1R	ST19962	B	4050	4050		W55 Com 4050 6013	ROTORRY PUMP 2810-00-379-4893
4	TRK	Y4T	BT 4211	B	4072	4072		W55 Com 4072 0001	RADIO FUSE 5810-00-637-1443
4	TRK	Y4T	375214	B	4118	4118		W55 Com 4118 0011	SPAC. 4820-00-611-111
REMARKS: During this period, M60A1R Tank Wms +ins+ was experienced due to the replacement of M/M W55/RORO wheel, NSN 7520-00-671-2856 on seven tanks. AMC MRE has been contacted to determine the cause of failure. Local supply of Drum Assy. is limited. External source of supply is AWZ.								TO: PERSON IN CHARGE  IN DATE 4/37	

REVERSE, DA FORM 2406, OCT 89

Figure 1-16. DA Form 2406 (back).

5 Block 10d, Non-availability reason. Enter the appropriate reason from the note at the bottom of the backside of the DA Form 2406 (A-Modification; B-Parts; C-Malfunction; D-Support Maintenance).

6 Block 10e, Date non-available. Enter the Julian date the item became non-available.

7 Blocks 10f(1) and (2), Date admitted to shop. Enter the date the item entered organization and/or maintenance support, as appropriate.

8 Block 10g, Support shop job or rqn number. Enter the work order number from the DA Form 2407 or the requisition number for the part required to make the item operational.

9 Block 10h, Remarks or part no. Enter explanatory information, such as the malfunction, or the replacement part required and its NSN.

(b) Block 11, Remarks. Use as needed to explain any entries on the form.

(c) Block 12a, Verified by (signature). The commander signs in the block with blue or black ink.

(d) Block 12b, Date. The commander puts in the Julian date he or she signs the report with blue or black ink.

i. **Distribution of DA Form 2406.** Distribute the copies of the MCSR as described below.

(1) Forward the original completed copy of the MCSR for items in Appendix B of AR 700-138 through local command channels to the data reduction center.

(2) Reserve and National Guard units keep one copy (machine or hard) of all DA Form 2406 reports on file for one year and then destroy them according to the instructions in AR 25-400-2.

(3) Active Army units keep one copy of each DA Form 2406 for six months and then destroy them.

(4) Send one copy of the MCSR to higher headquarters.

(5) Send one copy of the DA Form 2406 to the supporting supply and maintenance activities.

(6) Provide copies of the unit MCSR to the local AMC logistics assistance office.

(7) Submit a hard copy of DA Form 2406 directly to CNGB, ATTN: ARL-M, The Pentagon, Washington, DC 20310-2500. The report is due to the National Guard Bureau (NGB) not later than the first of the month after the cutoff date of the report.

(8) Ensure reports are moved rapidly through all levels of command.

(a) The data reduction center maintains a six-month history file of DD Form 1392 (Data Message Form) for any reports sent by electrical means.

(b) Commanders maintain a six-month history file of certified/registered mail receipts for those DA Forms 2406 sent by mail.

1-5. DA FORM 2405, MAINTENANCE REQUEST REGISTER

a. **Purpose.** The DA Form 2405 is a compilation of all work requests (DA Forms 2407) handled by a maintenance activity.

b. **Use.**

(1) The DA Form 2405 is a support maintenance management record.

(2) The maintenance request register is a ready source for answers to questions on maintenance requests. It also provides information for management reports, such as backlog status reports, etc.

(3) The DA 2405 is used at organizational level as a quality control sheet and a record of maintenance requests sent to support units.

c. **Preparation of the DA Form 2405.** Refer to figure 1-17.

(1) Column a, Job order number. Enter the work order number from DA Form 2407, for example, 5034-0001. You may also put the priority designator (PD) in column "a" or in the left-hand margin.

(2) Column b, Quantity and nomenclature. Enter the total number of items from block 16a of DA Form 2407 and the name of the items (do not enter the number if only one item is listed). Enter the information from block 3 of DA Form 2407.

(3) Column c, Work requested by. Enter the name of the unit or activity requesting the repair. Take this information from block 1a of DA Form 2407, for example, X-ray 00 Evacuation Hospital.

(4) Column d, Serial/registration number. Enter the serial number of the item. Take this information from block 2 or block 16 of DA Form 2407, for example, 14905.

(a) Enter a locally assigned number, such as the bumper number, if no serial or registration number is listed.

(b) Use separate lines when more than one serial or registration number is on the DA Form 2407.

(5) Column e, Brief description of work. Briefly describe the work to be accomplished, for example, exposure light inop.

(6) Column f, Date job order received. Enter the Julian date the work request was received, for example, 5034.

d. Distribution and File Copies of DA Form 2405.

(1) Keep DA Form 2405 for six months after the date of the last entry in column h and then destroy the form.

(2) If you close out the DA Form 2405 on a calendar or fiscal year basis, you may move open document numbers to a new register.

(3) Keep DA Forms 2405 used for making budgets until the budgeting process is completed. Then, you may destroy the form.

1-6. DA FORM 2409, EQUIPMENT MAINTENANCE LOG

a. **Purpose.** DA Form 2409, Equipment Maintenance Log, gives the complete maintenance history of a particular item of equipment. See figure 1-18.

b. **Use.** The DA Form 2409, Equipment Maintenance Log, is used for the following purposes.

- (1) As an equipment log.
- (2) As a record of safety recall information.
- (3) When local or command procedures require tracking of maintenance costs.

(d) Block 4, Location. Enter the actual location of the piece of equipment (pencil entry).

(e) Block 5, Frequency of maintenance. Enter the interval of maintenance (weekly, monthly, semiannually, annually).

(f) Block 6, Nomenclature. Enter the noun abbreviation of the item.

(g) Block 7, Expected useful life. If you know it, enter the expected life of the equipment in this block. If you do not know it, enter "UNK."

(h) Block 8, Expected date of retirement. Enter the calendar date the item is expected to be taken out of service. You can do this by comparing the date in service (block 11) and expected life (block 7). If you don't have this information, enter "UNK."

(i) Block 9, Technical references. Enter the manufacturer's literature or Army technical publications (TMs, TBs, and so forth) applying to the item.

(j) Block 10, Manufacturer. Enter the name of the manufacturer of the item. If you don't know it and it isn't on the item, enter "UNK."

(k) Block 11, Date put in service. Enter the calendar date the item was accepted into Army inventory. If you don't have that information, estimate the date and enter, for example, "EST June, 1995."

(l) Block 12, Unit cost. Enter the cost of the item at the time the maintenance log was written. If you don't have the actual cost, refer to the AMDF.

(2) Complete Section B--Maintenance Inspection Record.

(a) Column a, Date. Enter the calendar day, month, and year the scheduled maintenance inspection or service was done.

(b) Column b, Initial. Ensure the person doing the inspection, test, or service completes this space.

(c) Column c, Remarks. Enter the results of the inspection, test, or service. Normally the word "service" is sufficient. When support units work on the equipment, put the job-order number in this column.

(3) Complete Section C--Repair and Cost Record. Refer to figure 1-19 to see the reverse side of DA Form 2409.

2 Column b, Date of MWO. Enter the calendar date the MWO was issued.

3 Column c, Priority. Enter one of the following codes. The MWO will tell you which priority applies to the MWO.

a U = urgent.

b L = limited urgent.

c N = normal.

4 Column d, ECH. Enter the category of maintenance that will do the work (O, F, H, or D)

5 Column e, MWO title or kit number. Enter the MWO kit number.

6 Column f, date MWO applied. Enter, in pencil, the date the MWO is applied.

(b) Part B, Modifications completed. The unit applying the MWO normally completes this part.

1 Column g, Manhours. The manhours required to complete the MWO.

2 Column h, Organization applying the MWO. The name of the unit completing the MWO.

3 Column i, Signature. Ensure the individual completing the MWO signs here.

1-7. DA FORM 2402, EXCHANGE TAG

a. **Purpose.** This form serves as an identification tag. See figure 1-20.

b. **Use.** Use the DA Form 2402 for the following purposes.

(1) To identify items held for warranty claims.

(2) To identify items held as Standard Form (SF) 368 (Product Quality Deficiency Report) exhibits.

(3) To identify other items as needed.

1. SUPPORT AGENCY (ISSUED) WACTAO		2. DATE 88292	
3. ORGANIZATION (ISSUED) WACCBO		4. <input type="checkbox"/> WARRANTY <input checked="" type="checkbox"/> AIR EXHIBIT <input type="checkbox"/> EXCHANGE	
5. NSN 2805-01-03A, B500		6. NOUN NOMENCLATURE ENGINE, GASOLINE	
7. PD 02		8. AUTHENTICATION <i>[Signature]</i>	
9. END ITEM NOUN NOMENCLATURE S/EG CNT MNT		10. MODEL SecM 1975	
11. SERIAL NO. 54782		12. DEFICIENCY OR SYMPTOM ENGINE SEIZED	
13. DATE ACCEPTED 88292		14. SIGNATURE <i>[Signature]</i>	15. PRICE YES
16. JON A 803862		17. INITIALS <i>[Initials]</i>	
18. DATE REPAIRED 270088		19. INITIALS <i>[Initials]</i>	

Figure 1-20. Completed DA Form 2402, Equipment Exchange Tag.

(4) As a receipt for test, measurement, and diagnostic equipment (TMDE) items needing calibration.

c. General Instructions.

(1) The DA Form 2402 has four copies.

(a) Copy 1 is normally used as a receipt for the unit.

(b) Copy 2 is a receipt for the battalion level except for warranty claim items. When the form is used to identify or show action completed on a warranty item or claim exhibit, send copy 2 to the supporting warranty office. The warranty control office will use this form to close out or complete any needed warranty actions or claims.

(c) Copy 3 serves as a receipt for support units.

(d) Copy 4 stays with the item until it is repaired and issued. After the repair is done, the tag identifies the item as fixed. This form accompanies each item sent to supporting maintenance shops (DS, GS, depot, or contractor) for warranty repairs.

(e) Depending on the item, repair needed, and level of work, not all copies may be needed.

(2) Use a separate DA Form 2402 for each item.

d. Preparation of DA Form 2402.

- (1) Block 1, Support agency (DODAAC). Line through "DODAAC" and enter the acronym "UIC." Enter the six-digit UIC of the support activity which will receive, hold, or work on the item for you.
- (2) Block 2, Date. Enter the Julian date.
- (3) Block 3, Organization (DODAAC). Line through "DODAAC" and enter the acronym "UIC." Enter the six-digit UIC of the owning unit or organization.
- (4) Block 4, Warranty/EIR exhibit/exchange. Mark the block to show the use of the form, such as for equipment improvement recommendation (EIR). If the form is being used for other than the options indicated in block 4, for example, receipt for TMDE, print the use of the form above the exchange block.
- (5) Block 5, NSN. Enter the NSN of the item.
- (6) Block 6, Noun nomenclature. Print the noun abbreviation of the item to be exchanged.
- (7) Block 7, PD. Enter the PD applying to the action. The unit or organization listed in block 3 normally assigns the PD. When the form supports a customer maintenance request, use the PD of the maintenance request.
- (8) Block 8, PD authentication. The commander or the designated representative signs when a PD of 01 through 10 is in block 7. Enter the maintenance work-order number when a PD of 01 through 10 is taken from a maintenance request.
- (9) Block 9, End item nomenclature. Enter the noun abbreviation of the end item for the part or component in block 6 in this block.
- (10) Block 10, Model. Enter the model number of the end item.
- (11) Block 11, Serial no. Enter the serial number of the end item here.
- (12) Block 12, Deficiency or symptom. Briefly describe the problem in block 12.
- (13) Block 13, Date accepted. When the form is used as a receipt, the support unit will enter the Julian date.
- (14) Block 14, Signature. The person who receives the item signs in this block.

(15) Block 15, NMCS. Print the word "Yes" if the item is in NMC condition.

(16) Block 16, JON. The facility repairing the item enters the maintenance job order number (JON).

(17) Block 17, Initials. The person receiving the item for repair initials in this block.

(18) Block 18, Date repaired. The person doing the work enters the Julian date upon completion of the repair.

(19) Block 19, Initials. The person doing the work initials this block.

e. Disposition.

(1) Destroy the DA Form 2402 when the part or component it applies to is installed or otherwise disposed of.

(2) After the action is completed, destroy the copies used as a receipt.

(3) When the form identifies a warranty claim of an SF 368 exhibit, the DA Form 2402 stays on the exhibit until the item is no longer needed.

Continue with Exercises

EXERCISES, LESSON 1

INSTRUCTIONS: Answer the following exercises by circling the lettered response that best answers the question.

After you have answered all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the lesson material referenced after the solution.

1. You are determining the mission capability of a newly acquired unique item of equipment. The only technical documentation available is the manufacturer's installation instructions. Who judges if it can perform its mission?
 - a. The officer in charge (OIC) at organization support makes the decision.
 - b. The OIC at unit support makes the decision.
 - c. Headquarters Department of Army (HQDA) makes the decision.
 - d. The unit commander makes the decision.

2. A dental operating unit is at support maintenance because of poor performance due to multiple leaks in the unit's hoses. However, replacement hoses have been backordered to the support facility. What is the unit's status?
 - a. FMC.
 - b. NMC.
 - c. NMCS.
 - d. NMCM.

3. Refer to Figure 1 below. What is the unit's status for the month of August?

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REGISTRATION NUMBER					ADMINISTRATION NO.				NOMENCLATURE								MODEL				ASSIGNED TO										
JAN																															
FEB																															
MAR																															
APR																															
MAY																															
JUN																															
JUL																															
AUG											○	○	○	⊗	⊗	⊗	⊗														
SEP																															
OCT																															

Figure 1 for exercise 3.

- a. Seven days NMC at support.
 - b. Seven days NMCS at support.
 - c. Three days NMCM at support and four days organizational NMCS.
 - d. Three days organizational NMCM and four days organizational NMCS.
4. Which of the following categories of data are transferred to a new DD Form 314?
- a. Nomenclature.
 - b. UIC.
 - c. PD.
 - d. MCSR item.
5. Which of the following is a function of the DA Form 2407?
- a. Scheduling unit PMCS.
 - b. Reporting warranty claims actions.
 - c. Documenting not-mission-capable time.
 - d. A support maintenance management record.

6. You are completing a DA Form 2407. Block 9 calls for the entry of an ERC. Where do you find this code?
 - a. AR 700-183, Appendix B-1.
 - b. AR 220-1.
 - c. DA PAM 738-750.
 - d. The TOE.

7. Refer to Figure 2 on the following page. Support maintenance provides NMCM and NMCS time and dates on DA Form 2407 for reportable equipment undergoing modification with an MWO. Where on the form is this information found?
 - a. Block 16a.
 - b. Block 17c.
 - c. Column 20h.
 - d. Block 20m.

8. Which document provides DA-level managers with readiness data on certain equipment, systems, and subsystems?
 - a. DA Form 2406.
 - b. DA Form 2405.
 - c. DA Form 2409.
 - d. DA Form 2407.

9. Which of the following is a reportable equipment closing date for a USAR unit?
 - a. 15 JAN.
 - b. 15 JUL.
 - c. 15 MAR.
 - d. 15 NOV.

10. You are preparing a DA Form 2409, Equipment Maintenance Log for an item of equipment. Block 12 of the form requires you to fill in the cost of the item but you do not have this information. What do you do?
 - a. Enter "UNK."
 - b. Enter a contemporary estimated cost.
 - c. Refer to the AMDF.
 - d. Leave the block blank.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 1

1. d (para 1-1a(1))
2. c (paras 1-1b(2), 1-1c)
3. d (para 1-2b(12))
4. a (para 1-2d(1)(c))
5. b (para 1-3b(3))
6. d (para 1-3c(1)(t))
7. a (para 1-3c(3)(b)2, figure 1-6)
8. a (para 1-4a(1))
9. c (para 1-4c(2))
10. c (para 1-6c(1)(l))

End of Lesson 1

LESSON ASSIGNMENT

LESSON 2

Technical Reports.

TEXT ASSIGNMENT

Paragraphs 2-1 through 2-4.

TASKS TAUGHT

Prepare DA Form 5623, Defibrillator Energy Output Certification.

Prepare and Maintain DA Form 5621-R, Leakage Current Measurements, General.

Prepare and Maintain DA Form 5624-R, DC Defibrillator Inspection Record.

LESSON OBJECTIVES

When you have completed this lesson, you should be able to:

- 2-1. Identify procedures used to measure and record electrical leakage from items of medical equipment.
- 2-2. Identify procedures used to prepare and maintain certain forms that pertain to the certification and electrical safety of items of medical equipment.

SUGGESTION

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.

