

This copy is a reprint which includes current pages from Changes 1 through 3.

TB 38-750-2

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**MAINTENANCE MANAGEMENT PROCEDURES
FOR
MEDICAL EQUIPMENT**

**APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED**

HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1987

CHANGE }
 No. 5 }

HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON, DC, 1 AUGUST 2013

**MAINTENANCE MANAGEMENT PROCEDURES
 FOR MEDICAL EQUIPMENT**

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TB 38-750-2, 12 April 1987, is changed as follows:

1. Remove old page and insert new page as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove pages

Insert pages

2-27

2-27

2-28

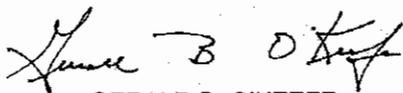
2-28

2. File this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
 Chief of Staff

Official:



GERALD B. O'KEEFE
*Administrative Assistant to the
 Secretary of the Army*

Distribution:

Active Army, Army National Guard of the United States, and U.S. Army Reserve: To be distributed in accordance with the initial distribution number 341113, requirements for TB 38-750-2, Maintenance Management Procedures for Medical Equipment.

Record the DATE INSPECTED and NEXT INSPECTION DUE date in the corresponding blocks. Print the name of the technician performing the tests in the INSPECTED BY block. The technician performing the test legibly signs in the SIGNATURE block.

d. Disposition.

(1) If no deficiencies are noted, the DA Form 5624-R will be maintained on file pending the next certification of performance inspection. DA Form 5624-R will be locally reproduced on 8 ½ x 11 inch paper. A copy for local reproduction is located at the back of this bulletin.

(2) If deficiencies are noted, the DA Form 5624-R will be attached to the repair work order requesting corrective action. The DA Form 5624-R will be maintained on file pending the next certification of performance inspection.

2-12. DD Form 2163 (Medical Equipment Verification / Certification)

a. Purpose. The DD Form 2163 label will be affixed to all items of biomedical equipment requiring verification or certification to:

Serve as a visual indicator to operators that the medical device they are using has been checked by qualified personnel.

(1) Indicate the date the next verification or certification is scheduled/due.

(2) Identify individual who performed this action by Tech Code.

b. Use. DD Form 2163 is to be used by DoD medical activities and distribution will be limited to these activities. This label will be used by all medical activities.

c. DMLSS Preparation. If available, DMLSS will print DD 2163

d. Manual Preparation. The person who performs the verification or certification action will complete the label (DD Form 2163) as indicated below. Entries will be legibly made with a blue, blueblack, or black ballpoint pen, or indelible pencil. Felt-tip pencils and pens or grease pencils will not be used. Completion instructions are by block title. This is an inspectable item and emphasis must be placed on it to ensure this form is properly completed.

(1) *CERTIFIED BY.* Enter the Tech Code of the person performing the verification or certification procedure.

(2) *DATE DUE.* Enter the calendar month and year on which the next verification or certification procedure is due.

(a) The date will be entered using the three alpha characters for the month and two digit numerical year. (e.g. JUN14.)

e. Disposition. The label (DD Form 2163) will, when possible, be affixed to the front of the calibrated instrument or in a conspicuous place when there is no surface that can be considered the front. When the label cannot be affixed to equipment because the item is too small or because its intended use prohibits the label, the governing safety authority for the location needs to determine which of the following methods will suffice or develop one of their own:

(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 item.

(3) Affix the label to the outside lid of the case. (This applies to medical instruments and devices routinely kept individual cases.) Labels previously affixed to the equipment will be removed and replaced with a new label.

MEDICAL EQUIPMENT VERIFICATION / CERTIFICATION	
CERTIFIED BY	DATE DUE
(DD FORM 2163, 3 JUL 2012)	

(Figure 2-15)

2-13. DD Form 2164 (X-ray Verification/Certification Worksheet)

- a. Purpose.* The DO Form 2164 provides a record of x-ray verification, certification, and corrective action taken.
- b. Use.* DO Form 2164 is used to record action taken in union with verification and certification of x-ray systems.
- c. Preparation.* One copy of the DO Form 2164 will be completed by the person performing the verification and certification for each x-ray system. Spaces not requiring entries due to the configuration or type of the equipment will be annotated as "not applicable" or N/A. Entries will be legibly made with a blue or blue-black ballpoint pen or indelible pencil. Felt-tip pens and pencils or grease pencils will not be used.
 - (1) *Heading.* Enter the name and LOCATION of the unit or activity, building and room number where the system is located, work order number, DATE AND TIME OF SERVICE, and DATE NEXT SERVICE DUE.
 - (2) *ACTION* Complete by placing an X in the appropriate block when the service has been completed.
 - (3) *Section 1, EQUIPMENT IDENTIFICATION.* Enter the MANUFACTURER, MODEL, type, style, size, focal spots, or other designation placed on the components by the manufacturer, and the SERIAL NUMBER assigned by the manufacturer in the space provided.
 - (4) *Section II, VISUAL INSPECTION OF EQUIPMENT.* Visually inspect the items listed. If no action is needed, place an X in the NOT REQUIRED column. If action is required, annotate the TYPE REQUIRED. When the required action has been performed, indicate so in the ACTION TAKEN column and enter the INITIAL(s) AND DATE.
 - (5) *Section III, OPERATIONAL TESTING OF EQUIPMENT.* Perform operational checks on items listed. If no operating problems are found, place an X in the NOT REQUIRED column. If action is required, enter the required action in the TYPE REQUIRED column. When the required action is completed, indicate so in the ACTION TAKEN column and enter the initial(s) of the technician performing the action and the date in the INITIAL AND DATE column.
 - (6) *Section IV, RADIOGRAPHIC CERTIFICATION.* Perform the indicated procedures and enter the results in the spaces provided. Record the line voltage in item 21 (single phase) or item 22 (three phase) as appropriate.
 - (a) *Item 23, TRANSFORMER BALANCE.* This test is performed only on an annual basis.
 - (b) *Item 24, EXPOSURE TIMER TEST.* In the TIME SETTING ON CONTROL blocks, enter the time setting that is indicated on the control. In the ACTUAL TIME MEASURED blocks, enter the measured exposure time.
 - (c) *Item 25, KILOVOLTAGE AND MILLIAMPERAGE VERIFICATION.* The kilovoltage (kVp), as indicated on the x-ray control, is pre-printed in the top blocks. The milliamperage, as indicated on the control panel, is to be entered in the extreme left side of the form only in the blocks preprinted with MA. The highest mA indicated on the control panel will be entered in the uppermost block. All other blocks will have the mA indicated in descending value with the bottom block containing the lowest mA station that is indicated on the control panel. The blocks containing the diagonal lines will be used for recording the actual milliamperage and kilovoltage measured for each mA station and kVp station on the control. In the top portion of the blocks with diagonal line, enter the kilovoltage as measured for each value of kVp that is indicated. In the bottom portion of the blocks, enter the mA as measured for each mA station indicated on the control.
 - (d) *Item 26, PENETROMETER FILM DENSITY.* Enter a check in the correct box as to whether the penetrometer film density is satisfactory or not.
 - (e) *Item 27, RADIOGRAPHIC PHOTO-TIMER TEST.* Indicate the type of exposure variation received with a film in the table BUCKY, CHEST unit, or OTHER photo timing device by exposing a phantom at 90 kVp, 200 mA with density controls in DARK (+), NORMAL, LIGHT (-). Record the actual mA in the appropriate block.

CHANGE

No. 4



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 1 JUNE 2006

MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT

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TB 38-750-2, 12 April 1987, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjustment to the identification number.

Remove pages

i and ii
2-19 through 2-28
A-1 and A-2
DA Form 5621-R, Jan 87
DA Form 5622-R, Jan 87
DA Form 5624-R, Jan 87

Insert pages

i and ii
2-19 through 2-28
A-1 and A-2
DA Form 5621-R, May 06
None
DA Form 5624-R, May 06

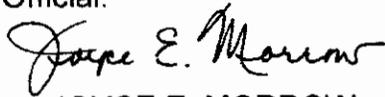
2. File this change sheet in the front of the publication for reference purposes.

TB 38-750-2

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
*General, United States
Army
Chief of Staff*

Official:



JOYCE E. MORROW
*Administrative Assistant to the
Secretary of the Army*

Distribution:

Active Army, Army National Guard of the United States, and U.S. Army Reserve: To be distributed in accordance with the initial distribution number 341113, requirements for TB 38-750-2, Maintenance Management Procedures for Medical Equipment.

**MAINTENANCE MANAGEMENT PROCEDURES
FOR MEDICAL EQUIPMENT**

You can help improve this bulletin. If you find any mistakes or if you know a way to improve procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 (Recommended Changes to Equipment Technical Publications) located in the back of this manual to: Commander, U.S. Army Medical Materiel Agency, ATTN: MCMR-MMO-AL, Frederick, MD 21702-5001. A reply will be furnished directly to you.

Approved for public release:
distribution is unlimited

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Section II. VERIFICATION AND TEST RECORDS OR FORMS

2-7. General

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

2-8. DA Form 5621-R (Medical Equipment Electrical Safety)

a. Purpose. The DA Form 5621-R provides a record of electrical leakage current measurements for all medical equipment (see figures 2-10 and 2-11).

b. Use. The DA Form 5621-R will be used to record current leakage measurements taken on medical equipment when the equipment fails the electrical safety test.

c. Preparation. (Completion instructions by block title.) Entries will be legibly made with a blue, blue-black, or black ballpoint pen or indelible pencil. Felt-tip pens, pencils, or grease pencils will not be used. DA Form 5621-R will be locally reproduced on 8 1/2- by 11-inch paper. A copy for local reproduction is at the back of this bulletin.