LESSON 2

TECHNICAL REPORTS

2-1. GENERAL

This lesson contains instructions on the use of forms necessary for verification and certification of medical equipment. It also includes instructions for completing forms covering electrical-leakage measurements and inspection records.

2-2. DA FORM 5621-R, LEAKAGE CURRENT MEASUREMENTS, GENERAL

A completed DA Form 5621-R is shown in figure 2-1.

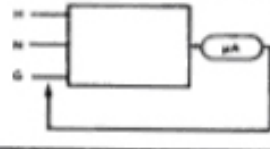
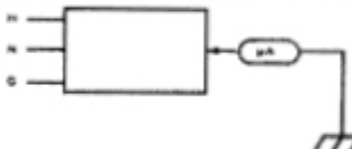
LEAKAGE CURRENT MEASUREMENTS, GENERAL				AREA/LOCATION <i>DR #2</i>		DATE <i>6 JAN 94</i>																	
				HOSPITAL <i>OO EVAC HOSPITAL</i>		INSPECTED BY <i>PFC JONES</i>																	
TYPE		RESULTS		INDEX NUMBER	NOMENCLATURE	MODEL NUMBER	TEST I RESISTANCE (MΩ)	TEST II - CURRENT (μA)															
								GROUNDED NORMAL		GROUND LIFTED - POLARITY													
A	B	OK	NO						NORMAL	REVERSED													
✓		X			SUCTION APPARATUS	9700	90 mΩ	ON	7 μA	37 μA	40 μA												
								OFF	8 μA	20 μA	20 μA												
								ON															
								OFF															
								ON															
								OFF															
								ON															
								OFF															
								ON															
								OFF															
								ON															
								OFF															
								ON															
								OFF															
								ON															
								OFF															
TEST I				MAXIMUM LIMITS				TEST II															
				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> </tr> <tr> <td>I Resistance</td> <td style="text-align: center;">150 mΩ</td> <td style="text-align: center;">150 mΩ</td> </tr> <tr> <td>II Current (Grounded)</td> <td style="text-align: center;">10 μA</td> <td style="text-align: center;">50 μA</td> </tr> <tr> <td>Current (Ground Lifted)</td> <td style="text-align: center;">100 μA</td> <td style="text-align: center;">500 μA</td> </tr> </table>					A	B	I Resistance	150 mΩ	150 mΩ	II Current (Grounded)	10 μA	50 μA	Current (Ground Lifted)	100 μA	500 μA				
	A	B																					
I Resistance	150 mΩ	150 mΩ																					
II Current (Grounded)	10 μA	50 μA																					
Current (Ground Lifted)	100 μA	500 μA																					
DA FORM 5621-R, JAN 87				REPLACES DD FORM 1346, 1 JUL 75, WHICH WILL BE USED.				(7B 36-750-2)															

Figure 2-1. Completed DA Form 5621-R.

a. **Safety Precautions.** When you perform leakage-current measurements, observe the following safety precautions.

- (1) Do not touch any internal component you cannot see.
- (2) Remove watches and jewelry. Cover the electronic unit if you take a break while working. Store tools safely; do not set them down inside the unit.
- (3) Cover the power-supply components with a nonconductive shield as a precaution during voltage tests. Avoid touching anything but the contact points being tested.
- (4) Never work with electricity in wet conditions and do not use wet electrical cords, tools, or appliances.
- (5) Do not touch metal or any other ground when working with electricity.
- (6) Keep protective equipment handy: safety goggles for overhead work, heavy rubber work gloves, rubber-soled shoes for working outdoors or in damp conditions.
- (7) Light your service panel and work area well. Keep a flashlight near the service panel.
- (8) Do not splice electrical cords or remove the grounding prong from a three-prong plug.

b. **Required Equipment.** You will need a blank DA Form 5621-R, a pen or pencil, and a multimeter to complete this task.

c. **Purpose.** The DA Form 5621-R provides a record of electrical current-leakage measurements for general medical equipment.

d. **Use.** Use the DA Form 5621-R to record current-leakage measurements taken on medical equipment when the equipment fails the electrical safety test.

e. **Preparation.** Refer to figure 2-1. Make legible entries with a blue, blue-black, or black ballpoint pen or indelible pencil. Do not use felt-tip pens, pencils, or grease pencils.

(1) Area/locations. Enter the area, section, department, and building and room number where the equipment is located, for example, OR number two.

(2) Date. Enter the date the current-leakage measurements were made, for example, 6 JAN 94.

- (3) Hospital. Enter the unit or activity, for example, 00 evacuation (EVAC) Hospital.
- (4) Inspected by. Enter your name and code (assuming you are making the measurements).
- (5) Type. Enter if the equipment is in the (A) critical-care area or (B) general-care area.
- (6) Results. Annotate whether the equipment measurements are within the maximum limits identified.
- (7) Index number. Leave this block blank (local option).
- (8) Nomenclature; model number. List the equipment nomenclature and model number, for example,, Suction Apparatus, 9700.
- (9) Test I-resistance (mΩ). Measure and record the ground resistance in megohms (mΩ) from the grounding pin of the plug to the equipment's grounding test point or to its chassis, for example, 90mΩ.
- (10) Test II-current (μA), grounded normal. Measure and record the leakage current in microamperes (μA) with the equipment in the "on" and "off" modes.
- (11) Ground lifted-polarity; normal, reversed. Measure and record the leakage current on the equipment in the ground-lifted; normal and reversed-polarity modes.

f. **Disposition Procedures.**

- (1) Attach the completed form to the number-five copy of the completed DA Form 2407.
- (2) Dispose of according to the normal disposition procedures used for the DA Form 2407.

2-3. DA LABEL 175, DEFIBRILLATOR ENERGY OUTPUT CERTIFICATION

A completed DA Form Label 175 is shown in figure 2-2.

- a. **Purpose.** The defibrillator energy-output-certification label provides a record for the certification of energy output.
- b. **Use.** DA Label 175 is used by medical units for documenting energy output on all defibrillators.

DEFIBRILLATOR ENERGY OUTPUT CERTIFICATION	
INDICATED ENERGY OR CONTROL SETTING (WATT-SECONDS)	ENERGY DELIVERED TO A 50 OHM LOAD (WATT-SECONDS)
60	63
100	105
150	158
200	210
250	260
300	310
360	375
DATES	
CERTIFICATION 10 SEPT 93	EXPIRATION SEPT 94
INSPECTOR SSG J. Checkler	

Figure 2-2. Completed DA Label 175.

c. **Required Equipment.** In addition to a blank form and ink pen, you will need a defibrillator and a defibrillator tester to complete this task.

d. **Preparation.**

(1) Preparer. DA Label 175 is normally prepared by the person performing the output certification.

(2) Indicated energy or control setting. Enter the energy level selected on the defibrillator control setting.

(3) Energy delivered to a 50-ohm load. Measure and record the delivered-energy levels in joules (watt-seconds) adjacent to the corresponding control setting in paragraph (2) above.

(4) Other output levels. Repeat steps (2) and (3) for all output levels indicated on the defibrillator control.

(5) Dates. Enter the date of certification and the expiration date.

(6) Inspector. Legibly record the name of the person performing the output certification.

e. **Disposition Procedures.** Affix the DA Label 175 as close as possible to the control panel on the defibrillator. When the label cannot be affixed to the equipment because the item is too small or because its intended use prohibits the label, one of the following methods will suffice.

(1) Maintain a log book in the immediate vicinity which contains the applicable label for the medical item.

(2) Affix the label to a tag which, in turn, is fastened to the medical equipment.

(3) Fasten the label to the outside lid of the case. Previous labels must be voided, removed and destroyed, or you can place the new label over the old label.

2-4. DA FORM 5624-R, DC DEFIBRILLATOR INSPECTION RECORD

The front and back of a blank DA Form 5624-R are shown in figures 2-3 and 2-4.

a. **Purpose.** The DA Form 5624-R provides a record for the certification of energy output and performance inspection for defibrillators.

b. **Use.** Use the DA Form 5624-R for documenting energy output and defibrillator performance inspections.

c. **Required Equipment.** In addition to the blank form and a pen, you will need a medical safety analyzer to complete this task.

d. **Preparation.** When performing tests and inspections, follow instructions per the equipment's TM or manufacturer's literature.

DC DEFIBRILLATOR INSPECTION RECORD For use of this form, see TB 38-750-2; the proponent agency is OTSG				ACTION		
				NOT NEEDED	NEEDED	TAKEN
LOCATION	SERIAL NO.	INDEX NO.	DATE OF INSPECTION			
MANUFACTURER	MODEL	WORK ORDER NO.	NEXT INSPECTION DUE			
I. VISUAL INSPECTION						
	OK	ACTION NEEDED	ACTION TAKEN (Date and Initials)			
1. ATTACHMENT PLUG						
2. LINE CORD AND STRAIN RELIEFS						
3. PADDLES, CABLES, AND CONNECTORS						
4. FUSE						
5. CONDITION OF CONTROLS, INDICATORS AND METER						
6. GENERAL CONDITION OF INSTRUMENT						
7. ELECTRODE PASTE OR SALINE PADS						
8. POSITION OF CONTROLS						
II. OPERATION						
9. LEAKAGE CURRENT TO CHASSIS (Circle Unacceptable Values)	OFF	ON				
A. PROPERLY GROUNDED	μA	μA				
B. UNGROUNDED, CORRECT POLARITY						
C. UNGROUNDED, REVERSED POLARITY						
10. LEAKAGE CURRENT TO PADDLES (Circle Unacceptable Values)						
A. PROPERLY GROUNDED	μA	μA				
B. UNGROUNDED, CORRECT POLARITY						
C. UNGROUNDED, REVERSED POLARITY						
11. OUTPUT ENERGY (Watt-Seconds)						
CONTROL SETTING	ENERGY		PREVIOUS VALUE	CHANGE		
	INDICATED	DELIVERED				

DA FORM 5624-R, AUG 87

EDITION OF JAN 87 IS OBSOLETE.

USAPA V1.00

Figure 2-3. Blank DA Form 5624-R (front).

		OK	ACTION NEEDED	ACTION TAKEN <i>(Date and Initials)</i>	
12. CHARGING TIME TO MAXIMUM ENERGY SETTING					
SEC TO	W-SEC				PREVIOUS VALUE
					SEC
13. INTERNAL DISCHARGE OF STORED ENERGY					
14. ENERGY DELIVERED AFTER 1 MINUTE					
MAXIMUM SETTING					W-SEC
15. OUTPUT OF TENTH REPEATED DISCHARGE					
MAXIMUM SETTING					W-SEC
16. SYNCHRONIZER OPERATION					
17. OTHER FEATURES <i>(Specify)</i>					
CERTIFICATION					
PROVISIONAL AUTHORIZATION ONLY		DA LABEL 175 REPLACED			
COMMENTS AND DESCRIPTION OF DEFICIENCIES <i>(Refer to Item Numbers)</i>					
INSPECTED BY <i>(Type or Print Name and Grade)</i>		SIGNATURE			

REVERSE OF DA FORM 5624-R, AUG 87

USAPA V1.00

Figure 2-4. Blank DA Form 5624-R (back).

(1) Heading. Refer to figure 2-5. You complete this section by placing an "X" or a check mark in the appropriate block when the inspection and performance testing have been completed. Also enter the location, serial number, index number, material management control number (MMCN), date of inspection, manufacturer, model, work-order number, and the next inspection due date.

DC DEFIBRILLATOR INSPECTION RECORD		ACTION	
		<input checked="" type="checkbox"/> NOT NEEDED	<input type="checkbox"/> NEEDED
LOCATION DQ EUCAL Hosp	SERIAL NO. 2220A02296	INDEX NO. M3579	DATE OF INSPECTION 10 Sep 84
MANUFACTURER HEWLETT PACKARD	MODEL 78660A	WORK ORDER NO. 42445026	NEXT INSPECTION DUE MAR 85
I.		SECTION	

Figure 2-5. Heading.

(2) Section I, visual inspection. Refer to figure 2-6. Visually inspect the items listed in blocks 1 through 8. If no action is required, place an "X" or a check mark "✓" in the "ok" column. If action is required, annotate action needed in the column provided (for example, replace, repair, and so forth). When the required action has been taken, enter the date and your initials in the "action taken" column.

HEWLETT PACKARD 78660A		42445026		MAR 85	
I. VISUAL INSPECTION					
	OK	ACTION NEEDED	ACTION TAKEN (Date and Initials)		
1. ATTACHMENT PLUG	✓				
2. LINE CORD AND STRAIN RELIEFS	✓				
3. PADDLES, CABLES, AND CONNECTORS	✓				
4. FUSE	✓				
5. CONDITION OF CONTROLS, INDICATORS AND METER	✓				
6. GENERAL CONDITION OF INSTRUMENT	✓				
7. ELECTRODE PASTE OR SALINE PADS	✓				
8. POSITION OF CONTROLS	✓				
II. SECTION					

Figure 2-6. DA Form 5624-R, section I.

NOTE: Action is required if the unit fails a test. Equipment must operate according to the standards set out in TM 8-605. If the equipment does not operate according to those standards, then the equipment must be repaired.

(3) Section II, operation (blocks 9A through 9C). Refer to figure 2-7.

III. OPERATION					
9. LEAKAGE CURRENT TO CHASSIS (Circle Unacceptable Values)	OFF	ON			
A. PROPERLY GROUNDED	.2 μ A	.3 μ A	✓		
B. UNGROUNDED, CORRECT POLARITY	.2	.3	✓		
C. UNGROUNDED, REVERSED POLARITY	.4	.2	✓		
10. LEAKAGE CURRENT TO PADDLES (Circle Unacceptable Values)			✓		
A. PROPERLY GROUNDED	.1 μ A	.1 μ A	✓		
B. UNGROUNDED, CORRECT POLARITY	.1	.1	✓		
C. UNGROUNDED, REVERSED POLARITY	1.2	1.2	✓		
11. OUTPUT ENERGY (Watt-Seconds)					

Figure 2-7. DA Form 5624-R, blocks 9 and 10.

(a) Measure and record the leakage current to the chassis in the equipment's ON and OFF positions.

1 Set the mode switch on the safety analyzer to CASE LEAKAGE.

2 Connect a Kelvin cable to the red rear panel jacks. The current is disabled in this mode so you can leave the cable connected for both resistance and leakage tests.

3 Connect the alligator clip of the Kelvin cable to a grounded point on the case of the unit under test (UUT). If you leave the clip in place after making the ground resistance measurement, you can be sure you have the clip on a grounded point of the case. Make the following case-leakage measurements for the various line conditions.

a Unit Under Test power on and off.

b Normal and reverse polarity.

c Closed and open ground.

(b) Circle any unacceptable values.

(c) If no action is required, place an "X" or "✓" in the "ok" column.

(d) If action is required, annotate the action needed in the "action-needed" column.

(e) When the action has been taken, enter the date and your initials in the "action-taken" column.

(4) Blocks 10A through 10C, leakage current to paddles. Refer to figure 2-7.

(a) Measure and record the leakage current to the paddles in the equipment's ON and OFF positions.

(b) Circle the unacceptable values.

(c) If no action is required, place an "X" or "√" in the "ok" column.

(d) If action is required, annotate the action needed in the "action-needed" column.

(e) When the action has been taken, enter the date and your initials in the "action-taken" column.

(5) Block 11, output energy (Watt-seconds). Refer to figure 2-8.

CONTROL SETTING		ENERGY		PREVIOUS VALUE	CHANGE	OK	ACTION NEEDED	ACTION TAKEN
INDICATED	DELIVERED							
60	63	60	+3	✓				
100	105	99	+6	✓				
150	158	150	+8	✓				
200	210	200	+10	✓				
250	260	248	+12	✓				
300	310	300	+10	✓				
360	375	352	+17	✓				

DA FORM 5624-R, JAN 87

REPLACES DD FORM 1943, 1 JUN 74, WHICH WILL BE USED.

(TB 38-750-2)

Figure 2-8. DA Form 5624-R, block 11.

- (a) List the defibrillation energy in the "control-setting" column.
 - (b) Record the energy output indicated on the defibrillator and record "energy indicated" and "energy delivered" measured at each control setting in the columns.
 - (c) Record the "previous value" measured from a prior performance test and record the change in output.
 - (d) If no action is required, place an "X" or "√" in the "ok" column.
 - (e) If action is required, annotate the action needed in the "action-needed" column.
 - (f) When the action has been taken, enter the date and your initials in the "action-taken" column.
- (6) Block 12, charging time to maximum energy setting. Refer to figure 2-9.