(1) HOSPITAL/AREA/LOCATIONS. Enter the unit or activity, the area, section, department and room and building number where the equipment is located.

(2) END ITEM NOMENCLATURE. List equipment nomenclature.

(3) MFR. Enter the generic manufacture of the end item.

(4) MDL. Enter the model number of the end item. Use the manufacturer's generic model number rather than a catalog number.

(5) SERIAL #. List the serial number of the end item. If a component of the end item fails the performance test, indicate the components serial number in the REMARKS block.

(6) ECN. Record the Equipment Control Number (ECN) or locally assigned index number.

(7) TYPE OF EQUIPMENT. Check the block that corresponds to the type of equipment; PORTABLE or FIXED.

(8) TEST I-GROUND RESISTANCE. Measure and record the resistance from the ground pin of the power plug to any exposed conductive surface of the equipment being evaluated. This test is performed on portable medical equipment with and without patient connected leads and on fixed equipment during initial installation.

(9) REMARKS. Use to document any additional information or comments that do not fit elsewhere.

(10) TEST II-CHASSIS LEAKAGE CURRENT: GROUNDED. Measure and record leakage current with equipment in the ON and OFF mode. This test is performed on portable medical equipment with and without patient connected leads and on fixed equipment during initial installation and periodically thereafter.

(11) TEST II-CHASSIS LEAKAGE CURRENT: GROUND OPEN. Measure and record leakage current on equipment in the GROUND LIFTED mode. This test is performed on portable medical equipment with and without patient connected leads and on fixed equipment during initial installation.

(12) PATIENT LEAD INPUT. Check the appropriate box for the type of patient lead inputs.

(13) TEST III-LEAD TO GROUND. For equipment with isolated patient lead input, measure the leakage current between each patient electrode (individually) and electrical ground with equipment in the ON position GROUNDED and GROUND OPEN modes. For equipment with nonisolated patient lead input, measure and record leakage current between all patient electrodes (connected together in common) and electrical ground with equipment in the ON position GROUNDED and GROUND OPEN modes. This test is performed on medical equipment with patient connected leads.

(14) TEST IV-BETWEEN LEADS. Measure and record the leakage current between all combinations of patient electrodes with equipment in the ON position GROUNDED and GROUND OPEN modes. For electrocardiographs and electrocardiographic monitors only, the phrase "between all combinations of patient electrodes" is interpreted to mean "between the right arm and right leg, between the left arm and right leg, and right arm and left arm electrodes, while the unit is in the Lead I or normal measuring mode." This test does not apply to equipment without patient electrodes.

MEDICAL EQUIPMENT ELECTRICAL SAFETY																													
For use of this form, see TB 38-750-2; the proponent agency is OTSG.																													
HOSPITAL/AREA/LOCATION: <i>28TH CSH, OR #1</i>																													
END ITEM NOMENCLATURE: <i>Defibrillator</i>																													
MFR: <i>Medtronic</i>	MDL: <i>Lifepak 12</i>	SERIAL: <i>141303XX</i>	ECN: <i>126XX</i>																										
TYPE OF EQUIPMENT: (Check One) <input checked="" type="checkbox"/> PORTABLE (P)		<input type="checkbox"/> FIXED (F)																											
TEST I - GROUND RESISTANCE		P = 0.50 OHM	REMARKS																										
		<i>.23 Ω</i>	SAMPLE																										
TEST II - CHASSIS LEAKAGE CURRENT		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">GROUNDED</th> <th colspan="2">GROUND OPEN</th> </tr> <tr> <th>ON</th> <th>OFF</th> <th>ON</th> <th>OFF</th> </tr> </thead> <tbody> <tr> <td>P = N/A</td> <td>F = 40Mv/500Mv</td> <td>P = 300uA</td> <td>F = 5mA</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>107uA</i></td> <td style="text-align: center;"><i>107uA</i></td> </tr> </tbody> </table>		GROUNDED		GROUND OPEN		ON	OFF	ON	OFF	P = N/A	F = 40Mv/500Mv	P = 300uA	F = 5mA			<i>107uA</i>	<i>107uA</i>										
GROUNDED		GROUND OPEN																											
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PATIENT LEAD INPUT: (Check One - Applies to Tests III, IV, & V) <input checked="" type="checkbox"/> ISOLATED (I)		<input type="checkbox"/> NONISOLATED (N)																											
TEST III - LEAD TO GROUND		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">I = 10uA</th> <th colspan="2">I = 50uA</th> </tr> </thead> <tbody> <tr> <td>RA</td> <td style="text-align: center;"><i>2 uA</i></td> <td rowspan="4" style="text-align: center; vertical-align: middle;">N/A</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">N/A</td> </tr> <tr> <td>LA</td> <td style="text-align: center;"><i>1 uA</i></td> </tr> <tr> <td>RL</td> <td></td> </tr> <tr> <td>LL</td> <td style="text-align: center;"><i>2 uA</i></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> </tr> <tr> <th colspan="2">I = 100uA</th> <th colspan="2">I = 100uA</th> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table>		I = 10uA		I = 50uA		RA	<i>2 uA</i>	N/A	N/A	LA	<i>1 uA</i>	RL		LL	<i>2 uA</i>	C				I = 100uA		I = 100uA				N/A	N/A
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TEST IV - BETWEEN LEADS		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">I = 10uA N = 50uA</th> <th colspan="2">I & N = 50uA</th> </tr> </thead> <tbody> <tr> <td>RA-RL</td> <td style="text-align: center;"><i>1 uA</i></td> <td rowspan="3" style="text-align: center; vertical-align: middle;">N/A</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">N/A</td> </tr> <tr> <td>LA-RL</td> <td style="text-align: center;"><i>2 uA</i></td> </tr> <tr> <td>RA-RL</td> <td style="text-align: center;"><i>1 uA</i></td> </tr> </tbody> </table>		I = 10uA N = 50uA		I & N = 50uA		RA-RL	<i>1 uA</i>	N/A	N/A	LA-RL	<i>2 uA</i>	RA-RL	<i>1 uA</i>														
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TEST V - ISOLATION TEST		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">I = 50uA</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>RA</td> <td style="text-align: center;"><i>3 uA</i></td> <td rowspan="4" style="text-align: center; vertical-align: middle;">N/A</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">N/A</td> </tr> <tr> <td>LA</td> <td style="text-align: center;"><i>11 uA</i></td> </tr> <tr> <td>RL</td> <td></td> </tr> <tr> <td>LL</td> <td style="text-align: center;"><i>11 uA</i></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		I = 50uA				RA	<i>3 uA</i>	N/A	N/A	LA	<i>11 uA</i>	RL		LL	<i>11 uA</i>	C											
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C																													
TESTED BY: (Print or Type) <i>R. Lugnut</i>	GRADE/RANK: <i>SGT</i>	DATE TESTED (YYYYMMDD) <i>20060520</i>	WORK ORDER #: <i>200605200237</i>																										

Figure 2-10. DA Form 5621-R, Medical Equipment Electrical Safety (Front).

INSTRUCTIONS FOR COMPLETING DA FORM 5621

GENERAL

HOSPITAL/AREA/LOCATION: Identify the owning medical treatment facility and location of the end item within the facility, i.e. Brooke Army Medical Center, Main OR, Room 3.

END ITEM NOMENCLATURE: Generic nomenclature for the end item.

MFR: The manufacturer of the end item.

MDL: The model number of the end item. Use the manufacturer's generic model identification rather than a catalog number.

SERIAL #: The serial number of the end item. If a component of the end item fails the performance test, indicate the components serial number in the REMARKS block.

ECN: Equipment Control Number or locally assigned index number.

TYPE OF EQUIPMENT: Check the appropriate block. Patient lead input refers to the way in which the patient connected leads are electrically connected to the equipment.

TESTED BY/DATE TESTED: Legibly print or type this information.

WORK ORDER #: The control number assigned to the work order initiated to correct the equipment safety failures identified during the performance test.

PERFORMANCE TESTING

The values indicated on this form are IAW NFPA 99, and indicate the maximum acceptable limits for each test and tested type of equipment. Additional instructions can be found in NFPA 99, Chapter 8.

ABBREVIATIONS: (Perform only those tests required by the appropriate type of equipment being tested. Refer to the abbreviations below.)

P - Portable Equipment.

I - Portable Equipment with Isolated Patient Connected Leads.

N - Portable Equipment with Nonisolated Patient Connected Leads.

F - Fixed Equipment.

PORTABLE EQUIPMENT W/O PATIENT CONNECTED LEADS.

Perform TEST I & II only. *

PORTABLE EQUIPMENT W/ PATIENT CONNECTED LEADS.

Perform TEST I thru V. * (Test III & V - the number of lead tests will depend on the type of equipment being tested i.e., 12 lead vs. 3 lead equipment. Use the REMARKS block if additional space is required to document the results).

FIXED EQUIPMENT.

Perform TEST I & TEST II - GROUND LIFTED during initial installation.

After initial installation periodically only perform Test II - GROUNDED (Critical Care Areas - 40mV; General Care Areas - 500mV).

* TEST II - GROUND LIFTED MAXIMUM LIMIT EXCEPTIONS:

Exception 1 - 250mA maximum acceptable limit when equipment is individually scheduled by serial number or index number for periodic testing.

Exception 2 - 500mA maximum acceptable limit when the equipment is special purpose; safety testing will be performed quarterly.