	OK	ACTION NEEDED	ACTION TAKEN (Date and Initials)
12. CHARGING TIME TO MAXIMUM ENERGY SETTING			
6 SEC TO 360 W-SEC	✓		
PREVIOUS VALUE			
13. INTERNAL DISCHARGE OF STORED ENERGY	✓		
14. ENERGY DELIVERED AFTER FIFTEEN SECONDS			
MAXIMUM SETTING 360	✓		
375 W-SEC			
15. OUTPUT OF TENTH REPEATED DISCHARGE			
MAXIMUM SETTING 360	✓		
375 W-SEC			
16. SYNCHRONIZER OPERATION	✓		
17. OTHER FEATURES (Specify)			

Figure 2-9. DA Form 5624-R, blocks 12 through 17.

- (a) Measure and record the charging time to the maximum energy setting.
- (b) Record the previous delivered value from the prior performance inspection.

- (c) If no action is required, place an "X" or "√" in the "ok" column.
 - (d) If action is required, annotate the action needed in the "action-needed" column.
 - (e) When the action has been taken, enter the date and your initials in the "action-taken" column.
- (7) Block 13, internal discharge of stored energy setting. Refer to figure 2-9.
- (a) Charge the defibrillator to its maximum energy level.
 - (b) Test and verify the discharge of stored energy through the internal-discharge circuitry.
 - (c) If no action is required, place an "X" or "√" in the "ok" column.
 - (d) If action is required, annotate the action needed in the "action-needed" column.
 - (e) When the action has been taken, enter the date and your initials in the "action-taken" column.
- (8) Block 14, energy delivered after one minute. Refer to figure 2-9.
- (a) Set the defibrillator control setting to the maximum setting and charge.
 - (b) Measure and record the maximum energy delivered after a one minute storage.
 - (c) If no action is required, place an "X" or "√" in the "ok" column.
 - (d) If action is required, annotate the action needed in the "action-needed" column.
 - (e) When the action has been taken, enter the date and your initials in the "action-taken" column.
- (9) Block 15, output of tenth repeated discharge. Refer to figure 2-9.
- (a) Charge and discharge the defibrillator at maximum setting 10 times.
 - (b) Measure and record the energy output of the 10th repeated discharge.

(c) If no action is required, place an "X" or "√" in the "ok" column.

(d) If action is required, annotate the action needed in the "action-needed" column.

(e) When the action has been taken, enter the date and your initials in the "action-taken" column.

(10) Block 16, synchronizer operation. Refer to figure 2-9.

(a) Test and verify synchronizer operation.

(b) If no action is required, place an "X" or "√" in the "ok" column.

(c) If action is required, annotate the action needed in the "action-needed" column.

(d) When the action has been taken, enter the date and your initials in the "action-taken" column.

(11) Block 17, other features (specify). Refer to figure 2-9.

(a) Specify, inspect, and verify the operation test of any optional features not listed on the DA Form 5624-R.

(b) If no action is required, place an "X" or "√" in the "ok" column.

(c) If action is required, annotate the action needed in the "action-needed" column.

(d) When the action has been taken, enter the date and your initials in the "action-taken" column.

(12) Certification. Refer to figure 2-2.

(a) Certify after energy output levels have been verified and inspection indicates that no action is needed.

(b) Complete the DA Form 5623, Defibrillator Energy Output Certification, and attach it to the defibrillator (paragraph 2-3). Enter an "X" in the "DA Form 5623 replaced" block. Some older forms may refer to DD Forms 1942 and 1944 in this block.

NOTE: You will use the information from DA Form 5624-R to complete the DA Form 5623.

(13) Comments and description of deficiencies. Annotate any additional comments or continuations of deficiencies previously listed (refer to the item numbers).

(14) Inspected by. Type or legibly print the name of the technician conducting the inspection.

(15) Signature. The technician who performed the inspection signs here.

e. Disposition Procedures.

(1) If you found no deficiencies, maintain the DA Form 5624-R in a file pending the next certification of performance inspection.

NOTE: DA Form 5624-R is locally reproduced on 8 1/2- by 11-inch paper.

(2) If you do encounter deficiencies, attach the DA Form 5624-R to the number-five copy of the DA Form 2407 requesting corrective action.

(3) Dispose of the attached DA Form 5624-R according to the disposition instructions of the number-five copy of the DA Form 2407.

Continue with Exercises

EXERCISES, LESSON 2

INSTRUCTIONS: Answer the following questions by circling the lettered response that best answers the question.

After you have answered all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the lesson material referenced after the solution.

1. You are reviewing a DA Form 5621-R on an item of medical equipment. Under the column headed "Type," column "B" is checked. What does this mean?
 - a. The equipment is located in the critical-care area.
 - b. The equipment is scheduled for replacement.
 - c. The equipment is used for noninvasive monitoring.
 - d. The equipment is located in the general-care area.

2. You have completed your review of the DA Form 5621-R. Which of the following is a disposition procedure you use for the DA Form 5621-R?
 - a. File it in the unit suspense file.
 - b. Attach it to copy 5 of a DA Form 2407.
 - c. Forward it to USAMMA.
 - d. Forward it to unit maintenance.

3. What is measured and recorded by the DA Form 5623, Defibrillator Energy Output Certification?
 - a. Current leakage.
 - b. Ground current.
 - c. Energy delivered to a 50-ohm load.
 - d. Resistance in μa .

4. Which form provides a record for the certification of energy output and performance inspection for defibrillators?
 - a. DA Form 5624-R.
 - b. DA Form 5623.
 - c. DA Form 2407.
 - d. DA Form 5621-R.

5. What is the authority for performance standards for defibrillators?
 - a. TB 38-750-2.
 - b. TM 8-605.
 - c. AR 700-2.
 - d. AR 700-138.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 2

1. d (para 2-2e(5))
2. b (para 2-2f(1))
3. c (para 2-3d(3))
4. a (para 2-4a)
5. b (para 2-4d(2), NOTE)

End of Lesson 2

LESSON ASSIGNMENT

LESSON 3

Supply Procedures.

TEXT ASSIGNMENT

Paragraphs 3-1 through 3-7.

TASKS TAUGHT

Add a Medical Part to the Demand-Supported Prescribed Load List (PLL).

Update the Prescribed Load List.

Inventory Repair Parts/Common Tools/Special Tools.

LESSON OBJECTIVES

When you have completed this lesson, you should be able to:

- 3-1. Identify how to determine initial stockage levels of medical repair parts.
- 3-2. Identify procedures for preparing a change to the PLL.
- 3-3. Identify procedures to update the PLL by preparing a DA Form 2063-R.
- 3-4. Identify procedures used to inventory equipment on-hand and reconcile overages and shortages with the property book (PB).

SUGGESTION

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.

LESSON 3

SUPPLY PROCEDURES

3-1. PROCEDURES FOR ADDING A MEDICAL REPAIR PART TO THE DEMAND-SUPPORTED PRESCRIBED LOAD LIST

Since much of this task involves knowledge gained in the prerequisite subcourse MD0357, those parts of the task will be mentioned to indicate the sequence of performance but not covered in any detail. Assume you are a repair parts clerk in a repair facility and have received three demands for a nonstocked (fringe) item within six months. This is the requirement for adding items to the PLL in the active Army. For USAR and ARNG units, the requirement is three demands within 360 days.

a. Post the new repair part entries in the "demands" section of a DA Form 3318, Record of Demands--Title Insert.

b. Determine the initial stockage level for a demand-supported item.

(1) Stock-level tables are used to determine the initial stockage level for a demand-supported item. These tables are based on the demand rate and the average customer wait time (ACWT). There are five stock-level tables. There is a 10-day, 15-day, 20-day, 25-day, and 30-day ACWT Table.

(2) Determine the initial stockage level for a demand supported item as follows.

(a) Add the quantities of the three demands which qualified the item for stockage.

(b) Find this quantity in the "Total Quantity Demanded" row of the proper stock level table. Use the ACWT Table directed by your Major Army Command (MACOM). Army National Guard units use the 30-day ACWT Table. If your MACOM does not direct otherwise, use the 15-day ACWT Table (DA PAM 710-2-1) that is partially shown in figure 3-1.

(c) Find the column across the top of the table showing the number of days it took for three demands for the item to occur.

(d) The initial stockage quantity is found where the row (horizontal) and column (vertical) cross.

c. Prepare a request on DA Form 2765-1 for a sufficient quantity to fill the current requests plus the initial stockage level as determined above.

**Table 3-3
PLL stockage levels (based on 15-day ACWT) (1st table)**

Total Quantity Demanded	Number of Days in Which 3 Demands Occurred												
	ACTIVE ARMY	1-22	23-37	38-52	53-67	68-82	83-97	98-112	113-127	128-142	143-157	158-172	173-188
ARNG/USAR	1-44	45-74	75-104	105-134	135-164	165-194	195-224	225-254	255-284	285-314	315-344	345-380	
3	4	1	1	1	1	1	1	1	1	1	1	1	
4	5	2	1	1	1	1	1	1	1	1	1	1	
5	7	2	2	1	1	1	1	1	1	1	1	1	
6	8	3	2	1	1	1	1	1	1	1	1	1	
7	10	3	2	2	1	1	1	1	1	1	1	1	
8	11	4	3	2	2	1	1	1	1	1	1	1	
9	12	4	3	2	2	1	1	1	1	1	1	1	
10	14	5	3	2	2	2	1	1	1	1	1	1	
11	15	5	4	3	2	2	2	1	1	1	1	1	
12	16	6	4	3	2	2	2	1	1	1	1	1	
13	18	6	4	3	3	2	2	2	1	1	1	1	
14	19	7	5	3	3	2	2	2	2	1	1	1	
15	20	8	5	4	3	2	2	2	2	1	1	1	
16	22	8	5	4	3	3	2	2	2	2	1	1	
17	23	8	6	4	3	3	2	2	2	2	2	1	
18	25	9	6	4	4	3	3	2	2	2	2	2	
19	26	9	6	5	4	3	3	2	2	2	2	2	
20	27	10	7	5	4	3	3	2	2	2	2	2	
21	29	10	7	5	4	3	3	3	2	2	2	2	
22	30	11	7	5	4	4	3	3	2	2	2	2	
23	31	11	8	6	5	4	3	3	3	2	2	2	
24	33	12	8	6	5	4	3	3	3	2	2	2	
25	34	12	8	6	5	4	4	3	3	2	2	2	
26	35	13	9	6	5	4	4	3	3	3	2	2	
27	37	13	9	7	5	4	4	3	3	3	2	2	
28	38	14	9	7	6	5	4	3	3	3	3	2	
29	40	14	10	7	6	5	4	4	3	3	3	2	
30	41	15	10	8	6	5	4	4	3	3	3	3	
31	42	15	10	8	6	5	4	4	3	3	3	3	
32	44	16	11	8	6	5	5	4	4	3	3	3	
33	45	16	11	8	7	5	5	4	4	3	3	3	
34	46	17	11	8	7	6	5	4	4	3	3	3	
35	48	17	12	9	7	6	5	4	4	3	3	3	
36	49	18	12	9	7	6	5	4	4	4	3	3	
37	50	18	12	9	7	6	5	5	4	4	3	3	
38	52	19	13	9	8	6	5	5	4	4	3	3	
39	53	19	13	10	8	6	6	5	4	4	4	3	
40	55	20	13	10	8	7	6	5	4	4	4	3	
41	56	20	14	10	8	7	6	5	5	4	4	3	
42	57	21	14	10	8	7	6	5	5	4	4	4	
43	59	21	14	11	9	7	6	5	5	4	4	4	
44	60	22	15	11	9	7	6	5	5	4	4	4	
45	61	23	15	11	9	8	6	6	5	4	4	4	
46	63	23	15	11	9	8	7	6	5	5	4	4	
47	64	23	16	12	9	8	7	6	5	5	4	4	
48	65	24	16	12	10	8	7	6	5	5	4	4	
49	67	24	16	12	10	8	7	6	5	5	4	4	
50	68	25	17	12	10	8	7	6	5	5	5	4	

Use last column to find revised stockage using demands in the most recent 2 review periods. If total quantity demanded is more than 60, see table on next page.

Figure 3-1. Fifteen day ACWT Table (partial).

- d. Post those entries to the "request" section of the DA Form 3318.
- e. File the DA Form 3318 in the PLL file and use the following procedures in paragraph 3-2 to change the PLL.

3-2. PREPARE OR UPDATE THE PRESCRIBED LOAD LIST WITH DA FORM 2063-R, PRESCRIBED LOAD LIST

For units establishing a PLL or undergoing a change in equipment, prepare a separate DA Form 2063-R for each type of equipment on-hand in the unit for which repair parts are to be stocked. The repair parts from these lists are then combined on another DA Form, 2063-R. As a medical unit, you will list Class VIII medical supplies and Class IX repair parts separately. Prepare the lists with enough copies to meet local needs.

a. **Prepare DA Form 2063-R for Each Type of Equipment.** Prepare a DA Form 2063-R for each item of equipment as shown in figure 3-2 and explained below.

- (1) Block 1. Enter the date the list is prepared, for example, 4 JAN 92.
- (2) Block 2. Enter the name of the unit or organization, for example, BTRY C 1-1651 ARTY BN.
- (3) Block 3. Enter the UIC of the unit or organization, for example, WA2HC0.
- (4) Block 4. Enter a description and model number of the end item for which parts are stocked, for example, TRK UTIL 1/4 ton. Enter the EIC for the end item, for example, BBA. The EICs can be found in the AMDF to the left of the LIN for most end items in the Army inventory. The EIC is a three-position code replacing the W/ESDC on requests for issue. If no EIC is listed, leave the block blank. Also enter the EIC on the DA Form 3318 for each item on the PLL. Write it in the remarks block of that form.
- (5) Block 5. Enter the number of the TM or DA PAM, or both, listing the repair parts and the date of the current edition, for example, TM 9-2320-218-10P, 12 JAN 82.
- (6) Stock-number column. List all repair parts with an NSN authorized for stockage, in national item identification number (NIIN) sequence. Enter part-numbered items after the NSN items in federal supply code for manufacturers (FSCM) sequence.
- (7) Item-description column. Enter a description of each item.
- (8) Unit of issue column. Enter the unit of issue for each item.
- (9) Basic column. Enter the quantity prescribed by the mandatory parts list (MPL) for each item.
- (10) Operational column. Enter the demand-supported quantity for each item when not prescribed by an MPL. For those items prescribed by an MPL, and the MPL quantity is greater than the demand-support quantity, leave this block blank. If the demand-supported quantity is greater than the quantity prescribed by the MPL, enter the difference.

EXAMPLE: A total of three items are demanded. The MPL supports two of them ("2" in the basic column). The third item is entered as "1" (the difference) in the operational column.

(11) Remarks column. Leave this block blank.

b. Preparing the DA Form 2063-R as a Consolidated Prescribed Load List.

A consolidated PLL is used to report repair parts common to two or more end items.

Prepare the DA Form 2063-R as a consolidated PLL as shown in figure 3-3 and explained below.

(1) Upper left corner. Print the word "CONSOLIDATED."

(2) Block 1. Enter the date the list is approved by the commander.

(3) Block 2. Enter the name of the unit or organization.

(4) Block 3. Enter the UIC of the unit or organization.

(5) Blocks 4 and 5. Leave these blocks blank.

(6) Stock number column. List all repair parts with an NSN from the separate lists in NIIN sequence. Enter part-numbered items after the NSN items in commercial and government entity (CAGE) code sequence.

(7) Item description column. Enter a description of each item.

(8) Unit of issue column. Enter the unit of issue for each item.

(9) Authorized quantity column. Add the quantities of repair parts common to two or more different types of equipment to get the authorized quantity.

(a) "Basic" column. Enter the total basic quantity from the separate lists.

(b) "Operational" column. Enter the total operational quantity from the separate lists.

c. **Processing DA Form 2063-R.** After the individual and consolidated DA Forms 2063-R are prepared, process them as follows.

(1) Take the consolidated list to the unit commander for approval. The commander approves it by signing the last page.

(2) File a copy of the individual PLLs and approved consolidated PLL in the unit file.

(3) Send a copy of the approved PLL to the supply support activity (SSA) for review. Do this within five days after approval. Changes to the unit PLL by the SSA are authorized only when errors are found such as incorrect stock numbers or unauthorized repair parts. The SSA will inform the unit if any errors are found in the list. Correct any errors found by the SSA.

d. **Updating DA Form 2063-R.** After giving the SSA an initial load list, keep the list current. Update the list as follows.

(1) Give any changes to the SSA as they occur. List the changes on a DA Form 2063-R. Prepare a consolidated list for the following items.

(a) Added to the list.

(b) Deleted from the list.

(c) Having an increase in stockage quantity.

(d) Having a decrease in stockage quantity.

(2) Enter the new stockage quantity in the operational or basic column as appropriate.