(15) TEST V-ISOLATION TEST. Measure the leakage current between each patient electrode (individually) and electrical hot with equipment in the ON and OFF positions GROUNDED mode. Performed on medical equipment with isolated patient connected leads.

(16) TESTED BY. Enter the technician's name who performed the tests.

(17) GRADE/RANK. Enter the grade or rank of the technician who performed the tests.

(18) DATE TESTED. Enter the date the testing was performed.

(19) WORK ORDER #. The control number assigned to the work order initiated to correct the equipment safety failures identified during the performance test.

d. Disposition. The DA Form 5621-R with noted deficiencies will be attached to the DMLSS work order requesting corrective action. After deficiencies have been corrected maintain DA Form 5621-R in the current files area for one year.

2-9. DA Form 5622-R (Leakage Current Measurements, EKG)

a. Purpose. DA Form 5622-R is rescinded, and replaced with DA Form 5621-R Medical Equipment Electrical Safety, May 2006. Refer to paragraph 2-8 for instructions on completing DA Form 5621-R.

2-10. DA Label 175 (Defibrillator Energy Output Certification).

a. Purpose. The Defibrillator Energy Output Certification label provides a record for the certification of energy output (see figure 2-12).

b. Use. DA Label 175 will be used by medical units for documenting energy output on all defibrillators.

c. Preparation. (Completion instructions by column title.)

Labels previously affixed to the equipment will be voided, removed, and destroyed, or new labels will be placed over the old labels.

(1) DA Label 175 will be 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 delivered entry levels in joules (WATT-SECONDS) adjusted to the correct control setting in item (2) above.

NOTE Repeat items (2) and (3) for all output levels indicated on the defibrillator control.

(4) DATES. Enter the date of CERTIFICATION and the EXPIRATION date.

(5) INSPECTOR. Record legibly, the name of the person performing output certification.

d. Disposition. Affix DA Label 175 as close as possible to the control panel on the defibrillator. When the label cannot be affixed to 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 item.

(3) Affix the label to the outside lid of the case.

DEFIBRILLATOR ENERGY OUTPUT CERTIFICATION	
INDICATED ENERGY or CONTROL SETTING (WATT-SECONDS)	ENERGY DELIVERED TO A 50 OHM LOAD (WATT-SECONDS)
60	61
100	103
150	152
200	208
250	255
300	310
360	366
DATES	
CERTIFICATION 26 May 2006	EXPIRATION May 2007
INSPECTOR SGT R. Lugnut	

DA LABEL 175 REPLACES DD FORM 1942, 1 JAN 87 JUN 74, WHICH WILL BE USED

Figure 2-12. DA Label 175, Defibrillator Energy Output Certification

2-11. DA Form 5624-R (DC Defibrillator Inspection Record)

a. Purpose. The DA Form 5624-R provides a record for the certification of energy output and performance inspection for defibrillators (see figures 2-13 and 2-14).

b. Use. DA Form 5624-R will be used for documenting energy output and defibrillator performance inspection.

c. Preparation. Capital letters indicate the title of appropriate blocks on this form. When performing tests and inspections, follow instructions as per equipment item technical manual or manufacture's literature. DA Form 5624-R will be locally reproduced on 8 ½ x 11 inch paper. A copy for local reproduction is located at the back of this bulletin.

(1) Enter HOSPITAL/AREA/LOCATION, MFR (manufacturer), MDL (model), SERIEL #, and ECN (Equipment Control Number).

(2) VISUAL INSPECTION. Visually inspect each of the listed areas and indicate whether they pass with no required action. Enter either "Y" YES or "N" NO. If an area fails inspection, in the DESCRIPTION OF ACTION NEEDED column briefly indicate what action is required e.g., replace paddle plates, replace line cord. When deficiencies are corrected, record the date in the DATE ACTION COMPLETED column.

(3) PERFORMANCE TESTS

(a) 6. OUTPUT ENERGY. List defibrillation energy CONTROL SETTING. Record energy output indicated on the defibrillator and record ENERGY DELIVERED measured at each control setting in the columns provided. Record PREVIOUS VALUE measured from a prior performance test and record the CHANGE in output. If no action is required place a "Y" in the PASS column. If action is required place an "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(b) 7. CHARGE TIME AT MAXIMUM ENERGY SETTING. Measure and record charging time to reach the maximum energy setting. Record the previous value from a prior performance inspection. If no action is required place a "Y" in the PASS column. If action is required place a "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(c) 8. INTERNAL DISCHARGE FUNCTION. Charge the defibrillator to its maximum energy level. Test and verify discharge of stored energy through internal discharge circuitry. If no action is required place a "Y" in the PASS column. If action is required place an "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(d) 9. ENERGY DELIVERED AFTER 1 MINUTE. Set the defibrillator control setting to MAXIMUM SETTING and charge. Measure and record the maximum energy delivered after a minute storage. If no action is required place a "Y" in the PASS column. If action is required place a "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(e) 10. OUTPUT OF TENTH REPEATED DISCHARGE. Charge and discharge the defibrillator to MAXIMUM SETTING 10 times. Measure and record the energy output of the 10th repeated discharge. If no action is required place a "Y" in the PASS column. If action is required place a "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(f) 11. SYNCHRONIZED OPERATION. Test and verify synchronized operation. If no action is required place a "Y" in the PASS column. If action is required place an "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(g) 12. OTHER FEATURES (Specify). Inspect: verify operational test of optional features not listed. If no action is required place a "Y" in the PASS column. If action is required place an "N" in the PASS column and annotate the DESCRIPTION OF ACTION NEEDED in the column provided. When required action has been taken, enter the date in the DATE ACTION COMPLETED column.

(4) CERTIFICATION. If the unit has passed all the performance tests and the unit meets the manufacturer's specifications, check the FULL CERTIFICATION WITH LABEL ATTACHED box. Complete and affix DA Label 175 to the defibrillator. If the unit failed a performance test but can be used safely check the PROVISIONAL WORK ORDER # box and record the work order number for the repair work order.

DC DEFIBRILLATOR INSPECTION RECORD				
For use of this form, see TB 38-750-2; the proponent agency is OTSG				
HOSPITAL/AREA/LOCATION: <i>28TH CSH, OR #1</i>				
MFR:	<i>Medtronic</i>	MDL:	<i>Lifepak 12</i>	SERIAL: <i>141303XX</i> ECN: <i>126XX</i>
VISUAL INSPECTION				
	PASS	DESCRIPTION OF ACTION NEEDED	DATE ACTION COMPLETED (YYYYMMDD)	
1. GENERAL INSTRUMENT CONDITION	<i>Yes</i>			
2. ATTACHMENT PLUG	<i>Yes</i>			
3. LINE CORD AND STRAIN RELIEFS	<i>Yes</i>			
4. PADDL. CABLES & CONNECTORS	<i>Yes</i>			
5. CONTROLS, INDICATORS & METERS	<i>Yes</i>			
PERFORMANCE TESTS				
6. OUTPUT ENERGY (Enter Values in Watt-Seconds)				
CONTROL SETTING	ENERGY DELIVERED	PREVIOUS VALUE	CHANGE	
<i>2</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>Yes</i>
<i>10</i>	<i>9.9</i>	<i>10</i>	<i>-0.1</i>	<i>Yes</i>
<i>70</i>	<i>69.7</i>	<i>69.9</i>	<i>-0.2</i>	<i>Yes</i>
<i>150</i>	<i>149.3</i>	<i>149.6</i>	<i>-0.3</i>	<i>Yes</i>
<i>200</i>	<i>199.7</i>	<i>199.8</i>	<i>-0.1</i>	<i>Yes</i>
<i>250</i>	<i>249.4</i>	<i>249.7</i>	<i>-0.3</i>	<i>Yes</i>
<i>300</i>	<i>299.5</i>	<i>299.6</i>	<i>-0.1</i>	<i>Yes</i>
<i>360</i>	<i>359.5</i>	<i>359.7</i>	<i>-0.2</i>	<i>Yes</i>
7. CHARGE TIME AT MAXIMUM ENERGY SETTING	<i>8 SEC</i>	PREVIOUS VALUE:	<i>8 SEC</i>	<i>Yes</i>
SAMPLE				
8. INTERNAL DISCHARGE FUNCTION	<i>Yes</i>			
9. ENERGY DELIVERED AFTER 1 MINUTE AT MAXIMUM SETTING:	<i>360 359.4 W-SEC Yes</i>			
10. OUTPUT OF TENTH REPEATED DISCHARGE:	<i>358.2 W-SEC Yes</i>			
11. SYNCHRONIZED OPERATION	<i>Yes</i>			
12. OTHER FEATURES (Specify)	<i>Pacer Yes</i>			
CERTIFICATION				
<input checked="" type="checkbox"/> FULL CERTIFICATION WITH LABEL ATTACHED			<input type="checkbox"/> PROVISIONAL CERTIFICATION WORK ORDER #	
DATE INSPECTED (YYYYMMDD)	NEXT INSPECTION DUE (YYYYMMDD)			
<i>20060520</i>	<i>20061120</i>			
INSPECTED BY: (Print or Type)	GRADE/RANK:	SIGNATURE		
<i>R. Lugnut</i>	<i>SGT</i>	<i>SGT R. Lugnut</i>		

Figure 2-13. DA Form 5624-R. DC Defibrillator Inspection Record (Front)

INSTRUCTIONS FOR COMPLETING DA FORM 5624
<p>HOSPITAL/AREA/LOCATION: Self explanatory.</p> <p>MFR: Name of manufacturer.</p> <p>MDL: Use the manufacturer's generic model identification rather than a catalog number.</p> <p>SERIAL #: The serial number of the defibrillator.</p> <p>ESN: Equipment Control Number or locally assigned index number.</p>
<p><u>VISUAL INSPECTION (Items 1 thru 5)</u></p> <p>PASS: Visually inspect each of the listed areas and indicate whether they pass with no required action. Enter either YES (Y) or NO (N).</p> <p>DESCRIPTION OF ACTION NEEDED: Briefly indicate what action is required e.g., replace paddle plates, replace line cord.</p> <p>DATE ACTION COMPLETED: The date a maintenance work order was completed.</p>
<p><u>PERFORMANCE TESTS</u></p> <p>NOTE: PERFORMANCE TEST WILL BE MADE AFTER THE BATTERIES HAVE BEEN SERVICED.</p> <p>6. OUTPUT ENERGY. CONTROL SETTINGS: Indicate the output energy settings available through operator control settings. If more settings are available than space provided, use an equal sampling of low, medium, and high settings. ENERGY DELIVERED: Indicate the actual delivered energy when measured with calibrated TMDE. PREVIOUS VALUE: Indicate the "ENERGY DELIVERED" values from the previously filed performance test. CHANGE: Subtract the "ENERGY DELIVERED" from the "PREVIOUS VALUE." The result can be a negative number.</p> <p>7. CHARGE TIME: The time it takes to charge to the maximum energy setting. PREVIOUS VALUE: Taken from the previously filed performance test.</p> <p>8. INTERNAL DISCHARGE FUNCTION: Self explanatory.</p> <p>9. ENERGY DELIVERED AFTER 1 MINUTE: Self explanatory.</p> <p>10. TENTH REPEATED DISCHARGE: Self explanatory.</p> <p>11. SYNCHRONIZED OPERATION: Self explanatory.</p> <p>12. OTHER FEATURES: Test other special features.</p>
<p><u>CERTIFICATION</u></p> <p>FULL/PROVISIONAL CERTIFICATION: Check one of the boxes. Full Certification: Unit meets all the manufacturer's specifications. Provisional Certification: Unit may remain in use and can be used safely but repairs are required (a work order is required when this block is checked). DATE INSPECTED: The date a maintenance work order was completed. NEXT INSPECTION DUE: Self explanatory. INSPECTED BY: Name of the technician performing the test. SIGNATURE: Signature of the technician performing the test.</p>

Figure 2-14. DA Form 5624-R, DC Defibrillator Inspection Record (Back).

Record the DATE INSPECTED and NEXT INSPECTION DUE date in the corresponding blocks. Print the name of the technician performing the tests in the INSPECTED BY block. The technician performing the test legibly signs in the SIGNATURE block.

d. Disposition.

- (1) If no deficiencies are noted, the DA Form 5624-R will be maintained on file pending the next certification of performance inspection. DA Form 5624-R will be locally reproduced on 8 ½ x 11 inch paper. A copy for local reproduction is located at the back of this bulletin.
- (2) If deficiencies are noted, the DA Form 5624-R will be attached to the repair work order requesting corrective action. The DA Form 5624-R will be maintained on file pending the next certification of performance inspection.

2-12. DD Form 2163 (Medical Equipment Verification/Certification)

a. Purpose. The DD Form 2163 label will be affixed to all items of biomedical equipment requiring verification or certification to-

- (1) Certify that the equipment has been verified or certified to the required accuracy.
- (2) Indicate the date the equipment was verified or certified and when the next verification or certification is scheduled.
- (3) Identify the facility that provided verification or certification services and the individual who performed this action.
- (4) List six consecutive certification or verification actions before replacement is required.

b. Use. DD Form 2163 is to be used only by DOD medical activities and distribution will be limited to these activities. This label will be used by all medical activities.

c. Preparation. The person who performs the verification or certification action will complete the label (DD Form 2163) as indicated below. Entries will be legibly made with a blue, blueblack, or black ballpoint pen, or indelible pencil. Felt-tip pencils and pens or grease pencils will not be used. Completion instructions are by block title:

- (1) 1 ID NUMBER. Enter the ID number of the equipment when assigned by command directive.
- (2) 2 MODEL NO. Enter the model number of the equipment as assigned by the manufacturer. If none is available, use the locally assigned model number.
- (3) 3 SERIAL NO. Enter the serial number assigned to the equipment by the manufacturer. If none is available, use the locally assigned serial number.
- (4) 4 AUTHORITY. Enter the authority authorizing the verification or certification; that is, JCAHO requirements, 21 CFR requirements, or American Society of Pathologists requirements.
- (5) 5 LEVEL. Enter the proper verification or certification level code as shown below.
 - (a) *Code D (depot).* Verification or certification performed by medical depot personnel.
 - (b) *Code I (maintenance).* Verification or certification performed by in-house medical maintenance personnel.
- (6) Block 6. Enter verification or certification frequency code as follows:--
 - (a) *Code M.* Identifies an item requiring 30-day verification or certification.
 - (b) *Code Q.* Identifies an item requiring 90-day verification or certification.
 - (c) *Code S.* Identifies an item requiring 180-day verification or certification.
 - (d) *Code A.* Identifies an item requiring 360-day verification or certification.
- (7) UIC. Enter the UIC of the activity providing the verification or certification service or the Federal Supply Code for Manufacturers (FSCM) number when the manufacturer service is provided by a commercial source.
- (8) CERTIFIED BY. Enter the initials of the person performing the verification or certification procedure.
- (9) DATE COMPLETE. Enter the calendar date on which the verification or certification was completed.
- (10) DATE DUE. Enter the calendar date on which the next verification or certification procedure is due.

d. Disposition. The label (DD Form 2163) will, when possible, be affixed to the front of the calibrated instrument or in a conspicuous place when there is no surface that can be considered the front. When the label cannot be affixed to 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 item.
- (3) Affix the label to the outside lid of the case. (This applies to medical instruments and devices routinely kept in individual cases.) Labels previously affixed to the equipment will be voided.

removed, and destroyed, or new labels will be placed over the old labels.

MEDICAL EQUIPMENT VERIFICATION/CERTIFICATION							
1 TIC NUMBER		2 MODEL NO		3 SERIAL NO			
		78660A		220A02296			
4 AUTHORITY			5 LEVEL		6 FREQUENCY		
ANSI DF2			I		A		
UIC	CERTIFIED BY	DATE COMPL	DATE DUE	UIC	CERTIFIED BY	DATE COMPL	DATE DUE
222	JC	9/84	9/85				

Figure 2-15. DD Form 2163. Medical Equipment Verification/Certification Label

DD FORM 2163. 1 NOV 78

2-13. DD Form 2164 (X-ray Verification/Certification Worksheet)

a. Purpose. The DD Form 2164 provides a record of x-ray verification, certification, and corrective action taken.

b. Use. DD Form 2164 is used to record action taken in union with verification and certification of x-ray systems.

c. Preparation. One copy of the DD Form 2164 will be completed by the person performing the verification and certification for each x-ray system. Spaces not requiring entries due to the configuration or type of the equipment will be annotated as "not applicable" or N/A. Entries will be legibly made with a blue or blue-black ballpoint pen or indelible pencil. Felt-tip pens and pencils or grease pencils will not be used.

(1) *Heading.* Enter the name and LOCATION of the unit or activity, building and room number where the system is located, work order number, DATE AND TIME OF SERVICE, and DATE NEXT SERVICE DUE.

(2) *ACTION.* Complete by placing an X in the appropriate block when the service has been completed.

(3) *Section I. EQUIPMENT IDENTIFICATION.* Enter the MANUFACTURER, MODEL, type, style, size, focal spots, or other designation placed on the components by the manufacturer, and the SERIAL NUMBER assigned by the manufacturer in the space provided.

(4) *Section II. VISUAL INSPECTION OF EQUIPMENT.* Visually inspect the items listed. If no action is needed, place an X in the NOT REQUIRED column. If action is required, annotate the TYPE REQUIRED. When the required action has been performed, indicate so in the ACTION TAKEN column and enter the INITIAL(S) AND DATE.

(5) *Section III. OPERATIONAL TESTING OF EQUIPMENT.* Perform operational checks on items listed. If no operating problems are found, place an X in the NOT REQUIRED column. If action is required, enter the required action in the TYPE REQUIRED column. When the required action is completed, indicate so in the ACTION TAKEN column and enter the initial(s) of the technician performing the action and the date in the INITIAL AND DATE column.

(6) *Section IV. RADIOGRAPHIC CERTIFICATION.* Perform the indicated procedures and enter the results in the spaces provided. Record the line voltage in item 21 (single phase) or item 22 (three phase) as appropriate.

(a) *Item 23. TRANSFORMER BALANCE.* This test is performed only on an annual basis.

(b) *Item 24. EXPOSURE TIMER TEST.* In the TIME SETTING ON CONTROL blocks, enter the time setting that is indicated on the control. In the ACTUAL TIME MEASURED blocks, enter the measured exposure time.

(c) *Item 25. KILOVOLTAGE AND MILLIAMPERAGE VERIFICATION.* The kilovoltage (kVp), as indicated on the x-ray control, is pre-printed in the top blocks. The milliamperage, as indicated on the control panel, is to be entered in the extreme left side of the form only in the blocks preprinted with MA. The highest mA indicated on the control panel will be entered in the uppermost block. All other blocks will have the mA indicated in descending value with the bottom block containing the lowest mA station that is indicated on the control panel. The blocks containing the diagonal lines will be used for recording the actual milliamperage and kilovoltage measured for each mA station and kVp station on the control. In the top portion of the blocks with diagonal lines, enter the kilovoltage as measured for each value of kVp that is indicated. In the bottom portion of the blocks, enter the mA as measured for each mA station indicated on the control.