(3) Enter "added," "changed," or "deleted" in the remarks column for each item to show the type of change.

(4) Provide the SSA with a new load list at the second and alternate review periods. Ensure the list includes all previous changes.

3-3. PERFORM A RECEIPT AND ISSUE OF PROPERTY INVENTORY

a. When receiving property from an SSA, inventory the items as follows.

(1) Make sure the items are for your unit. Check the document number and the unit name on the receipt document. Do not sign for the property unless it is for your unit.

(2) Check the item to make sure it matches the description on the receipt document. Report any problems to the SSA issue clerk for corrections.

(3) Count all items. Make sure the quantity received agrees with the quantity recorded on the receipt document. Report any differences to the SSA issue clerk for correction.

(4) Check end items for completeness. Use the proper TM or supply catalog (SC) to identify components. Make a list of any component shortages. Use this list and the TM or SC to prepare the hand receipt shortage annex. Report shortages to the SSA issue clerk.

(5) Check the serial numbers when items with serial numbers are received. Items such as vehicles, materials handling equipment, office machines, generators, controlled cryptographic items (CCI), classified communication security (COMSEC), and weapons will have serial numbers. Check the item's serial number with the one recorded on the receipt document. If there is no serial number listed on the receipt document, enter it. Report any serial number problems to the SSA issue clerk for correction.

(6) Make a visual check of the condition of the items. If they are damaged, tell the SSA issue clerk. The issue clerk will take action according to DA PAM 710-2-2.

(7) If serviceability of an item is questionable, notify the property book officer (PBO). The PBO and stock record officer will resolve the matter.

(8) Sign the receipt document after actions in paragraphs 3-3a(1) through (7) are completed.

b. When property is to be issued on a hand or subhand receipt, the receiving person must inventory the property. Take the following actions.

(1) Check each item to make sure the item and its description on the hand or subhand receipt match. Make a list of any differences.

(2) Count all items. Make sure the quantity received agrees with the hand or subhand receipt. Check end items for completeness using the proper TM or SC. Make sure component shortages are listed on a hand receipt shortage annex. Make a list of any differences.

(3) Verify serial numbers. Check the item's serial number with the serial number recorded on the hand or subhand receipt. Make a list of any differences.

(4) Report differences to the person making the issue. Make sure all problems are corrected before signing the hand or subhand receipt.

(5) Sign the hand or subhand receipt after actions in (1) through (4) above have been completed.

c. Report unreconciled discrepancies in the receipt and accounting of classified COMSEC equipment and CCI as a physical insecurity.

3-4. PERFORM A CHANGE OF HAND-RECEIPT HOLDER INVENTORY

When the hand-receipt holder is replaced, inventory all property listed on the hand receipt. Perform the inventory before the new hand-receipt holder assumes responsibility for the property. The unit's accountable officer will decide how much time is allowed for the inventory. To conduct the hand-receipt holder inventory, use the following procedures.

NOTE: A property transfer via subhand receipt does not transfer direct responsibility for the property to the subhand-receipt holder as is the case for a hand-receipt holder.

a. Take these actions prior to inventory.

(1) Check with the next higher commander for any instructions.

(2) Make sure all hand or subhand receipts and annexes with change documents are updated.

(3) Review the hand receipt to find the type of items to be inventoried. If needed, select personnel to assist in the inventory and give them instructions.

(4) Notify subhand-receipt holders of when and how the inventory is to be conducted.

(5) Review DA PAM 25-30 to ensure the most current supply catalogs, components lists, technical manuals, and other related publications are used during the inventory. In the event the most current publications are not on-hand, the outgoing hand-receipt holder will place required publications on order during the inventory. The incoming hand-receipt holder inventories by the publication on-hand or, if no publication is on-hand, by preparing a component list of items on-hand pending receipt of the most current publication. Inform the commander for whom the property book is kept of this action.

(6) Immediately upon receipt of the current publication, the hand-receipt holder directs a 100-percent inventory be taken to determine any overages or shortages. Overages will be turned in. Shortages are accounted for as follows.

(a) When the publication indicates an item as being newly added, request the item.

(b) When the publication indicates a component is not new or is being deleted, and the component was not on-hand during the original inventory, a report of survey procedure is initiated.

b. Inventory the property as follows.

(1) Check each item to make sure the item and its description on the unit property book or hand receipt matches. Make a list of any differences.

(2) Make a visual check of the condition of the property. Make a list of any damaged equipment.

(3) Count all items listed on the hand receipt. Make a list of any overages or shortages.

(4) Check end items for completeness. Use the proper TM or SC to identify components. Ensure that component shortages are listed on hand-receipt shortage annexes. Check the document register to ensure component shortages are on request. Make a list of component shortages not listed on hand-receipt shortage annexes. Make a list of any component overages.

(5) Check the serial number on the item with that recorded on the hand receipt. Make a list of any serial number differences.

(6) If items are in maintenance, make sure the maintenance request is valid. Check all open maintenance requests with the supporting maintenance facility.

(7) Report damaged equipment to unit maintenance personnel for repair.

(8) Report all differences regarding property discrepancies to the accountable officer or PBO. After the document has been assigned to the adjustment documents, the outgoing hand-receipt holder signs for the adjusted quantities in the next column. The new hand-receipt holder signs for the same quantities in the next available column. If no discrepancies were discovered during the inventory, the new hand-receipt holder signs the next available quantities column thereby acknowledging responsibility for the property.

c. If a hand-receipt holder dies or departs the unit without transferring responsibility for property, the unit commander appoints a person to act on his behalf so a joint inventory can be conducted.

3-5. PERFORM A CYCLIC INVENTORY

a. The officer responsible for the unit's property will ensure this inventory is conducted. This inventory is performed when one of the following occurs.

(1) The responsible officer of a unit keeping its own property book elects to do it.

(2) The property book is kept at other than unit level and the PBO requires it.

b. When the cyclic-inventory option has been chosen, use the following procedures.

(1) Conduct cyclic inventories monthly, quarterly, or semiannually. Inventory about 10 percent of the property book items monthly, 25 percent quarterly, or 50 percent semiannually.

(2) If the location of hand- or subhand-receipt holders make the inventory of a certain number of lines impractical, the PBO or responsible officer may choose that specific hand or subhand receipts be completely inventoried.

(3) The PBO or responsible officer will designate, by memorandum, the items to be inventoried.

(4) The responsible officer notifies hand- or subhand-receipt holders when and how the inventory is to be conducted.

(5) Inventory the required items with the hand- or subhand-receipt holders. Check the items to make sure the item and description on the hand or subhand receipt match. Make a list of any differences.

(6) Make a visual check of the condition of the property. Make a list of any damaged property.

(7) Check end items for completeness. Use the proper TM or SC to identify components. Make sure component shortages are listed on hand-receipt shortage annexes. Check the document register to make sure component shortages are on request. Make a list of component shortages not listed in the hand-receipt shortage annexes. Make a list of any component overages. In the event the most current publication is not on-hand, take the action discussed in subparagraphs 3-4a(5) and (6).

(8) Check the serial number on the item with the serial number recorded on the hand or subhand receipt. Make a list of any serial number differences.

(9) Report damaged equipment to unit maintenance personnel for corrective action.

(10) Report differences pertaining to property book items to the PBO. The PBO conducts causative research for these differences. Causative research includes, but is not limited to, comparing all postings to the applicable property book page against documents supporting those postings and verifying all hand receipt change documents. The PBO searches storage areas under his control, and ensures end item identity was not destroyed by consolidation, disassembly or mislabeling. When no conclusive findings are made, take the following actions.

(a) Turn in overages as "found on installation" property.

(b) Account for any shortages by preparing a report of survey. When preparing the report of survey, ensure the unit price used is current.

(c) Prepare and process an administration adjustment report (AAR) to correct differences within sizes, makes, or models.

(d) Adjustment documents must be posted to the property book. Adjust hand or subhand receipt and hand-receipt shortage annexes accordingly.

(e) Submit requests for issue to replace shortages.

(11) Record the results of the inventory on the informal memorandum designating which items were to be inventoried. State in the informal memorandum that the required items were completely inventoried and the name of the individual who conducted the inventory. Also state that differences have been accounted for "according to AR 735-5 and DA PAM 710-2-1." The responsible officer must sign the informal memorandum. File the original of the informal memorandum at property-book level. File a copy of the informal memorandum at the unit level if the responsible officer is a hand-receipt holder. If the property book is kept at unit level, send a copy of the informal memorandum to the next higher level. Separate informal memorandums are needed when the unit supported by more than one property book activity.

3-6. PERFORM A CHANGE OF PROPERTY BOOK OFFICER INVENTORY

This inventory is taken when the PBO of an organization is replaced. The inventory is conducted jointly by the incoming and outgoing PBOs. Property not issued on hand receipt must be inventoried.

a. Take the following actions prior to the inventory.

(1) The outgoing PBO takes the following actions.

(a) Makes sure all completed receipt, turn-in, and adjustment documents have been posted to the property book.

(b) Makes the property book and related files available to the incoming PBO for review.

(c) Assists the incoming PBO in the review of the property records.

(2) The incoming PBO takes the following actions.

(a) Compares the MTOE, TDA, or joint table of allowances (JTA) with the property book. He or she ensures a page is in the property book for each item from the required column of these documents. If pages are missing, the outgoing PBO makes sure they are prepared.

(b) Checks the property book and document register to find if all items from the authorized column of the MTOE, TDA, or JTA are on-hand or on request. If items are not on-hand or on request, check to see if a report of supply constraint has been submitted. If not, the outgoing PBO ensures shortages are placed on request.

(c) Reviews the property book, document register, and document file to judge the condition of the records in terms of satisfying accounting requirements.

(d) Ensures hand-receipt holders are presently assigned to the unit issued the property.

(e) Compares hand receipts with the property book to find the items not issued and makes a list of these items.

(f) Ensures there is a property book page for each property book item listed on the hand receipt and makes a list of any differences.

(g) Develops some method to keep track of those property book pages that have been compared to hand receipts. If marks are made on the property book pages, they should be made in pencil. Then they can be erased after the inventory is complete.

b. After completion of the actions in paragraph 3-6a, inventory the items not issued on hand receipts. Use the following procedures.

(1) Check each item to make sure the item and its description on the property book match. Make a list of any differences.

(2) Make a visual check of the condition of the property. Make a list of any damaged property. Accept damaged equipment as being on-hand.

(3) Count all items not issued on hand receipt. Make a list of any shortages or overages.

(4) Check end items for completeness. Use the proper TM or SC to identify components. Make a list of any component shortages or overages. Check the document register to make sure component shortages are on request.

(5) Verify serial numbers. Check the serial number of the item with the serial number recorded on the property book. Make a list of any serial number differences.

(6) If items are in maintenance, make sure the maintenance request is valid. Check open maintenance requests with the supporting maintenance facility.

(7) Report damaged equipment to unit maintenance personnel for repair.

(8) The outgoing PBO conducts causative research for differences as discussed in paragraph 3-5b(10).

(9) After the proper actions in paragraph 3-6b(1) through (8) above have been completed, the incoming PBO completes the statement of accountability for the property.

c. When the inventory cannot be completed within the prescribed time (30 days), extensions may be requested from the commander making the appointment. If an extension is not granted, the incoming PBO becomes accountable on the effective date. Extensions must be in writing and will not exceed 30 days. A maximum of two extensions may be requested.

3-7. PERFORM AN ANNUAL PROPERTY BOOK INVENTORY

This inventory is required when property books are kept at other than the using-unit level. The PBO conducts this inventory. All items not issued on hand receipts must be counted.

a. Take the following actions prior to the inventory.

(1) Make sure all completed receipt, turn-in, and adjustment documents have been posted to the property book.

(2) Compare hand receipts with the property book to find the items not issued. Make a list of these items.

(3) Make sure there is a property book page for each property book item listed on the hand receipts. Make a list of any differences.

b. The items are inventoried as follows below.

(1) Check each item to make sure the item and its description on the property book match. Make a list of any differences.

(2) Make a visual check of the condition of the property. Make a list of any damaged property.

(3) Count all items not issued on hand receipt. Make a list of any overages or shortages.

(4) Check end items for completeness. Use the proper TM or SC to identify components. Make a list of any component shortages or overages. Check the document register to make sure component shortages are on request.

(5) Check the serial number on the item with that recorded on the property book. Make a list of any serial number differences.

(6) If items are in maintenance, make sure the maintenance request is valid. Check open maintenance requests with the supporting maintenance facility.

(7) Report damaged equipment to unit maintenance personnel for repair.

(8) Conduct causative research for differences as discussed in subparagraph 3-5b(10).

(9) When the inventory is completed, prepare a memorandum for the PBO's signature. The memorandum will state that the inventory was conducted. It will also state, when applicable, that differences have been accounted for "according to AR 735-5 and DA PAM 710-2-1." File the original of the memorandum at the property-book level. Send a copy of the memorandum to the person who appointed the PBO.

Continue with Exercises

EXERCISES, LESSON 3

INSTRUCTIONS: Answer the following questions by marking the lettered response that best answers the question or best completes the sentence.

After you have answered all of the exercises, turn to "Solutions to Exercises" at the end of this lesson and check your answers. For each exercise answered incorrectly, reread the lesson material referenced after the solution.

1. Refer to the figure 1 [DA PAM 710-2-1, Table 8-3 (partial)] below.

Table 8-3
PLL stockage levels (based on 15-day ACWT) (1st table)

Total Quantity Demanded	Number of Days in Which 3 Demands Occurred												
	ACTIVE ARMY	1-22	23-37	38-52	53-67	68-82	83-97	98-112	113-127	128-142	143-157	158-172	173-180
ARRNG/USAR	1-44	45-74	75-104	105-134	135-164	165-194	195-224	225-254	255-284	285-314	315-344	345-360	
3	4	1	1	1	1	1	1	1	1	1	1	1	1
4	5	2	1	1	1	1	1	1	1	1	1	1	1
5	7	2	2	1	1	1	1	1	1	1	1	1	1
6	8	3	2	1	1	1	1	1	1	1	1	1	1
7	10	3	2	2	1	1	1	1	1	1	1	1	1
8	11	4	3	2	2	1	1	1	1	1	1	1	1
9	12	4	3	2	2	1	1	1	1	1	1	1	1
10	14	5	3	2	2	2	1	1	1	1	1	1	1
11	15	5	4	3	2	2	2	1	1	1	1	1	1
12	18	6	4	3	2	2	2	1	1	1	1	1	1
13	18	6	4	3	3	2	2	2	1	1	1	1	1
14	19	7	5	3	3	2	2	2	2	1	1	1	1
15	20	8	5	4	3	2	2	2	2	1	1	1	1
16	22	8	5	4	3	3	2	2	2	2	1	1	1
17	23	8	5	4	3	3	2	2	2	2	2	1	1
18	25	9	6	4	4	3	3	2	2	2	2	2	2
19	26	9	6	5	4	3	3	2	2	2	2	2	2
20	27	10	7	5	4	3	3	2	2	2	2	2	2
21	29	10	7	5	4	3	3	3	2	2	2	2	2
22	30	11	7	5	4	4	3	3	2	2	2	2	2
23	31	11	8	6	5	4	3	3	3	2	2	2	2
24	33	12	8	6	5	4	3	3	3	2	2	2	2
25	34	12	8	6	5	4	4	3	3	2	2	2	2
26	35	13	9	6	5	4	4	3	3	3	2	2	2
27	37	13	9	7	5	4	4	3	3	3	2	2	2
28	38	14	9	7	6	5	4	3	3	3	3	3	2
29	40	14	10	7	6	5	4	4	3	3	3	3	2
30	41	15	10	8	6	5	4	4	3	3	3	3	3
31	42	15	10	8	6	5	4	4	3	3	3	3	3
32	44	16	11	8	6	5	5	4	4	3	3	3	3
33	45	16	11	8	7	5	5	4	4	3	3	3	3
34	46	17	11	8	7	6	5	4	4	3	3	3	3
35	48	17	12	9	7	6	5	4	4	3	3	3	3
36	49	18	12	9	7	6	5	4	4	4	3	3	3
37	50	18	12	9	7	6	5	5	4	4	3	3	3
38	52	19	13	9	8	6	5	5	4	4	3	3	3
39	53	19	13	10	8	6	5	5	4	4	4	3	3
40	55	20	13	10	8	7	6	5	4	4	4	3	3
41	56	20	14	10	8	7	6	5	5	4	4	3	3
42	57	21	14	10	8	7	6	5	5	4	4	4	4
43	59	21	14	11	9	7	6	5	5	4	4	4	4
44	60	22	15	11	9	7	6	5	5	4	4	4	4
45	61	23	15	11	9	8	6	5	5	4	4	4	4
46	63	23	15	11	9	8	7	6	5	5	4	4	4
47	64	23	16	12	9	8	7	6	5	5	4	4	4
48	65	24	16	12	10	8	7	6	5	5	4	4	4
49	67	24	16	12	10	8	7	6	5	5	4	4	4
50	68	25	17	12	10	8	7	6	6	5	5	4	4

Use last column to find revised stockage using demands in the most recent 2 review periods. If total quantity demanded is more than 50, use table on next page.