(d) *Item 26. PENETROMETER FILM DENSITY.* Enter a check in the correct box as to whether the penetrometer film density is satisfactory or not.

(e) *Item 27. RADIOGRAPHIC PHOTO-TIMER TEST.* Indicate the type of exposure variation received with a film in the table BUCKY, CHEST unit, or OTHER photo timing device by exposing a phantom at 90 kVp, 200 mA with density controls in DARK (+), NORMAL, LIGHT (-). Record the actual mA in the appropriate block.

TB 38-750-2
DA Form 2028-2
 Recommended Changes to Equipment Technical Publications
DA Form 2404
 Equipment Inspection and Maintenance Worksheet
DA Form 2405
 Maintenance Request Register
DA Form 2406
 Materiel Condition Status Report (MCSR)
DA Form 2407
 Maintenance Request
DA Form 2407-1
 Maintenance Request-Continuation Sheet
DA Form 2409
 Equipment Maintenance Log (Consolidated)
DD Form 314
 Preventive Maintenance Schedule and Record
SF 368
 Product Quality Deficiency Report (NSN 7540-00-105-0078)

MEDICAL EQUIPMENT ELECTRICAL SAFETY

For use of this form, see TB 38-750-2; the proponent agency is OTSG.

HOSPITAL/AREA/LOCATION:

END ITEM NOMENCLATURE:

MFR:

MDL:

SERIAL:

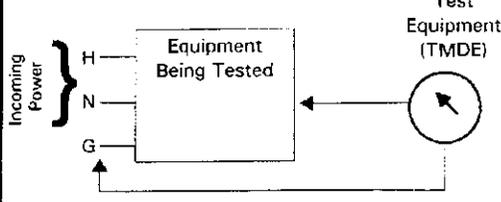
ECN:

TYPE OF EQUIPMENT: (Check One)

PORTABLE (P)

FIXED (F)

TEST I - GROUND RESISTANCE



P = 0.50 OHM

REMARKS:

TEST II - CHASSIS LEAKAGE CURRENT



GROUNDING

GROUND OPEN

ON OFF

ON OFF

P = N/A F = 40Mv/500Mv

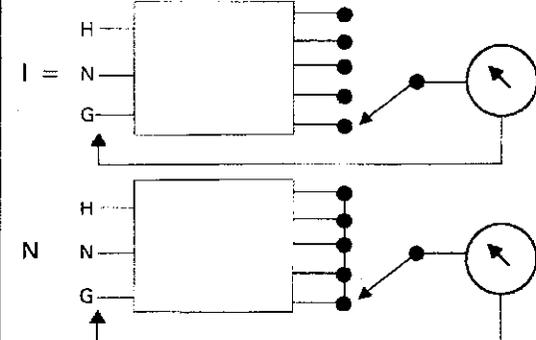
P = 300uA F = 5mA

PATIENT LEAD INPUT: (Check One - Applies to Tests III, IV, & V)

ISOLATED (I)

NONISOLATED (N)

TEST III - LEAD TO GROUND



I = 10uA

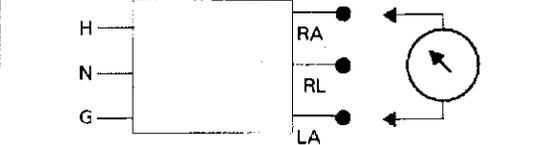
I = 50uA

RA
LA
RL
LL
C

I = 100uA

I = 100uA

TEST IV - BETWEEN LEADS

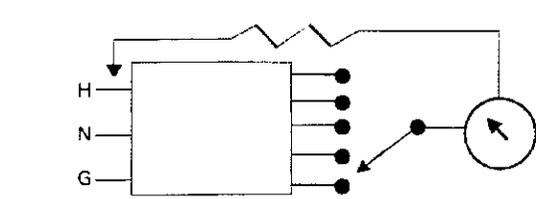


I = 10uA
N = 50uA

I & N = 50uA

RA-RL
LA-RL
RA-RL

TEST V - ISOLATION TEST



I = 50uA

RA
LA
RL
LL
C

TESTED BY: (Print or Type)

GRADE/RANK:

DATE TESTED (YYYYMMDD)

WORK ORDER #:

INSTRUCTIONS FOR COMPLETING DA FORM 5621

GENERAL

HOSPITAL/AREA/LOCATION: Identify the owning medical treatment facility and location of the end item within the facility, i.e. Brooke Army Medical Center, Main OR, Room 3.

END ITEM NOMENCLATURE: Generic nomenclature for the end item.

MFR: The manufacturer of the end item.

MDL: The model number of the end item. Use the manufacturer's generic model identification rather than a catalog number.

SERIAL #: The serial number of the end item. If a component of the end item fails the performance test, indicate the components serial number in the REMARKS block.

ECN: Equipment Control Number or locally assigned index number.

TYPE OF EQUIPMENT: Check the appropriate block. Patient lead input refers to the way in which the patient connected leads are electrically connected to the equipment.

TESTED BY/DATE TESTED: Legibly print or type this information.

WORK ORDER #: The control number assigned to the work order initiated to correct the equipment safety failures identified during the performance test.

PERFORMANCE TESTING

The values indicated on this form are IAW NFPA 99, and indicate the maximum acceptable limits for each test and tested type of equipment. Additional instructions can be found in NFPA 99, Chapter 8.

ABBREVIATIONS: (Perform only those tests required by the appropriate type of equipment being tested. Refer to the abbreviations below.)

P - Portable Equipment.

I - Portable Equipment with Isolated Patient Connected Leads.

N - Portable Equipment with Nonisolated Patient Connected Leads.

F - Fixed Equipment.

PORTABLE EQUIPMENT W/O PATIENT CONNECTED LEADS.

Perform TEST I & II only. *

PORTABLE EQUIPMENT W/ PATIENT CONNECTED LEADS.

Perform TEST I thru V. * (Test III & V - the number of lead tests will depend on the type of equipment being tested i.e., 12 lead vs. 3 lead equipment. Use the REMARKS block if additional space is required to document the results.

FIXED EQUIPMENT.

Perform TEST I & TEST II - GROUND LIFTED during initial installation.

After initial installation periodically only perform Test II - GROUNDED (Critical Care Areas - 40mV; General Care Areas - 500mV).

* TEST II - GROUND LIFTED MAXIMUM LIMIT EXCEPTIONS:

Exception 1 - 250mA maximum acceptable limit when equipment is individually scheduled by serial number or index number for periodic testing.

Exception 2 - 500mA maximum acceptable limit when the equipment is special purpose; safety testing will be performed quarterly.

DC DEFIBRILLATOR INSPECTION RECORD					
For use of this form, see TB 38-750-2; the proponent agency is OTSG					
HOSPITAL/AREA/LOCATION <i>28TH CSH, OR #1</i>					
MFR. <i>Medtronic</i>	MDL. <i>Lifepak 12</i>	SERIAL <i>141303XX</i>	ECN. <i>126XX</i>		
VISUAL INSPECTION					
	PASS	DESCRIPTION OF ACTION NEEDED	DATE ACTION COMPLETED (YYYYMMDD)		
1 GENERAL INSTRUMENT CONDITION	<i>Yes</i>				
2 ATTACHMENT PLUG	<i>Yes</i>				
3 LINE CORD AND STRAIN RELIEFS	<i>Yes</i>				
4 PADDLE, CABLES & CONNECTORS	<i>Yes</i>				
5 CONTROLS, INDICATORS & METERS	<i>Yes</i>				
PERFORMANCE TESTS					
6. OUTPUT ENERGY (Enter Values in Watt-Seconds)					
CONTROL SETTING	ENERGY DELIVERED	PREVIOUS VALUE	CHANGE		
<i>2</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>Yes</i>	
<i>10</i>	<i>9.9</i>	<i>10</i>	<i>-0.1</i>	<i>Yes</i>	
<i>70</i>	<i>69.7</i>	<i>69.9</i>	<i>-0.2</i>	<i>Yes</i>	
<i>150</i>	<i>149.3</i>	<i>149.6</i>	<i>-0.3</i>	<i>Yes</i>	
<i>200</i>	<i>199.7</i>	<i>199.8</i>	<i>-0.1</i>	<i>Yes</i>	
<i>250</i>	<i>249.4</i>	<i>249.7</i>	<i>-0.3</i>	<i>Yes</i>	
<i>300</i>	<i>299.5</i>	<i>299.6</i>	<i>-0.1</i>	<i>Yes</i>	
<i>360</i>	<i>359.5</i>	<i>359.7</i>	<i>-0.2</i>	<i>Yes</i>	
7. CHARGE TIME AT MAXIMUM ENERGY SETTING	PREVIOUS VALUE				SAMPLE
<i>8 SEC</i>	<i>8 SEC</i>		<i>Yes</i>		
8 INTERNAL DISCHARGE FUNCTION			<i>Yes</i>		
9. ENERGY DELIVERED AFTER 1 MINUTE AT MAXIMUM SETTING:			<i>Yes</i>		
<i>360</i>	<i>359.4 W-SEC</i>				
10. OUTPUT OF TENTH REPEATED DISCHARGE.			<i>Yes</i>		
	<i>358.2 W-SEC</i>				
11. SYNCHRONIZED OPERATION			<i>Yes</i>		
12. OTHER FEATURES (Specify)					
<i>Pacer</i>			<i>Yes</i>		
CERTIFICATION					
<input checked="" type="checkbox"/> FULL CERTIFICATION WITH LABEL ATTACHED			<input type="checkbox"/> PROVISIONAL CERTIFICATION WORK ORDER #		
DATE INSPECTED (YYYYMMDD)	NEXT INSPECTION DUE (YYYYMMDD)				
<i>20060520</i>	<i>20061120</i>				
INSPECTED BY: (Print or Type)	GRADE/RANK:	SIGNATURE			
<i>R. Luginut</i>	<i>SGT</i>	<i>SGT R. Luginut</i>			

Figure 2-13. DA Form 5624-R. DC Defibrillator Inspection Record (Front)

INSTRUCTIONS FOR COMPLETING DA FORM 5624

HOSPITAL/AREA/LOCATION: Self explanatory.

MFR: Name of manufacturer.

MDL: Use the manufacturer's generic model identification rather than a catalog number.

SERIAL #: The serial number of the defibrillator.

ESN: Equipment Control Number or locally assigned index number.

VISUAL INSPECTION (Items 1 thru 5)

PASS: Visually inspect each of the listed areas and indicate whether they pass with no required action. Enter either YES (Y) or NO (N).

DESCRIPTION OF ACTION NEEDED: Briefly indicate what action is required e.g., replace paddle plates, replace line cord.

DATE ACTION COMPLETED: The date a maintenance work order was completed.

PERFORMANCE TESTS

NOTE: PERFORMANCE TEST WILL BE MADE AFTER THE BATTERIES HAVE BEEN SERVICED

6. OUTPUT ENERGY.

CONTROL SETTINGS: Indicate the output energy settings available through operator control settings. If more settings are available than space provided, use an equal sampling of low, medium, and high settings.

ENERGY DELIVERED: Indicate the actual delivered energy when measured with calibrated TMDE.

PREVIOUS VALUE: Indicate the "ENERGY DELIVERED" values from the previously filed performance test.

CHANGE: Subtract the "ENERGY DELIVERED" from the "PREVIOUS VALUE." The result can be a negative number.

7. CHARGE TIME: The time it takes to charge to the maximum energy setting.

PREVIOUS VALUE: Taken from the previously filed performance test.

8. INTERNAL DISCHARGE FUNCTION: Self explanatory.

9. ENERGY DELIVERED AFTER 1 MINUTE: Self explanatory.

10. TENTH REPEATED DISCHARGE: Self explanatory.

11. SYNCHRONIZED OPERATION: Self explanatory.

12. OTHER FEATURES: Test other special features.

CERTIFICATION

FULL/PROVISIONAL CERTIFICATION: Check one of the boxes.

Full Certification: Unit meets all the manufacturer's specifications.

Provisional Certification: Unit may remain in use and can be used safely but repairs are required (a work order is required when this block is checked).

DATE INSPECTED: The date a maintenance work order was completed.

NEXT INSPECTION DUE: Self explanatory.

INSPECTED BY: Name of the technician performing the test.

SIGNATURE: Signature of the technician performing the test.

CHANGE

No. 3



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 1 November 1989

MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT

*Approved for public release;
distribution is unlimited*

TB 38-750-2, 12 April 1987, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjacent to the identification number.

<i>Remove Pages</i>	<i>Insert pages</i>
i and ii.....	i and ii
1-1 and 1-2.....	1-1 and 1-2
2-15 and 2-16.....	2-15 and 2-16
2-27 and 2-28.....	2-27 through 2-31
A-1 and A-2.....	A-1 and A-2
B-1.....	B-1
Glossary 3 and Glossary 4.....	Glossary 3 and Glossary 4
Glossary 7 and Glossary 8.....	Glossary 7 and Glossary 8
DA Form 2028-2 (3 copies).....	DA Form 2028-2 (3 copies)

2. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-34C-R, Block 1113, requirements for TB 38-750-2, Maintenance Management Procedures for Medical Equipment.

CHANGE }
No. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 30 August 1988

MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT

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<i>Remove pages</i>	<i>Insert pages</i>
i and ii.....	i and ii
1-1 and 1-2.....	1-1 and 1-2
2-1 and 2-2.....	2-1 through 2-2.1
2-11 and 2-12.....	2-11 and 2-12
2-15 and 2-16.....	2-15 through 2-16.1
A-1 and A-2.....	A-1 and A-2
Glossary 1 and Glossary 2.....	Glossary 1 and Glossary 2
Glossary 5 and Glossary 6.....	Glossary 5 and Glossary 6

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The Adjutant General

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General, United States Army
Chief of Staff

DISTRIBUTION:

To be distributed in accordance with DA Form 12-34B-R requirements for Sterilizer, Surgical Instrument and Dressing, Model MS1018.

CHANGE }
No. 1 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 15 November 1987

MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT

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i and ii.....	i and ii
1-1 and 1-2.....	1-1 and 1-2
2-19 and 2-20.....	2-19 and 2-20
2-23 through 2-28.....	2-23 through 2-28
A-1 and A-2.....	A-1 and A-2
DA Form 5624-R (front and reverse).....	DA Form 5624-R (front and reverse)

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General, United States Army
Chief of Staff

Official:
R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-34B-R, requirements for Sterilizer, Surgical Instrument and Dressing, Model MS1018.

MAINTENANCE MANAGEMENT PROCEDURES FOR MEDICAL EQUIPMENT

You can help improve this bulletin. If you find any mistakes or if you know a way to improve procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 (Recommended Changes to Equipment Technical Publications) located in the back of this manual to: Commander, U.S. Army Medical Materiel Agency, ATTN: SGMMA-M, Frederick, MD 21701-5001. A reply will be furnished directly to you.

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Chapter 1

INTRODUCTION

1-1. Purpose

This bulletin pertains to the maintenance management procedures for medical equipment. It covers the purpose, use, preparation, and disposition of forms used for the scheduling, performance, recording, and reporting of maintenance in TOE medical units. This bulletin applies to TOE medical units of the Active Army, the Army National Guard, and the U.S. Army Reserve. Use of these forms and procedures by TDA medical units may be authorized by medical commands.

1-2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this bulletin are explained in the text before their use and in the glossary. Additional military terms are defined in AR 310-25, and abbreviations can be found in AR 310-50.

1-4. Responsibilities

a. U.S. Army Medical Materiel Agency (USAMMA), National Maintenance Point, will be responsible for maintaining current information and monitoring the effectiveness of the maintenance procedures covered within this publication.

b. Commanders of TOE medical units will provide the resources and command emphasis necessary for ensuring that unit personnel are properly trained and are performing the maintenance management procedures covered within this bulletin.

c. Unit Biomedical Equipment Specialists will follow appropriate maintenance management procedures and instruct section supervisors and equipment operators on the proper procedures and use of forms applicable to operator's preventive maintenance checks and services (PMCS) levels.

d. Medical equipment operators will be responsible for performing operator's PMCS and following procedures within this bulletin for recording and reporting findings to the medical equipment maintenance section.

1-5. General instructions for using this bulletin

a. Operators, record clerks, maintenance personnel, supervisors, and commanders have an equal responsibility for maintaining the forms and records listed in this bulletin. These forms and

records, when properly maintained, give the commander a picture of the condition, use, and operational needs of the medical equipment within the command.

b. The forms and records in this bulletin will not be remade just for neatness. They will be remade only when the original forms and records are lost or so damaged that the information is no longer readable. When you have to remake a form or record due to damage, transcribe the information from the old form to the new form that would be required by the disposition instructions of each form. Put "UNK" for unknown in any block that is not legible. When you have to remake a form or record due to loss, transcribe as much information to the new form or record as can be obtained from inspecting the item of equipment, maintenance records, property book, and hand receipt records. Put "UNK" for unknown in any block where you cannot find the information.

c. Within this bulletin, you will find specific details on the use, preparation, and disposition of forms and records used to manage the maintenance of medical equipment. Unless the preparation instructions for the form or record state otherwise, the following rules will apply.

(1) Any section or block which states "Leave Blank" may be used by unit personnel for recording information required within the command.

(2) All forms and records will be filled out in blue or black ink unless otherwise stated. Grease pencils, felt tip markers or colored pencils and pens will not be used.

(3) Time and effort can be saved by using abbreviations. Use only abbreviations listed in AR 310-50 and the glossary of this bulletin.

(4) You can use ditto symbols. However, ensure that they cannot be misunderstood. Use ditto symbols only when the repeated information is not critical to understanding the entry.

(5) The terms noun, noun abbreviation, and noun nomenclature refer to the same basic identification. DA Form 2406 (Materiel Condition Status Report) specifies that you will use the noun abbreviation. Otherwise, you can use these terms interchangeably.

(6) Use the example forms in this bulletin as a guide only. Fill out your forms indicating your unit's equipment and its status. If there is a conflict between the instructions on the form and the instructions provided in this publication, follow those given in this publication.

(7) Commanders may appoint a designated representative to sign forms and records contained in this bulletin. When a representative is appointed, that authority must be in writing on a disposition form, orders, or DA Form 1687 (Notice of Delegation of Authority--Receipt for Supplies).

(8) Forms and records in this bulletin do not have to be typewritten, but must be readable, correct, and complete.