Figure 1.

1. Over the past 120 days, you have received three demands for a certain nonstocked repair part. The total number of demanded parts has been 15. When you receive the fourth request for that repair part, you prepare a DA Form 2765-1 for a sufficient quantity to fill the current requests plus the initial stockage level. Which of the following represents what that initial stockage level should be?
 - a. 20.
 - b. 19.
 - c. 15.
 - d. 2.

2. You are preparing a DA Form 2063-R to stock repair parts. On the form, where do you enter the end-item code?
 - a. In block 3.
 - b. In block 4.
 - c. In the remarks block.
 - d. In the stock-number column.

3. You are preparing a consolidated PLL. What, if anything, do you enter in blocks 4 and 5 of the DA Form 2063-R?
 - a. End-item description and EIC.
 - b. End-item model and TM numbers.
 - c. Line-item number and EIC.
 - d. Nothing.

4. You are updating your unit's PLL due to recent demand. You are increasing your stockage level of six-volt lamps, NSN 6240-00-155-7851, from four to six on a consolidated DA Form 2063-R. What is your entry in the remarks block for this item?
 - a. The EIC.
 - b. "Basic" or "operational."
 - c. "Changed."
 - d. "Added."

5. You are preparing to conduct a change-of-hand-receipt-holder inventory. What publication do you review to ensure you are working with the latest information such as supply catalogs, component lists, TMs, and related publications?
 - a. DA PAM 25-30.
 - b. DA PAM 710-2-1.
 - c. TB 38-750-2.
 - d. AR 375-5.

6. Out of necessity, you are preparing to conduct a cyclic inventory with outdated component lists. When the current publication arrives, you will conduct a 100-percent inventory with the new publication. What happens if an item, not on-hand for the initial inventory, is listed as deleted in the new publication?
 - a. The item will be requested on a DA Form 2063-R.
 - b. A report of survey will be initiated.
 - c. The item will not be added to the PLL.
 - d. The item will be added to the PLL.

7. Your unit must perform an inventory due to a change in PBOs. Which of the following is a responsibility of the incoming PBO?
- a. Ensuring all receipt and adjustment documents are posted to the property book.
 - b. Making the property book and related files immediately available.
 - c. Ensuring all hand-receipt holders are presently assigned to the unit.
 - d. Ensuring shortages are placed on request.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 3

1. d (para 3-1b(1)-(2), figure 3-1)
2. b (para 3-2a(4))
3. d (Para 3-2b(5))
4. c (para 3-2d(3))
5. a (para 3-4a(5))
6. b (paras 3-5b(7), 3-4a(6)(b))
7. c (para 3-6a(2)(d))

End of Lesson 3

LESSON ASSIGNMENT

LESSON 4

Additional Supply Management Tasks.

TEXT ASSIGNMENT

Paragraphs 4-1 through 4-4.

TASKS TAUGHT

Determine if Medical Equipment is Economically Repairable.

Classify Biomedical Equipment According to Life Expectancy and Expenditure Limitations.

Manage Equipment Maintenance Using Automated Systems at Unit Level.

LESSON OBJECTIVES

When you have completed this lesson, you should be able to:

- 4-1. Identify procedures used to apply the maintenance expenditure limits (MEL) factor to determine the economic reparability of medical equipment.
- 4-2. Identify techniques used to determine whether to repair or replace malfunctioning medical equipment.
- 4-3. Identify the parameters used to classify medical equipment according to life expectancy and expenditure limitations.
- 4-4. Identify the options available to you for managing medical equipment maintenance through The Army Maintenance Management Information System (TAMMIS) medical\ maintenance functions.

SUGGESTION

Work the lesson exercises at the end of this lesson before beginning the next lesson. These exercises will help you accomplish the lesson objectives.

LESSON 4

ADDITIONAL SUPPLY MANAGEMENT TASKS

4-1. GENERAL

In this lesson, you will learn to identify MEL factor procedures used to determine if an item of medical equipment is economically repairable. Along with the equipment's condition, the MEL factor is also used in classifying biomedical equipment. You will also learn to identify the automated systems options available to you to manage medical equipment maintenance at the unit level.

4-2. DETERMINE ECONOMIC REPAIRABILITY

a. **Calculate the maintenance expenditure limits** . The MEL is to ensure economic and operational effectiveness of maintenance operations. A MEL also ensures that it is more economical and operationally effective to perform corrective maintenance than to replace the materiel.

(1) Replacement cost. The first step of the process is determining the current replacement or acquisition cost of the item of equipment. If you do not have that figure, refer to the AMDF.

(2) Useful life. Calculate the percentage of the item's useful life remaining by dividing the life remaining in months by the life expectancy in months.

(3) Maintenance expenditure limits-factor graph. Use the MEL-factor graph (refer to figure 4-1) by reading up vertically from the percent of useful life remaining to a point of intersection with the baseline.

(4) Maintenance expenditure limits-factor percentage. Project a horizontal line to the MEL-factor percentage.

EXAMPLE: A fiberoptic bronchoscope costs the Army \$3,500 and has a useful life expectancy of six years. The item is in for major repairs after two years of service. Thus it has four years life remaining or 66 percent. The MEL factor for this bronchoscope is 54 percent.

NOTE: The MEL for materiel which has reached or exceeded its life expectancy is 10 percent. This percent remains constant so long as the materiel is used, regardless of its age. At the other end of the scale, a new item which has failed is considered to have no more than 80 percent of its life remaining.

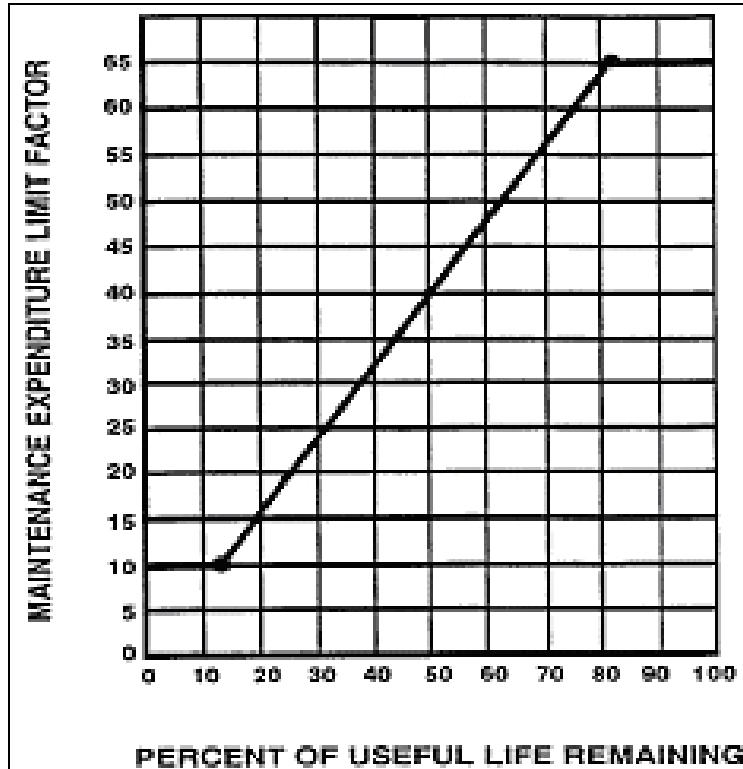


Figure 4-1. MEL-factor graph.

b. Multiply the Maintenance Expenditure Limits Factor by the Current Replacement Cost to Determine the Maximum Allowable Repair Costs. In the above example, the maximum allowable repair costs is \$1,890 ($\$3,500 \times 54$ percent).

c. Determine if Equipment Should be Repaired or Replaced.

(1) Direct-labor cost. Estimate the direct-labor cost for retail maintenance (unit, direct support, and general support levels).

(a) Multiply the chargeable manhours required to perform corrective maintenance, as determined by a technical inspection, with the applicable direct-labor rate.

(b) Use the following criteria to determine the direct-labor rate.

1 Determine the chargeable manhours (labor specifically identified to the corrective maintenance).

2 Determine the nonchargeable manhours (technical inspections and all other labor classified as indirect labor).

(2) Direct-materiel cost. Determine the direct-materiel cost estimate by identifying all chargeable materiel costs required to perform the corrective maintenance, as determined by a technical inspection.

(a) Determine chargeable materiel.

1 Repaired, rebuilt, or replacement assemblies, modules, or printed circuit boards.

2 Repair parts.

(b) Determine nonchargeable materiel.

1 Recording charts and paper.

2 Common filters typically replaced by operator personnel.

3 Electrodes.

4 Dental drills, burrs, handpieces, etc.

5 Light bulbs.

6 Batteries (rechargeable or not rechargeable).

7 Radiographic/fluoroscopic tubes.

8 Common hardware.

9 Materiel associated with equipment installation.

10 Materiel associated with equipment alteration, modifications, or special applications.

11 Other materials consumed during the operation of the equipment.

NOTE: Nonchargeable material includes items that are expected to be used up during the operation of equipment.

(c) Standard materiel. Estimate the cost of standard materiel at the current price listed in the appropriate supply manual or the AMDF.

(d) Nonstandard materiel. Estimate the cost of non-standard materiel at the current replacement cost.

(3) Indirect labor and materiel cost. Compute the indirect or overhead cost estimate by multiplying the chargeable manhours required to perform the corrective maintenance with the applicable indirect rate.

(a) Determine chargeable indirect costs which include the following.

1 Maintenance operation expenses identifiable to a work center or the maintenance shop performing the corrective maintenance, although not identifiable to a specific job.

2 General and administrative expenses.

3 Supervisory and administrative manhours.

(b) Determine nonchargeable indirect costs which include the following.

1 Replacement of basic-issue-list items.

2 The labor or materiel expenses for applying alterations or modifications.

3 Operating-expense items.

(4) Freight and packaging cost.

(a) Do not include freight as an element of cost when the maintenance materiel to be repaired is located in the continental United States (CONUS). Include the cost of freight to CONUS as an element of cost when the materiel to be repaired is located overseas and no local capability exists. The cost of freight includes all transportation and handling costs from point of use or storage to the designated CONUS point of repair.

(b) When materiel cannot be repaired on-site, and costs are incurred to prepare the materiel for shipment, such costs (including materials) are included in the cost estimate regardless of origin or destination.

(5) Miscellaneous cost. Identify all chargeable contractual services acquired incidental to, and identifiable with, a specific corrective maintenance action.

(6) Corrective maintenance cost. Determine the total corrective maintenance cost estimate by combining the estimated costs for each of the five cost elements in paragraphs 4-4a through 4-4e.

(7) Determination. Compare the projected repair cost with the maximum allowable cost and determine if the equipment should be repaired or replaced.

4-3. CLASSIFY EQUIPMENT ACCORDING TO LIFE EXPECTANCY AND EXPENDITURE LIMITATIONS

a. Determine Life Expectancy.

(1) Indefinite-life materiel. This classification is divided into three subclassifications.

(a) Hospital furniture. This classification is characterized by infrequent replacement because of slow deterioration and wear out. Hospital furniture includes narcotics and/or medicine cabinets, surgical stands, mechanical beds, etc.

(b) Basic electrical, mechanical, or electromechanical items. These items include patient lamps, sphygmomanometers, basic otoscopes/ophthalmoscopes, stethoscopes, and other low-cost materiel. This subclassification is characterized by frequent replacement because of fast wear out due to high use and industrial or technological obsolescence.

(c) Special-purpose items. These items include a wide range of assemblies/modules such as x-ray tubes, dental and surgical handpieces, printed circuit boards, and so forth. These items are characterized by interchangeability between equipment and replacement because of industrial obsolescence.

(2) Definite-life materiel. This classification has the following characteristics.

(a) Deterioration and wear out with use and age.

(b) Declining MELs based on life expectancies.

(c) Regular replacement based upon economic considerations.

(d) Replacement by exception based on other factors. These factors include the following.

1 Long term requirement for the materiel which must be available on a continuous basis.

2 Nonavailability of like or replacement materiel.

3 Lengthy acquisition time frames.

4 Industrial obsolescence, including industry's inability to provide satisfactory repair-parts support.

5 Nonavailability of funds for replacement materiel.

6 Technological obsolescence, including the availability of more clinically and/or logistically effective replacements.

(3) Exempt materiel. Exempt materiel is selected end items, assemblies, modules, printed circuit boards, and other repairable components which may be excluded from MEL control by the Army Service Item Control Center (SICC). Selected exclusions may be granted by the SICC or the Office of the Surgeon General (OTSG) to wholesale maintenance operations to retain items in service regardless of cost to meet critical operational requirements.

b. Materiel Life Expectancies.

(1) Indefinite life materiel. This materiel has no fixed life expectancy.

(2) Definite life materiel. Refer to the table listing life expectancies in the appendix of this subcourse. If the item is not listed, base your determination on life expectancies for similar items, manufacturers' recommendations, and USAMMA determinations.

(3) Exempt materiel. When excluded from MEL control, exempt materiel is granted indefinite life.

c. Life Expectancy Adjustments.

(1) Materiel in service. All medical materiel is considered to be in service or use when it is ready for clinical or nonclinical use in the care and treatment of patients. The in-service date starts the life expectancy of the materiel.

(2) Adjustments. Adjustment to life expectancies at the retail level may be approved by Major Command (MACOM) for abnormal or subnormal use and for materiel overhauled at DS and GS levels of maintenance or overhauled through contractual services.

4-4. EQUIPMENT MANAGEMENT WITH THE ARMY MAINTENANCE MANAGEMENT INFORMATION SYSTEM

The The TAMMIS as developed to manage medical information at field (TOE) medical units and provide commanders with timely and accurate medical information in a number of areas. The various functions are available through a hierarchy of system menus and submenus. The system's major menu and submenu hierarchy is shown in figure 4-2. In all cases, when you make a menu selection you receive either another submenu with further functional choices or a transaction screen wherein you can perform the transaction indicated.

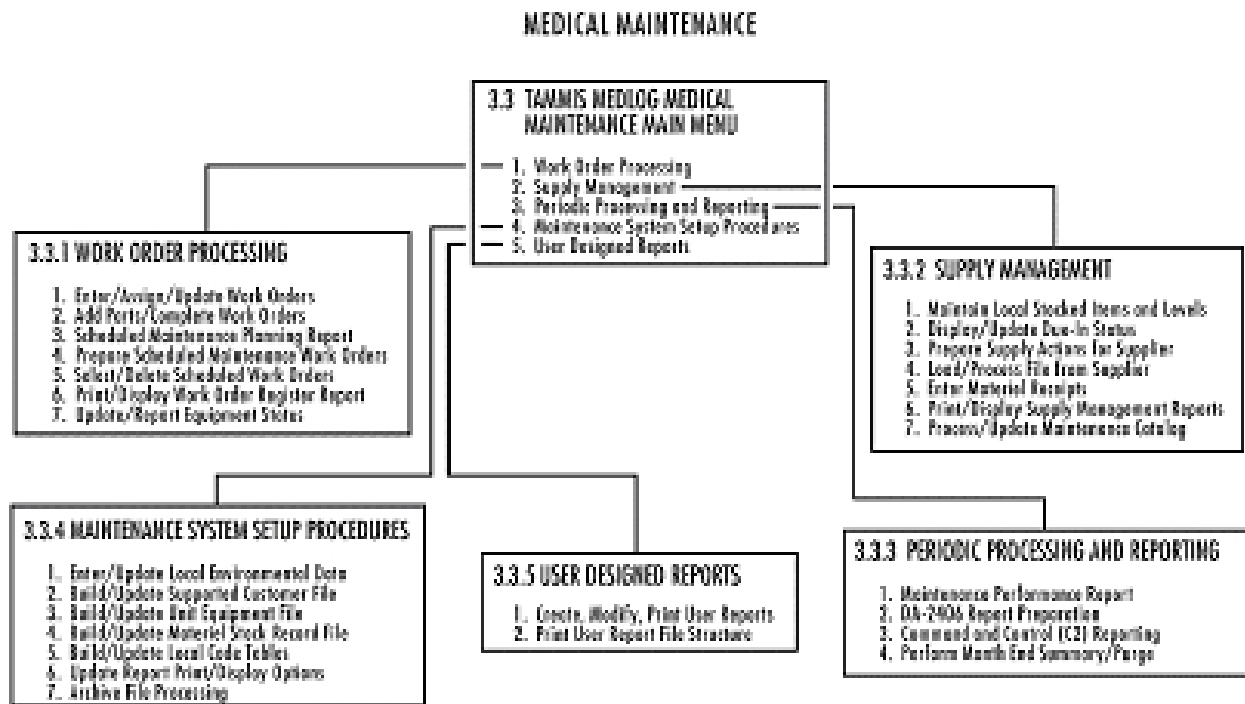


Figure 4-2. The Army Maintenance Management Information System Medical Maintenance menu hierarchy.

a. **Log-in.** To access the TAMMIS system medical maintenance menu, the log-in is "medmnt." The TAMMIS system is case sensitive. Use small letters only.

b. **Main Menu (3.3).** There are five medical maintenance system functions on the main menu (figure 4-2): work order processing, supply management, periodic processing and reporting, maintenance system setup procedures, and user designed reports. The work order processing menu item is the most significant portion of the subsystem. All other automated processes support it. The TAMMIS medical maintenance program operates at the medical logistics (MEDLOG) battalions and TOE hospitals (mobile Army surgical hospital [MASH], combat support hospital [CSH]) within the CORPS and at the MEDLOG and TOE hospitals (field, station, and general) within the communications zone (COMMZ). The system is used at each of these locations to manage equipment maintenance and repair for equipment owned by the local unit and equipment owned by supported units.

c. **Maintenance System Setup Procedures (4).** To establish site-specific parameters for the maintenance system, select (4) from the main menu. This option takes you to submenu (3.3.4) shown in figure 4-3. The functions from this submenu allow you to enter, during system-setup, site-specific system and application data required for the system to operate. These menu items also allow you to update or change this site-specific data once the system is operational to respond to changes in the local operational environment or procedures. This menu contains the following functions.

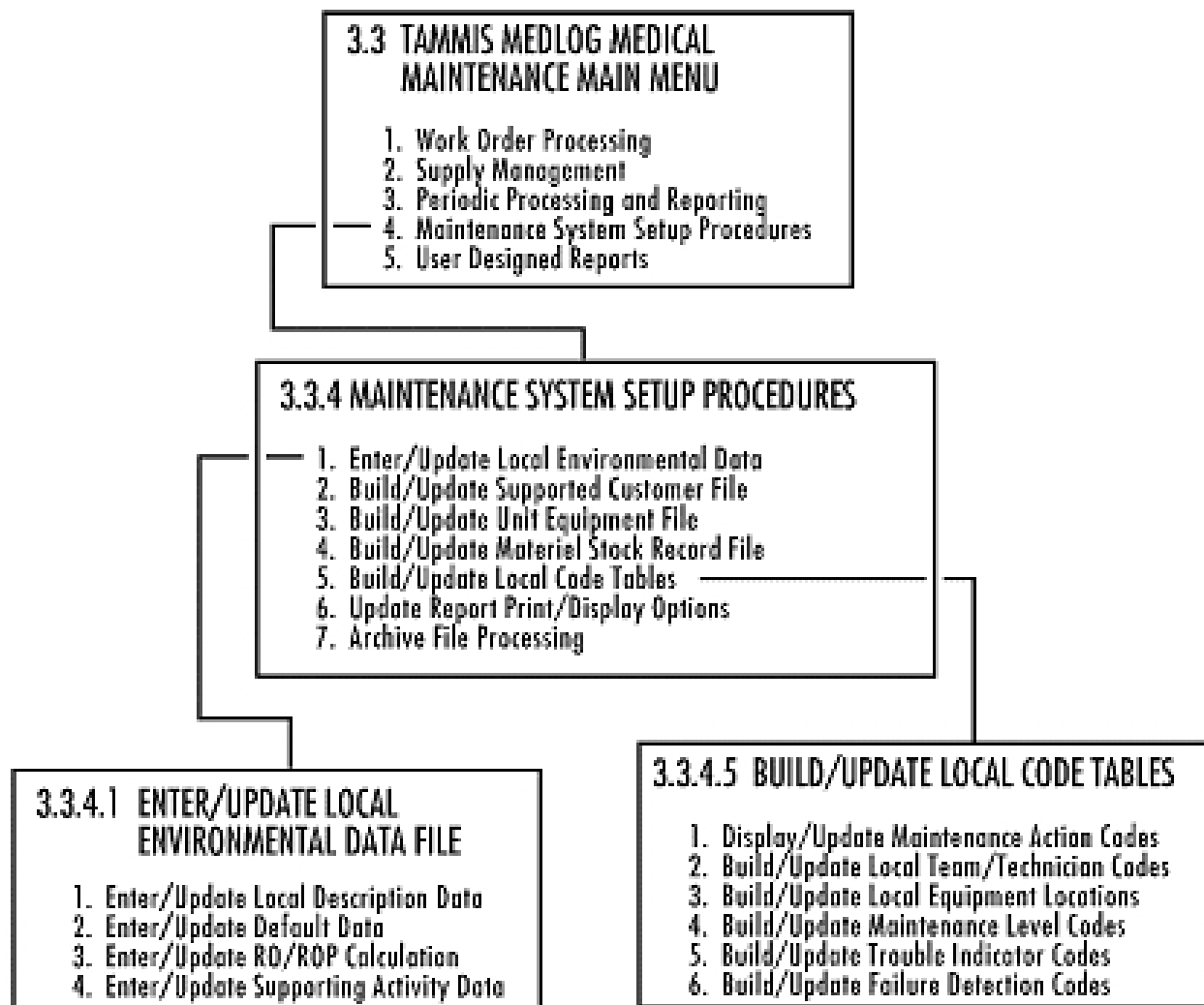


Figure 4-3. Submenus 3.3.4, 3.3.4.1, and 3.3.4.5.

(1) Enter/update local environmental data (1). This selection takes you to submenu 3.3.4.1, which allows you to identify the unit and specify default military standard requisitioning and issue procedures (MILSTRIP) data elements to be used by the materiel requisitioning menu items. This function also has constants for computing optimal stockage levels, system maintenance constants, and supporting maintenance and supply activity descriptions. The sub-menu contains the following options. Refer to figure 4-3.

(a) Enter/update local description data (1). This function allows you to identify the local unit to the Tammis Medlog system. The system uses the information to prepare reports and replenishment-and-status requests.

(b) Enter/update default data (2). This allows you to enter MILSTRIP defaults for the system to use in preparing materiel and status requests to be passed to an SSA.

(c) Enter/update RO/ROP calculation data (3). This function allows you to specify constants for the system to use in computing optimal stockage levels for items in the stock record file.

(d) Enter/update supporting activity data (4). This option allows you to define supporting supply (Class VIII and Class IX) activities and medical maintenance activities.

(2) Build/update supported customers file (2). Selection of 2 at the 3.3.4 menu allows you at the depot level to identify the on-hand equipment of each of your authorized customers.

(3) Build/update unit equipment file (3). Choosing 3 at menu 3.3.4 allows you to build, update, delete, and query equipment records in the unit equipment file.

(4) Build/update materiel stock record file (4). This option allows you to build, update, delete, and query for records in the materiel stock-record file.

(5) Build/update local code tables (5). Option 5 allows you to identify locally unique medical maintenance codes. This submenu (3.3.4.5) contains the following functions. Refer to figure 4-3.

(a) Display/update maintenance action codes (1). This option allows you to specify codes and associated descriptions identifying the local unit's various types of maintenance actions, the priority associated with each type, and the number of hours required to perform each type. The following maintenance-action codes are used here: CL--calibration, PM--preventive maintenance, RE--in-house repairs, ST--safety test, SS--special services (for example, alteration, survey), DR--depot repair, RR--referred repair, ER--evacuated repair, TI--technical inspection.

(b) Build/update local team/technician file (2). The choice of option 2 allows you to build the local team/ technician file by entering local team/technician codes and descriptions. You can update, delete, and query for the codes. The codes are used to identify specific teams and technicians when work orders are assigned.

(c) Build/update local equipment locations (3). This menu choice allows you to build a code table of local equipment sections (locations) by entering the local equipment location codes.

(d) Build/update maintenance level codes (4). This function allows you to build a code table for the system to use in editing maintenance codes entered for each maintenance request.

(e) Build/update trouble indicators (5). Function 5 allows you to build a table of trouble-indicator codes. You can update, delete, and query for trouble-indicator codes.

(f) Build/update failure-detection codes (6). This menu selection allows you to build a table of failure-detection codes. You can update, delete, and query for failure-detection codes.

(6) Update report print/display options (6). Menu selection 6 on the 3.3.4 menu allows the manager to specify which reports, when invoked by menu selection, must be printed and which can be displayed on the terminal and optionally printed.

(7) Archive file processing (7). This option allows you to review, print, and send files that have been archived by the system on its internal disk.

d. **Work Order Processing (1)**. Selection of the first option on menu 3.3 takes you to menu 3.3.1 shown in figure 4-4. This function allows you to enter, schedule, assign, track, and report medical maintenance work orders and identify and track the status of equipment directly supported by local medical maintenance personnel. This menu contains the following functions.

(1) Enter/assign/update work order (1). The first option on submenu 3.3.1 allows you to document, update, and track maintenance requests received. Selection of this option takes you to submenu 3.3.1.1 which contains the following functions. Refer to figure 4-4.

(a) Enter/update work orders (1). This option allows you to enter and update work orders. The system will assign a work-order number to the work order entered.

(b) Assign work orders (2). Option 2 allows you to assign work orders. The work order must be assigned to add parts or close out (complete) the work order.

(c) Refer/evacuate work orders (3). This option allows you to refer or evacuate a work order.

(d) Recall completed work orders (4). Selection of this option allows you to recall a completed work order.

(e) Defer work order (5). This allows you to defer a work order.

(f) Reject work order (6). Use this option to reject a work order.

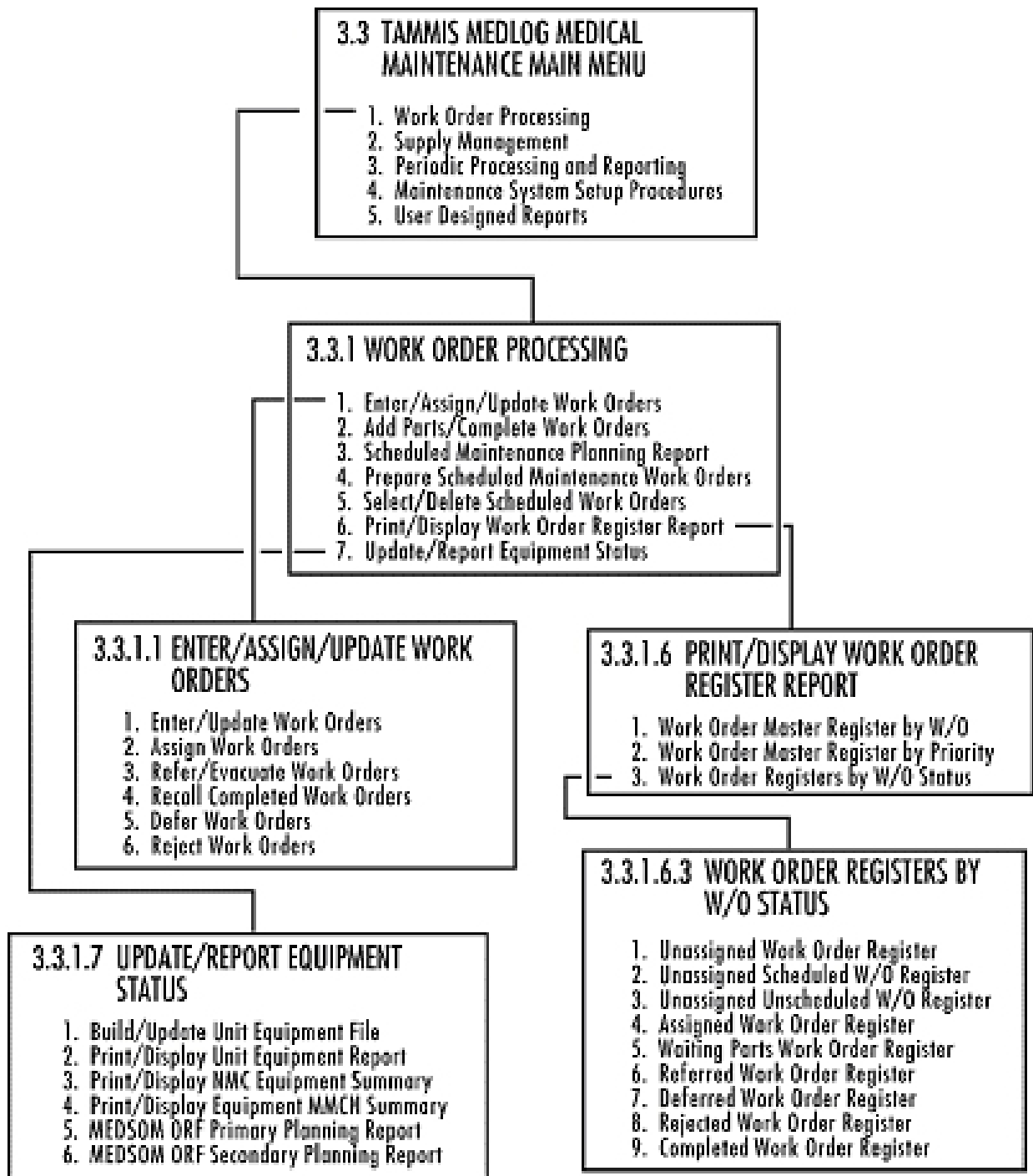


Figure 4-4. Work Order Processing menu.

(2) Add parts/complete work order (2). The second choice on submenu 3.3.1 allows you to add parts and complete work orders. All work orders must be completed from this menu item. You can only add parts to work orders with status code of "assigned" or "awaiting parts."

(3) Scheduled maintenance planning report (3). This menu choice allows you to display and print a report forecasting scheduled maintenance requirements.

(4) Prepare scheduled maintenance work orders (4). This function uses scheduled-services maintenance intervals established in the unit-equipment file to determine whether it is time for preventive maintenance (PM), calibration (CL) verification/certification, or safety testing (ST) to be performed for each piece of equipment.

(5) Select/delete scheduled work orders (5). This selection allows you to back out work orders for scheduled services generated automatically by the system or entered via the enter/update/assign-maintenance-request menu function.

(6) Print/display work order register report (6). This allows you to display and/or print a variety of special-purpose work order register reports. Selection of this function calls up submenu 3.3.1.6 which contains the following options. Refer to figure 4-4.

NOTE: The following register reports are used by the shop foreman, NCOIC, and OIC.

(a) Work order master register by work order (W/O)(1). Function number one on submenu 3.3.1.6 allows you to display and/or print a report of all work orders in the work order master file.

(b) Work order master register by priority (2). This function allows you to display and/or print a report of all work orders in the work order master file in work order priority sequence.

(c) Work order registers by work order status (3). The final selection on this submenu allows you to print reports listing work orders of a specific category or type. Selection of this function takes you to submenu 3.3.1.6.3. This sub-menu contains the following functions. Refer to figure 4-4.

1 Unassigned work order register (1). This function allows you to display and print a report of all open work orders not assigned to a team or technician.

2 Unassigned scheduled W/O register (2). This selection allows you to display and print a report of all scheduled work orders not assigned to a team or technician.

3 Unassigned unscheduled W/O register (3). This function allows you to display and print a report of all unscheduled work orders not assigned to a team or technician.

4 Assigned work order register (4). This function allows you to display and print a report of all work orders, scheduled and unscheduled, assigned to teams or technicians.

5 Waiting parts work order register (5). This option allows you to print a list of all work orders which cannot be completed because they are awaiting parts.

6 Referred work order register (6). Menu function 6 allows you to display and print -- in work order sequence--a report of work orders referred to another maintenance unit.

7 Deferred work order register (7). This option allows you to display and print a report of all work orders deferred by the user for future reactivation or deletion.

8 Rejected work order register (8). This menu function allows you to display and print a report of rejected work orders.

9 Completed work order register (9). With this menu function you can display and print a report of all completed work orders.

(7) Update/report equipment status (7). This menu item allows you to update and report the current status of equipment identified in the unit equipment file. This selection takes you to submenu 3.3.1.7 which contains the following functions. Refer to figure 4-4.

(a) Build/update unit equipment file (1). Selection of function 1 allows you to build the unit equipment file by adding equipment records. You can also update, delete, or query for any record and review significant repair records of work order history associated with each piece of equipment.

(b) Print/display unit equipment report (2). This function allows you to display and print a report listing all information associated with each piece of equipment identified in the unit-equipment-file.

(c) Print/display NMC equipment summary (3). This function displays and prints a list of unit-equipment-file equipment NMC.