1-6. How to report errors, recommend improvements, and ask for help with this bulletin

a. If you need help or have questions about this bulletin, send a letter through your command to the Commander, U.S. Army Medical Materiel Agency, ATTN: SGMMA-M, Frederick, MD 21701-5001. Be sure to send the letter through channels. The answer you need may be nearby. Your command will try to answer your question before passing it on. If you go through channels, you'll get the answer sooner.

b. When a recommendation for correction or change is submitted, ensure that your DA Forms 2028 (Recommended Changes to Publications and Blank Forms) or 2028-2 (Recommended Changes to Equipment Technical Publications) and letters asking for information state clearly the paragraph and page number of your area of concern. Add your name and AUTOVON number, too!

1-7. Field performance reporting

a. Field performance reporting is a method for selective collection and analysis of Deployable Medical Systems medical equipment.

b. Data is collected on designated equipment in specific units to provide medical logisticians with actual field performance data.

c. Units notified to report field performance data will refer to the SB 8-75-series publications for complete instructions and reportable items.

1-8. Readiness reporting

Units required to submit DA Form 2406 will refer to AR 700-138 for completion instructions.

Chapter 2

MEDICAL EQUIPMENT MAINTENANCE MANAGEMENT PROGRAM

Section I. MAINTENANCE MANAGEMENT FORMS

2-1. General

This chapter contains detailed instructions on the use of forms that are necessary for the management of maintenance on medical equipment. These forms will be used to show the results of inspections, PMCS, calibrations, verifications, and unscheduled maintenance performed.

2-2. DD Form 314 (Preventive Maintenance Schedule and Record)

a. Purpose. The DD Form 314 supplies a means of scheduling unit PMCS and the documenting of not-mission capable (NMC) time.

b. Use. DD Form 314 is used to—

(1) Schedule maintenance on medical equipment as required by technical manual or manufacturer's literature.

(2) Show NMC days on equipment to be reported on the DA Form 2406.

(3) Manage maintenance, services, or inspections locally as directed by the unit commander.

NOTE

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

c. General instructions.

(1) Normally one DD Form 314 covers one item of equipment. Several like items may be covered by 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. Like items of equipment reportable on DA Form 2406 cannot be combined on one DD Form 314.

(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 1 month or one service in advance, whichever is greater. Scheduling 1 month or one service 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) PM—any PMCS.

(b) CL—calibration.

(c) ST—safety test.

(d) P/C—PMCS and calibration.

(e) P/S—PMCS and safety test.

(f) C/S—calibration and safety test.

(g) AA—all of the above.

(8) Other symbols or subsymbols may be used as long as they do not conflict with the symbols required by this bulletin. 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 (7) above) in pencil in the date due block. 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. If not, the variance you are authorized is—

(a) Annual service—36 days before or after the scheduled day of the service.

(b) Semiannual service—18 days before or after the scheduled day of the service.

(c) Quarterly service—9 days before or after the scheduled day of the service.

(d) Monthly service—3 days before or after the scheduled day of the service.

(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. (Refer to the glossary terms for an explanation of NMC.) Record NMC days on the back of the DD Form 314.

(12) Show organizational not mission capable maintenance (NMCM) days with the symbol O. Put an S inside the O for organization not mission capable supply (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) Equipment that is NMC at the end of the day is counted NMC for the whole day. Equipment that is fully mission capable (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 that is 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 that the data required for the proper maintaining of the DD Form 314 is collected.

d. Preparation (completion instructions by block title).

NOTE

When an ADP system provides printouts or automated forms with all the information from the DD Form 314, do not prepare the form.

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

NOTE

For steps 2 through 6, use either the block at the top or bottom of the cards.

(2) **REGISTRATION NUMBER:** Enter the serial number of the item.

(3) **ADMINISTRATION NUMBER:** Enter the NSN of the item.

(4) **NOMENCLATURE:** Enter the noun abbreviation. For items reportable on DA Form 2406, enter the equipment category code (ECC) and line item number (LIN).

(5) **MODEL:** Enter the model number.

(6) **ASSIGNED TO:** Enter the designation of the activity or section in which the equipment is located.

(7) **DATE/BLOCKS:** Show services scheduled and completed.

(8) **REMARKS**

NOTE

A system DD Form 314 is needed only to combine NMC time on equipment reported as a system.

(a) (*Front side of form*) In pencil, note any maintenance data needed: symbols or subsymbols used, service due dates, etc. Services due the following year will also be noted here until they can be carried to a new form.

(b) (*Back side of form*) Enter any NMC time reported as totals by support maintenance. (When support maintenance gives a day-by-day breakout of NMC time, mark the days in the date blocks.) Also enter the manufacturer's name

(2) The DA Form 2404 is a record of deferred maintenance and uncorrected faults. This form is called the DA Form 2404 Def Maint or Deferred Maintenance Record.

(3) It records the results of technical inspections on equipment. When needed, this form will show serviceability codes listed in the AR, TB, or other publication requiring the technical inspection.

b. Use. The DA Form 2404 will be used by anyone performing inspections, maintenance services, diagnostic checks, technical evaluations, and PMCS.

(1) You may use one DA Form 2404 or separate forms to inspect all components or sub-systems that make up one complete system.

(2) You may also use one form to inspect several like items of equipment.

(3) Use this form as a temporary record of required and completed maintenance.

(4) Operators will use the DA Form 2404 to list faults they cannot fix and faults corrected by replacing parts.

(5) Unit maintenance personnel performing periodic services will list all faults found and action(s) taken to repair those faults.

(6) Support maintenance personnel will list on DA Form 2404 all faults found on initial inspection. Attach the initial inspection DA Form 2404 to the DA Form 2407 that will be given to the person performing the repairs. The DA Form 2404 will be used as the worksheet for correcting faults found or reporting to units any uncorrected unit level faults. Results of the maintenance action will be entered on DA Form 2407.

(7) Support maintenance personnel will list on DA Form 2404 all faults found during the final inspection. Attach the final inspection DA Form 2404 to the DA Form 2407 that will be given to the person that performed the repairs. All faults found during the final inspection will be corrected.

(8) A separate DA Form 2404 will be used to list uncorrected faults and deferred maintenance actions. This form will be kept on any item of equipment on which uncorrected faults and deferred actions occur.

c. Status symbols.

(1) "X"—Indicates a deficiency in the equipment that places it in an inoperable status.

(2) *Circled "X"*—Indicates a deficiency; however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished.

(3) *Horizontal dash "(—)"*—Indicates that

a required inspection, component replacement, or maintenance operation check is due but has not been accomplished, or an overdue MWO has not been accomplished.

(4) *Diagonal "(/)"*—Indicates a materiel defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable.

(5) *Last name initial in black, blue-black ink, or pencil*—Indicates that a completely satisfactory condition exists.

d. Preparation. (Capital letters indicate the title of appropriate blocks on the DA Form 2404.)

(1) When used by an operator performing PMCS.

(a) 1 ORGANIZATION: Enter the name of the organization that owns the equipment.

(b) 2 NOMENCLATURE AND MODEL: Enter the noun abbreviation and the model of the equipment.

(c) 3 REGISTRATION/SERIAL/NSN: Enter the applicable number in this block.

(d) 4a MILES: Leave blank.

(e) 4b HOURS: Leave blank.

(f) 4c ROUNDS FIRED: Leave blank.

(g) 4d HOT STARTS: Leave blank.

(h) 5 DATE: Leave this block blank until a fault is noted during the equipment inspection. (If no fault is found, the form can be used for more than 1 day.) If a fault is found, enter the current calendar date in this block.

(i) 6 TYPE INSPECTION: Enter the type of PMCS that is being conducted (daily, weekly, monthly, quarterly, semi-annually, or annually). If conducting more than one type PMCS, use the first letter of the PMCS (D/W, D/W/M, M/S, M/S/A). If the form has been previously used and the PMCS is different, place the first letter of the current PMCS (i.e., D, D/W, etc.) in column d by that day's date in column c.

(j) 7 TM NUMBER, TM DATE: Enter the number and date of the appropriate TM. If two TMs cover an item, enter the second TM number and date in the second number and date block. If either manual has changes, enter "W/C" and the latest change number after the TM number. Always use the date of the basic manual in the date block. For equipment that does not have a TM, enter "Mfr Lit."

(k) 8a SIGNATURE: Enter the inspector's signature and rank in this block only if a fault is found.

(l) 8b TIME: Leave blank.

(m) 9a SIGNATURE: Enter the medical maintenance supervisor's signature when all faults are corrected and information has been

recorded on applicable forms.

(n) 9b TIME: Leave blank.

(o) MAN-HOURS: Leave blank.

(p) TM ITEM NO. a: Enter the TM item number that applies to the fault listed in column c. If the TM contains no item number, list the page, paragraph, or sequence number. Circle the number if the fault is listed in the "Equipment is not ready/available" column of the PMCS. If the manual has no ready/available column, circle the TM item number of any fault that makes the equipment NMC.

(q) STATUS b: Enter the status symbol that applies to the fault (see para 2-3c).

(r) DEFICIENCIES AND SHORTCOMINGS c: Briefly list each fault that you find. (Skip two or three lines between faults.) If more than one TM applies to the equipment, draw a line under the last entry for that TM and enter the TM number you will use next. When using the form for more than one item of equipment, enter the registration/serial/NSN for the item with the fault. Enter the fault on the line below this number. If no faults are detected, enter the current calendar date.

NOTE

When faults are detected from publications other than the PMCS, they will be noted on the DA Form 2404. Those faults will not be counted as NMC for the DA Form 2406 unless they are in the PMCS "not ready" column.