(d) Print/display equipment materiel-management-control-number (MMCN) summary (4). This menu selection allows you to display and print a report of all equipment in the unit equipment file in MMCN sequence.

(e) Medical logistics operation readiness float (ORF) primary planning report (5). This function allows you to display and/or print a report listing all pieces of equipment identified in the supported-customer file with a readiness code of "A" (primary items).

(f) Medical ORF secondary planning report (6). Menu function 6 allows you to display and/or print a report listing all pieces of equipment identified in the supported-customer file with a readiness code other than "A" (secondary items).

e. Supply Management (2). This menu option on the main maintenance management menu (3.3) gives you access to a wide variety of submenus used to manage supplies. The major functions that are accessed from the Supply Management menu (3.3.2) are: maintain local stocked items and levels, display/update due-in status, prepare supply actions for supplier, load/process file from supplier, enter materiel receipts, print/display supply management reports, process/update maintenance catalog. Refer to figure 4-5 to see all the menu options available from the supply management menu 3.3.2.

f. Periodic Processing and Reporting (3). This menu option on the main maintenance management menu (3.3) allows you to display, print, and in some cases send periodic reports of interest to command units. It also allows you to process certain information periodically. The selection of this function takes you to submenu 3.3.3 (shown in figure 4-6) which contains the following functions.

(1) Maintenance performance report (1). Use this option to display and print a local performance report containing statistical data used to measure how well the local unit is performing its medical maintenance support mission.

(2) DA-2406 report preparation (2). Menu function 2 allows you choose submenu 3.3.3.2 to prepare a report equivalent to the DA-2406 (Materiel Condition Status Report), which lists all reportable equipment, lists on-hand levels, and identifies reportable equipment currently NMC.

(3) Command and control (C2) reporting (3). Use this function to choose submenu 3.3.3.3 to prepare reports of interest to command units to be sent to the appropriate command level.

(4) Perform monthly summary/purge (4). Selection of the final item of menu 3.3.3 summarizes local materiel-usage data associated with work orders which have been completed for a number of days and which exceed the system-purge criteria established during system setup. It then removes the detailed records for these completed work orders and records for other transactions whose age and status indicate they are no longer useful.

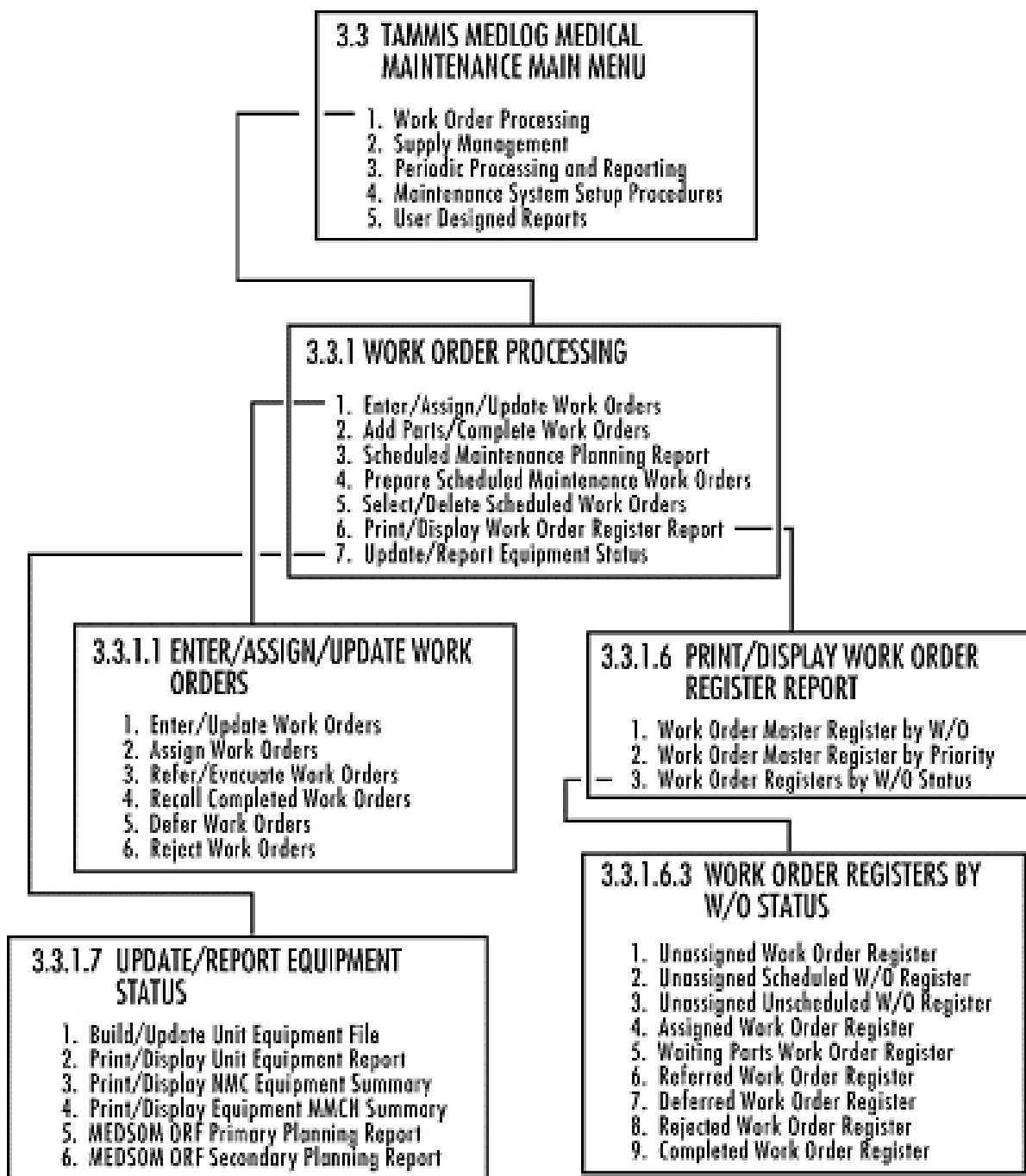


Figure 4-5. Supply Management menu and submenu options.

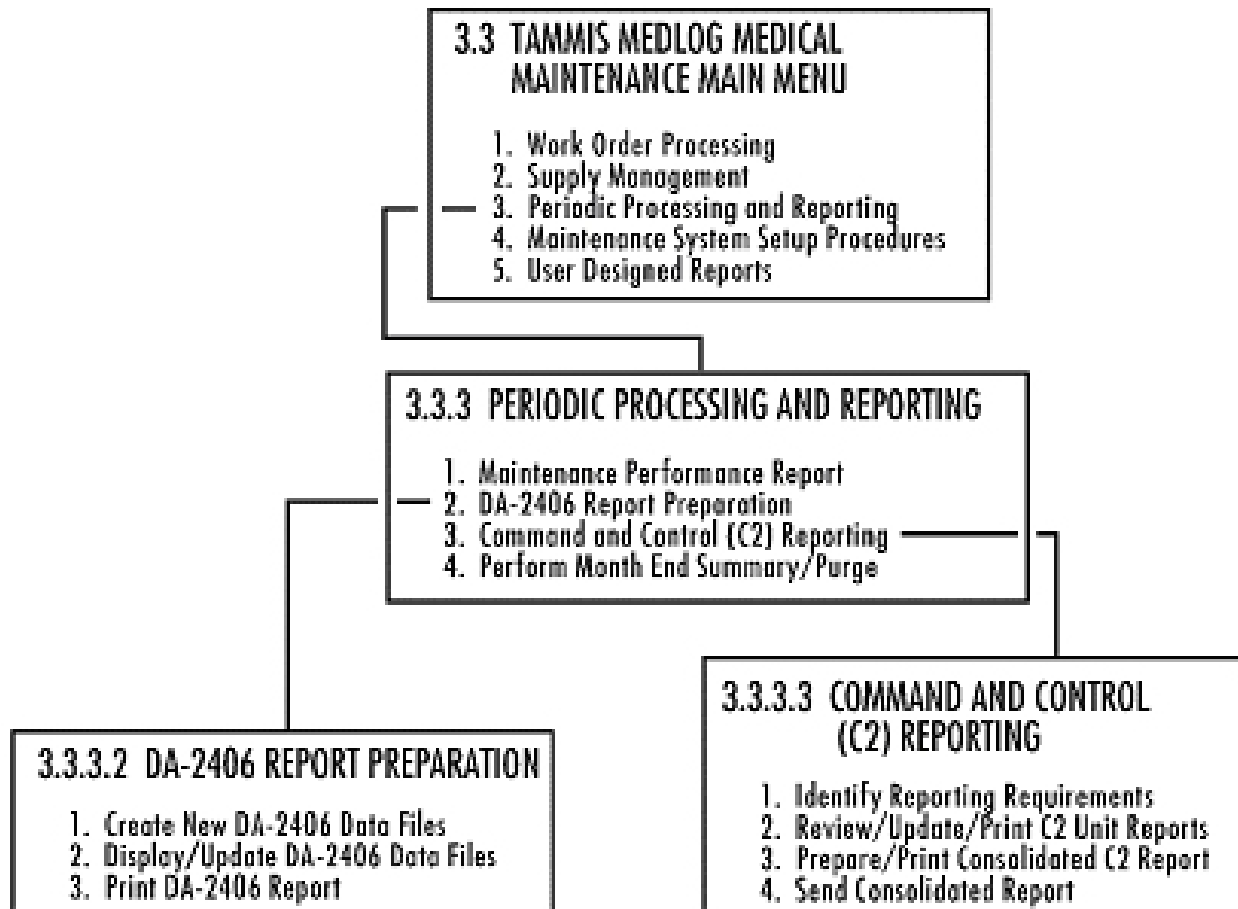


Figure 4-6. Periodic Processing and Reporting menu and submenus.

g. **User Designed Reports (5).** The "ad hoc report" tool reached from the main maintenance menu (figure 4-2) is intended to provide a mechanism for generating temporary reports. It is not intended to replace customized reports produced by the TAMMIS system. Selection of this function takes you to submenu 3.3.5 which has two functions. Refer to figure 4-2.

(1) Create, modify, and print user reports (1). This function allows you to browse through the ad-hoc-report file and to create, modify, delete, and print reports.

(2) Print user report file structure (2). With this function you can print a user-report file of all files, subsets of files, and fields in your application data base that may be included in a user report.

Continue with Exercises

EXERCISES, LESSON 4

INSTRUCTIONS: Answer the following exercises by circling the lettered response that best answers the question.

After you have answered all of the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the lesson material referenced after the solution.

1. An item of medical equipment requires extensive repair. Which of the following procedures do you use to calculate the MEL?
 - a. Determine the number of manhours required.
 - b. Determine the ratio of the item's cost to the cost of the repairs.
 - c. Estimate the direct-labor costs.
 - d. Calculate the percentage of the item's useful life remaining.

2. A piece of medical equipment failed after two months of service. It cost \$586.00 and had a 30-day warranty. The equipment has a life expectancy of eight years. What is its MEL?
 - a. 10 percent.
 - b. 25 percent.
 - c. 80 percent.
 - d. 100 percent.

3. A piece of medical equipment requires repair. It cost \$658.00 to replace. The item's percentage of useful life remaining is 60 percent. What is the MEL factor you use to determine whether or not to repair or replace the equipment?
 - a. 75 percent.
 - b. 60 percent.
 - c. 48 percent.
 - d. 40 percent.

4. You estimate it will take 12.5 manhours to repair an item of equipment. The technical inspection will require another 3.5 hours. How much direct labor do you charge the job?
 - a. 16 manhours.
 - b. 9 manhours.
 - c. 12.5 manhours.
 - d. 3.5 manhours.

5. Into which equipment classification do you place a narcotics control cabinet?
 - a. Indefinite life materiel.
 - b. Definite life materiel.
 - c. Exempt materiel.
 - d. Non-exempt materiel.

6. You are processing maintenance data into TAMMIS. You are at the maintenance system setup procedure menu (3.3.4) and select option 5. What happens?
 - a. You are immediately given a transaction screen to build the local team/technician file.
 - b. You are taken to submenu 3.3.4.1.
 - c. You are immediately given a transaction screen to specify optimal stock level constants for the system.
 - d. You are taken to the build/update local code tables menu 3.3.4.5.

7. Which TAMMIS function allows you to enter, schedule, assign, track, and report medical maintenance work orders and identify and track the status of equipment directly supported by local medical maintenance personnel?
 - a. 3.3.1.
 - b. 3.3.2.7.
 - c. 3.3.5.
 - d. 3.3.4.

8. Which one of the following options do you select to complete a work order?
 - a. Option 2 of menu 3.3.1.
 - b. Option 5 of menu 3.3.1.
 - c. Option 1 of menu 3.3.1 and then option 2 of menu 3.3.1.1.
 - d. Option 3 of menu 3.3.1.6 and then option 4 of menu 3.3.1.6.3.

9. You require a TAMMIS report on all NMC equipment in your unit. How do you get it?
 - a. Option 2 from menu 3.3, option 7 from menu 3.3.2, and option at 3.3.2.7.
 - b. Option 3 from menu 3.3, option 2 at menu 3.3.3, and option 2 at 3.3.3.2.
 - c. Option 1 from menu 3.3, option 7 from menu 3.3.1, and option 3 at 3.3.1.7.
 - d. Option 5 from menu 3.3 and option 2 from menu 3.3.5.

10. Refer to Figure 1 below. Which option do you select for a listing of NMC reportable equipment?

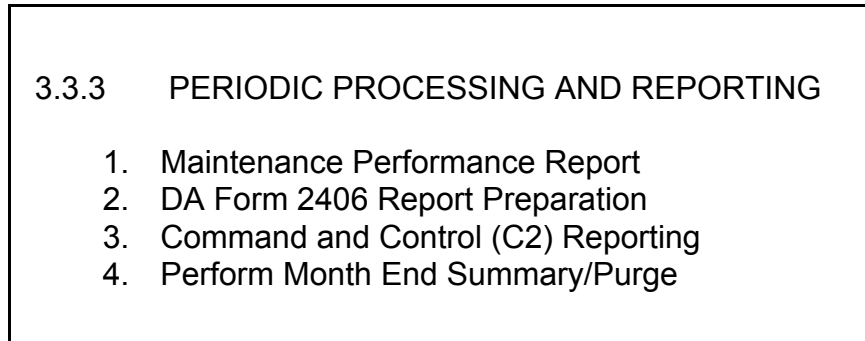


Figure 1 (for exercise 10).

- a. 1.
- b. 2.
- c. 3.
- d. 4.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 4

1. d (para 4-2a(2))
2. c (para 4-2a(4)NOTE)
3. c (para 4-2a(3), figure 4-1)
4. c (paras 4-2c(1)(b)1, 2)
5. a (para 4-3a(1)(a))
6. d (para 4-4c(5), figure 4-3)
7. a (para 4-4d)
8. a (para 4-4d(2), figure 4-4)
9. c (para 4-4d(7)(c), figure 4-4)
10. b (para 4-4f(2))

End of Lesson 4

APPENDIX
PUBLICATION EXTRACT
Maintenance Expenditure Limits for Medical Materiel
TB MED 7, 22 JUNE 1992

Use the above publication extract to take this subcourse. At the time we wrote this subcourse, these were the current publications. In your own work situation, always refer to the latest official publications.

Appendix B

LIFE EXPECTANCIES

EQUIPMENT	LIFE EXPECTANCY IN YEARS
Absorptiometer, Dual Photon, X-ray . . . . .	.8
Absorptiometer, Single Photon, X-ray . . . . .	.8
Aerator	12
Air Compressor	15
Air Sampler	10
Alcohol Analyzer . . . . .	.8
Amalgamator . . . . .	.6
Amino Acid Analyzer . . . . .	.8
Analyzer	
Alcohol . . . . .	.8
Amino Acid . . . . .	.8
Antibody Susceptibility . . . . .	.8
Blood Gas/pH . . . . .	.8
BUN . . . . .	.6
Carbon Dioxide . . . . .	.5
Carbon Monoxide . . . . .	.8
Cell	10
Clinical Chemistry . . . . .	.8
Coagulation . . . . .	.5
Defibrillator . . . . .	.8
ECG Monitor . . . . .	.5
Electrical Safety . . . . .	.8
Electrolyte . . . . .	.7
Electrosurgical	10
Enzyme . . . . .	.5
Esophageal Motility . . . . .	.7
Glucose . . . . .	.7
Hearing Aid	10
Infusion Pump . . . . .	.5
Lactate . . . . .	.7
Lithium . . . . .	.8

B-1

TB MED 7

Middle Ear	10
Nitrogen	8
Nitrous Oxide	8
Oxygen	10
Pacemaker Function	8
Platelet Aggregation	5
Pulmonary Function	10
Radioimmunoassay	8
Sodium/Potassium	8
Ultrasonic Unit	9
Vision Function	10
Anesthesia Apparatus	10
Antibiotic Susceptibility Analyzer	8
Apnea Monitor	7
Arthroscope System	10
Articulator, Dental	10
Aspirator	
Dental	10
Surgical	10
Thoracic	10
Uterine	10
Audiometer	10
Audiometric Booth	15
Auditory Function Screening Device	10
Auscultoscope	10
Autotransfusion Unit	8
Balance, Electronic	7
Balance, Mechanical	10
Basal Metabolism Unit	8
Bassinet	12
Bath	
Paraffin, Clinical Laboratory	10
Paraffin, Physical Therapy	12
Sitz	10
Water	10
Whirlpool	10
Battery Charger	10

B-2

Bed	
Air Fluidized	10
Birthing	12
Circle, Electric	12
Electric	12
Hydraulic	12
Pediatric	15
Bilirubinometer	8
Biofeedback System	8
Blast Cleaning Unit, Dental	10
Blender, Clinical Laboratory	10
Blood Cell Processor	10
Blood Flow Detector, Ultrasonic	10
Blood Gas/pH Analyzer	8
Blood Glucose Monitor	8
Blood Grouping System, Automated	9
Blood Pressure Apparatus, Electronic	7
Blood Recovery System	8
Blood Warmer	8
Booth, Audiometric	15
Bronchoscope, Fiberoptic (FO)	6
Bronchoscope, Rigid	10
BUN Analyzer	6
Cabinet, Dental (Sand Blasting)	10
Cabinet, Warming	12
Calibrator-analyzer	8
Calibrator, Audiometer	8
Calibrator/Generator ECG	8
Caloric Irrigation Unit	10
Camera	
Endoscopic	8
Fundus	8
GAMMA	8
Identification (X-ray Film)	8
Multi-image	10
Radiographic Photospot	8
Scintillation	8

TB MED 7

Surgical	8
Video	8
Capnograph	10
Carbon Dioxide	
Analyzer	5
Monitor, Exhaled Gas	10
Monitor, Transcutaneous	10
Carbon Monoxide Analyzer	8
Cardiac Output Unit	6
Cart, Resuscitation	10
Casting Unit, Dental	8
Cell	
Analyzer	10
Separator	8
Saver	8
Washer	5
Central Gas Systems	10
Centrifuge	
Cell Washing	8
Laboratory, Floor	10
Laboratory, High Speed	6
Laboratory, Table Top	8
Refrigerated	8
Chair	
Dental	10
Examination/Treatment	10
Optometry	10
Podiatric	10
Chamber, Hyperbaric	15
Chest, Medical Instrument and Supply Sets	16
Chloridometer	10
Chromatography Equipment, Gas	10
Circulatory Assist Unit, Intra-Aortic Balloon	8
Cleaner	
Bedpan	10
Dental, Steam	8
Ultrasonic	10

B-4

Vacuum	8
Vacuum, Surgical	6
Clinical Chemistry Analyzer	8
Coagulation Analyzer	5
Coagulation Timer	8
Coagulator, Sonic	10
Collector, Dust	10
Collimator, Radiographic	10
Colonoscope	5
Color Vision Tester	12
Colposcope	7
Compression Unit, Intermittent	10
Compressor, Air	12
Co-oximeter	10
Counter	
Blood Cell	10
Cell	5
Colony	8
GAMMA	8
Particle	8
Pill	10
Platlet	8
Scintillation	8
Crusher, Syringe and Needle	10
Cryogenic Blood Banking Equipment	10
Cryostat	10
Cryosurgical Unit	10
Cryosurgical Unit, Ophthalmic	10
CT Scanner	8
Curing Unit, Dental, Acrylic	8
Cutter-aspirator, Vitrectomy	8
Cutter, Bone	10
Cutter, Cast	8
Cutter-vacuum, Orthopedic Cast	6
Cystic Fibrosis Screening Devices	10
Cystometer	10
Cystoscope	10
Cystourethroscope	10

TB MED 7

Darkroom, X-ray	6
Defibrillator	8
Defibrillator Analyzer	8
Defibrillator/Monitor	8
Demineralizer	8
Densitometer, Recording	8
Dental Engine	8
Dental Operating and Treatment Unit	10
Depth Perception Apparatus	10
Dermatome	10
Diathermy Unit	10
Diathermy Unit, Ultrasonic	12
Diluter	10
Dispenser, Paraffin	10
Distilling Apparatus	15
Dosimeter, Radiation	10
Dosimeter, Sound	10
Drill, Bone	10
Drill, Cranial	10
Dryer, X-ray Film	10
Dynamometer	15
Dynamometer Exercise System	12
ECG Monitor	10
ECG Monitor Analyzer	5
EEG Monitor	10
Electrical Safety Analyzer	8
Electrocardiograph	
Interpretive	8
Multichannel	8
Three Channel	8
Electrocautery Unit	10
Electroencephalograph	10
Electrolyte Analyzer	7
Electromyograph	10
Electronystagmograph	8
Electro-oculograph	8
Electrophoresis Unit	8
Electroretinograph	8

Electrosurgical Analyzer 10

Electrosurgical Unit 8

Endoscope 10

Endoscopic Power Supply 10

ENT Treatment Unit 12

Enzyme Analyzer 5

Ergometer 10

Esophageal Motility Analyzer 7

Evoked Potential Unit 10

Exerciser, Physical Therapy 15

Eye Movement Monitor 10

Fetal Heart Detector 8

Fetal Monitor 10

Fiberoptic Light Instruments 8

Fibrometer 10

Filter/Tank Unit, Pharmaceutical 6

Fluorometer 10

Freezer

 Blood Cell 10

 Blood Plasma 12

 Laboratory 10

Furnace, Dental 8

GAMMA Camera 8

GAMMA Counter 8

Gas Sampling Unit 10

Gas Scavenger System, Anesthesia Unit 10

Gastroscope, Flexible 5

Gastroscope, Rigid 5

Generator, Hydrogen 10

Glucose Analyzer 7

Grinding/Polishing Machine, Dental 8

Headlight 12

Hearing Aid Analyzer 10

Heart-Lung Bypass System 8

Heart Rate Monitor 10

Heat Sealing Unit 10

Heat Treating Unit, Ophthalmic 10

Heater, Heat Treatment Pad 10

TB MED 7

Hemodialysis Unit	5
Hemoglobinometer	10
Hood	
Chemical	10
Dental Laboratory	10
Fume	10
Isolation, Laminar Air Flow	10
Microbiological	12
Humidifier	10
Hydrocollator	10
Hyperbaric Chamber	15
Hypodermic Injection Unit	8
Hypo/Hyperthermia Unit	10
Hypothermia Apparatus	10
Illuminator, X-ray Film, Motorized	8
Immunodiffusion Equipment	10
Incubator	
Aerobic	10
Anaerobic	10
Infant	10
Infant, Transport	8
Test Tube, Laboratory	10
Infusion Controller	10
Infusion Pump	10
Infusion Pump Analyzer	5
Injector	10
Injector, Angiographic	10
Insufflator	10
Irrigator	10
Isokinetic Exercise Equipment	12
Lactate Analyzer	7
Lantern, Color Perception Testing	12
Laparoscope	10
Laser	
Argon	10
Carbon Dioxide	10
Dye	10
Krypton	10

B-8

Nd:YAG	10
Ophthalmic	10
Lathe, Dental Laboratory	.8
Lavage Unit, Dental, Oral	.8
Lavage Unit, Surgical	.8
Lensometer	12
Lift, Patient	10
Light (Lamp)	
Bilirubin	10
Dental	10
Dental Activator	.8
Examination	10
Infrared	10
Fiberoptic	.8
Microscopic	10
Phototherapy	10
Surgical	10
Ultraviolet	10
Line Isolation Monitor	25
Linear Accelerator	.7
Liquid Oxygen System	10
Lithotripter, Extracorporeal	.5
Lithotripter, Ultrasonic	.5
Lithium Analyzer	.8
Loader, X-ray Film	.6
Magnet, Eye	10
Magnetic Resonance Imaging Equipment	.5
Manikin	.6
Marker, Ocular	.8
Mercury Monitor/Detector	10
Metal Detector, Magnetic	14
Meter, Foot Candle	.8
Meter, Leakage, RF	.8
Microscope	
Contact Lens	.8
Electron	10
Laboratory	12
Operating	12

TB MED 7

Phase Contrast	12
Stereo	12
Ultraviolet	12
Microsurgical Instruments	10
Microtome	
Cryostat	10
Rotary	10
Middle Ear Analyzer	10
Mixer, Clinical Laboratory	10
Mixer, X-ray Film Chemistry	10
Mixer-Investor, Vacuum	8
Moist Therapy Pack Conditioner	10
Monitor	
Apnea	7
Blood Glucose	8
Carbon Dioxide, Exhaled Gas	10
Carbon Dioxide, Transcutaneous	10
ECG	7
EEG	8
Eye Movement	8
Fetal Heart, Ultrasonic	7
Heart Rate	7
Oxygen, Transcutaneous	8
Pressure	8
Pulse	7
Radiation	8
Respiration	10
Temperature	8
Transcutaneous	7
Nebulizer, Pneumatic	10
Nebulizer, Ultrasonic	10
Nephroscope	10
Nitrogen Analyzer	8
Nitrous Oxide Analyzer	8
Oculoplethysmograph	8
Ophthalmometer	11
Organ Preservation System	10
Osmometer	10

B-10

Oven, Dental	8
Oven, Drying	10
Oximeter	10
Ear	10
In Vitro	10
Pulse	5
Oxygen	
Analyzer	10
Blender	10
Concentrator	8
Meter	8
Oxygen-Air Proportioner	10
Oxygenator	10
Pacemaker, Cardiac, External	5
Pacemaker, Function Analyzer	8
Package Sealer	10
Pad, Circulating Fluid, Localized Heating/Cooling	10
Percussor	5
Perimeter	10
Peritoneal Dialysis Unit	8
pH Meter	10
Phonocardiograph	8
Phorometer	12
Phoropter	12
Photometer, Flame	8
Photometer, Reflectance	10
Phototachometer	5
Phototherapy Unit	10
Phototherapy Unit, Hyperbilirubinemia	8
Physiologic Monitor System	
Acute Care	7
Cardiac Catheterization	7
Neonatal	7
Stress Exercise	7
Pill Counter, Pharmaceutical	10
Pipette, Automatic	10
Platelet Aggregation Analyzer	5
Plethysmograph	10

TB MED 7

Pneumatic Tester	8
Pneumothorax Unit	12
Porcelain Furnace, Dental	10
Pressure Monitor	10
Pressure Pad, Alternating	10
Processor	
X-ray Film, Automatic, Dental	8
X-ray Film, Automatic, Full Size	6
X-ray Film, Automatic, Table Top	7
Projector	
Chart, Eye	10
Cine	10
Microscope	12
Ophthalmic	10
Prophylactic Unit, Dental, Ultrasonic	6
Pulmonary Function Analyzer	10
Pulse Monitor	10
Pulse Oximeter	5
Pump	
Breast	10
Enteral Feeding	10
Infusion	10
Suction	10
Syringe, Oxytocin	10
Vacuum	10
Volumetric	10
Radiation Counter	8
Radiation Monitor	8
Radiographic/Fluoroscopic Unit, General Purpose	10
Radiographic/Fluoroscopic Unit, Mobile	8
Radiographic Table Systems	10
Radiographic Unit	
Chest	8
Dental	8
General Purpose (to 500 mA)	12
General Purpose (over 500 mA)	8
Mammographic	10
Mobile	8

Therapeutic	8
Tomographic - (Computer Assisted)	8
Tomographic - (Not Computer Assisted)	10
Radiometer	8
Radiometer, Ultraviolet	8
Radiotherapy Unit	8
Recorder	
Chart	10
Echocardiographic	8
Long Term	6
Long Term ECG, Portable	5
Tape	8
Video Disk	8
Refractometer	10
Refractor, Ophthalmologic	10
Refrigerator	
Biologic	12
Blood	12
Blood Bank	10
Cold Pack Therapy	12
Laboratory	12
Morgue	12
Refrigerator/Freezer	12
Regulator, High Pressure, Gas	10
Renal Transport Unit	8
Respiration Monitor	10
Resuscitator, Pulmonary, Gas	6
Resuscitator, Pulmonary, Manual	10
Rotator	10
Sanitizer	12
Saw	
Autopsy	10
Bone	10
Surgical	10
Scale	
Autopsy	12
Bed	10
Floor	14

TB MED 7

Infant	15
Laboratory	8
Scanner	
Computed Tomography (CT)	5
Long-term Recording, ECG	7
Ultrasonic, General Purpose	8
Scintillation Camera	8
Scintillation Counter	8
Sealing Machine	10
Sealing Machine, Unit Dose	10
Sensitometer, Radiographic	10
Shaker, Laboratory	10
Sharpener, Dental	7
Sharpener, Microtome Knife	10
Simulator	
Arrhythmia	7
ECG	10
Medical Functions	8
Radiotherapy	10
Sink, Portable	12
Sink, Surgical Scrub	12
Slide Stainer	10
Slit Lamp	10
Sodium/Potassium Analyzer	8
Spectrometer, Mass	8
Spectrophotometer	8
Sphygmomanometer, Electronic	10
Spirometer	10
Stapler, Automatic, Suture	5
Sterilizer	
Agar	10
Ethylene Oxide	12
Inoculating Loop	15
Steam	12
Steam/Ethylene Oxide	12
Steam, Table Top	10
Stethoscope, Electronic	10
Stethoscope, Ultrasonic	7

B-14

Stimulator	
Bone Growth	10
Nerve	10
Visual	18
Stirrer	10
Stretcher	15
Suction Apparatus	10
Suction/Pressure Unit	10
Syringe Pump, Oxytocin	10
Table	
Examination/Treatment	15
Fracture	15
Nuclear Medicine	10
Obstetrical	20
Operating	15
Orthopedic	10
Physical Therapy	15
Urological	15
Tachistoscope	10
Tachometer, Strobe	8
Telemetry Unit	10
Temperature Monitor	8
Tent, Oxygen	8
Test Set, Electrosurgical	8
Tester	
Color Vision	12
Current Leakage	8
Defibrillator	8
Pulp	8
Thermometer, Electronic	5
Thermoregulator	8
Thyroid Uptake System	10
Timer	10
Timer, Coagulation	8
Tissue Embedding Equipment	10
Tissue Processor	10
Titration	10
Tonometer	10

TB MED 7

Tourniquet, Pneumatic	10
Traction Unit	10
Transcutaneous Monitor	7
Transilluminator	12
Treadmill	8
Turning Frame, Orthopedic	10
Tympanometer	10
Ultrasonic Cleaning Systems	10
Ultrasonic Unit	
Analyzer	9
Dental Prophylaxis	6
Diagnostic	12
Ultrasound Unit, Therapeutic	7
Unit Dose Packing System	10
Urinary Collection Unit, Precision Measurement	8
Urodynamic Measurement System	7
Vacuum Mixing Device, Dental	8
Vacuum System, Dental	12
Vaporizer, Anesthesia Unit	10
Vectorcardiograph	7
Ventilator	
Air Evacuation	10
Anesthesia Unit	10
Neonatal	10
Volume	10
Vibrator, Mixer, Dental	10
View Box	
Rh Typing	10
X-ray	12
X-ray, Motorized	10
Vision Function Analyzer	10
Vision Tester, Color	12
Vitrectomy Unit	7
Warmer	
Blood	8
Radiant, Infant	10
Slide, Histology	10
Solution	12

B-16

Washer	
Bedpan	10
Labware . . . . .	.8
Surgical Instruments . . . . .	.8
Washer/Sterilizer . . . . .	.8
Water Bath, Electric	10
Welding Unit, Orthodontic . . . . .	.8
Wheelchair, Manual . . . . .	.6
Wheelchair, Powered . . . . .	.5
X-ray	
Absorptiometer, Dual Photon . . . . .	.8
Absorptiometer, Single Photon . . . . .	.8
Calibration/Verification System . . . . .	.8
Chemical Mixer	10
Film Changer, Cassette	10
Film Dryer . . . . .	.8
Film Duplicator . . . . .	.8
Film Handling Equipment, Automatic, Daylight . . . . .	.6
Film Processor . . . . .	.8
Film Processor, Automatic, Cline . . . . .	.6
Film Processor, Automatic, Dental . . . . .	.8
Film Processor, Automatic, Full Size . . . . .	.6
Film Processor, Automatic, Table Top . . . . .	.7

End of Appendix