(s) CORRECTIVE ACTION d: Indicates the corrective action taken by the operator as authorized by the equipment technical manual, maintenance allocation chart (MAC) or manufacturer operator's service manual. List all operator replaceable parts replaced or needed. If parts must be ordered, list NSN or part number, TM figure, and item number.

(t) INITIAL WHEN CORRECTED e: The operator initials any horizontal dash or diagonal faults that have been fixed. The operator gives the DA Form 2404 to the supervisor. The supervisor will review the corrected faults and those that are still not fixed to decide what other action is necessary. For quality control, the maintenance supervisor or a designated representative will check all corrected status symbol "X" faults and initial in column e in place of the equipment operator.

(u) CORRECTIVE ACTION d: Deferred maintenance of equipment. If parts are needed, the supervisor will ensure that they are ordered and the document number recorded in column

d of this form or DEF MAINT. Any faults that need organization maintenance will go on a DA Form 2407. Print DA FORM 2407 in column d.

NOTE

The Commander's representative will review all unfixed faults to decide which ones may be deferred or delayed. Faults that do not affect the operation of the equipment, the operator's safety, or patient safety can be deferred. Faults may be deferred because—

1. The fault may not be important enough to take time away from the mission and fixing the fault can wait until the next scheduled service or trip to support level maintenance.

2. The needed repair part is not on hand.

3. Support maintenance is backed up and cannot get to the equipment right away.

4. Other reasons at the commanding officer's discretion. Faults that are to be deferred will be listed on a separate DA Form 2404 (DEF MAINT). Print DA FORM 2404 DEF MAINT in column d of the initial DA Form 2404. Although status symbol "X" faults cannot be deferred, they may be downgraded. The commanding officer or his or her designated representative may downgrade an X to a circled X. Downgrade an X status symbol only when the equipment is crucial to the mission and the downgrade will not put the operator or patient in danger. If the equipment can be operated safely, under specific limits, the commander may downgrade the X.

(v) CORRECTIVE ACTION d: Clearing for limited operations of an item.

1. Print CLEARED FOR LIMITED OPERATIONS. Add the specific limits under which the equipment can be operated. Equipment cleared for limited operations will still be carried as NMC for the DA Form 2406 and DD Form 314. Give the reasons for the delay in repair of the equipment being cleared.

• If the reason is a part on order, print the document number and NSN or part number for each.

• If the part order is canceled later, print CANCELED and the Julian date the order was canceled. If you still need the part, reorder it. Put the fault, NSN or part number, and new document number on the next open line.

• If the delay is until the next scheduled service, print SCHEDULE FOR NEXT PM SERVICE. State which service and the date when it is due.

2. When possible, enter a calendar date when you expect the reason for delay will no longer apply. That is, when you can, give each

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET						
For use of this form, see TM 38-750; the proponent agency is the Office of the Deputy Chief of Staff for Logistics.						
1. ORGANIZATION <i>DENTAL Clinic #1, OOEVAC HOSP.</i>			2. NOMENCLATURE AND MODEL <i>OPERATING UNIT, DENTAL 305G1 PART-CART</i>			
3. REGISTRATION/SERIAL/RSN <i>90-1000</i>		4a. MILES —	b. HOURS —	c. ROUNDS FIRED —	d. HOT STARTS —	e. DATE <i>20 Feb 85</i>
6. TYPE INSPECTION <i>DAILY</i>						
7. APPLICABLE REFERENCE						
TM NUMBER <i>MANUFACTURER LIT</i>		TM DATE <i>19 Dec 82</i>		TM NUMBER		TM DATE
COLUMN a — Enter TM item number.			COLUMN d — Show corrective action for deficiency or shortcoming listed in Column c.			
COLUMN b — Enter the applicable condition status symbol.			COLUMN e — Individual ascertaining completed corrective action initial in this column.			
COLUMN c — Enter deficiencies and shortcomings.						
STATUS SYMBOLS						
<p>"X"—Indicates a deficiency in the equipment that places it in an inoperable status.</p> <p>CIRCLED "X"—Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished.</p> <p>HORIZONTAL DASH ("—")—Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished.</p>			<p>DIAGONAL ("/)—Indicates a materiel defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable.</p> <p>LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL—Indicates that a completely satisfactory condition exists.</p> <p>FOR AIRCRAFT—Status symbols will be recorded in red.</p>			
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.						
8a. SIGNATURE (Person(s) performing inspection)		8b. TIME		9a. SIGNATURE (Maintenance Supervisor)		9b. TIME
<i>Joe Jones PFC</i>				<i>Douglas Logan CAPT</i>		10. MANHOURS REQUIRED
11a. ITEM NO. c	11b. STATUS b	11c. DEFICIENCIES AND SHORTCOMINGS c		11d. CORRECTIVE ACTION d		11e. INITIAL WHEN CORRECTED e
		<i>18 Feb 85</i>				<i>JJ</i>
		<i>19 Feb 85</i>				<i>JJ</i>
<i>PA 18</i>	<i>/</i>	<i>Waste container jar has small crack at top</i>		<i>DA Form 2404 Def Maint 14-010 (part #)</i>		<i>JC</i>
SAMPLE						
<i>PA 3</i>	<i>/</i>	<i>Tray is warped</i>		<i>Replaced by DA</i>		<i>JC</i>
<i>PA 6</i>	<i>⊗</i>	<i>Left front castor broken</i>		<i>DA Form 2407 CLEARED FOR LIMITED OPERATIONS. UNIT NOT TO BE MOVED! PARTS NOT AVAIL. Doc # 5051-0023 Downgraded on 20 Feb 85 Downgrade ends 27 Feb 85</i>		<i>DL</i>

DA FORM 2404 1 APR 79

Replaces edition of 1 Jan 64, which will be used

Figure 2-3. DA Form 2404, Operator PMCS.

entry a date when the delay will no longer apply, the service is due, etc. Circled X faults listed on this form will have a date when the limited operations will end. If no date is available, give a calendar date when the downgrade action will be reviewed by the commanding officer or his or her designated representative. The date will be no more than 1 week from the date of the downgrade action. Print DOWNGRADED ON (date). DOWNGRADE ENDS (date).

NOTE

Maintenance supervisors, leaders, and operators will review this form regularly for faults that are overdue to be fixed.

3. Do not list faults that are already on a DA Form 2407 for repair.

4. More space or lines under column d may be used for the name of the person picking up parts, listing action taken, etc.

5. When the fault is corrected, the person doing the work enters the calendar date in column d.

(w) INITIAL WHEN CORRECTED e: The commander or his or her designated representative initials when the entry is made.

(2) When used for maintenance services and inspections:

NOTE

Instructions for block 1 through column c will be the same as instructions contained in (1)(a) through (1)(r) above.

(a) ORGANIZATION.

(b) CORRECTIVE ACTION d.

1. Explain the action(s) that were taken to correct the identified faults. Note any parts replaced or ordered and work accomplished.

2. For equipment requiring a DA Form 2409 (Equipment Maintenance Log (Consolidated)), note repair work done and parts replaced. Put that information on the DA Form 2409. Print DA FORM 2409 in column d for those items.

3. If parts are needed, order them and enter the document numbers.

(c) INITIAL WHEN CORRECTED e. The technician initials any faults that are fixed. He or she will also initial the status symbol for those faults. The supervisor or his or her representative will check all corrected status symbol X faults. The inspector will initial column e in place of the person doing the work. The person that did the work will then initial the status symbol.

(d) CORRECTIVE ACTION d:

1. A DA Form 2407 will be filled out for all items of equipment that require support maintenance. Print DA FORM 2407 in column d of the DA Form 2404 as to which faults generated the DA Form 2407. The commander may defer the repair of an item of equipment if the indicated faults do not affect the operation and present a safety hazard to the patient or operator. Some reasons for deferring maintenance are—

- Support maintenance cannot make repairs due to backlog.

- Needed repair parts are not on hand.

- Other reasons at the commander's discretion.

2. Faults that the commander or his or her representative decide can be deferred will go on a separate DA Form 2404 as deferred maintenance. Print DA FORM 2404 DEF MAINT in column d for those items.

NOTE

The commander or his or her representative may downgrade a status symbol X to a circled X, only if the equipment concerned is crucial to the mission and the downgrade will not endanger the patient or equipment operator.

(e) CORRECTIVE ACTION d. (Clearing for limited operations.) Print CLEARED FOR LIMITED OPERATIONS. Add the specific limits under which the equipment can be operated. The downgrade may affect a subsystem of a system. If so, make sure the limits include that part of the mission the system can no longer perform.

(f) INITIAL WHEN CORRECTED e. The commander or his or her designated representative will initial.

(g) SIGNATURE. The commander or designated representative signs first name, middle initial, last name, and rank.

(3) When used to list uncorrected and deferred maintenance actions.

(a) 1 ORGANIZATION. Enter the name of the unit or section to which the equipment belongs.

(b) 2 NOMENCLATURE AND MODEL. Enter the noun abbreviation and the model of the equipment.

(c) 3 REGISTRATION/SERIAL/NSN. Enter serial or registration number.

(d) 4a, b, c, d, and 5. Leave blank.

(e) 6 TYPE INSPECTION. Enter DEFERRED MAINTENANCE or DEF MAINT.

(f) 7, 8a, 8b, 9b, and 10. Leave blank.

(g) TM ITEM NUMBER a. Enter the date the fault was found.

(h) STATUS b.

1. Enter the status symbol that applies to the fault. Status symbol X faults will not go on this form.

2. When the fault is fixed, the person that does the work initials the status symbol.

(i) DEFICIENCIES AND SHORTCOMINGS c. Briefly describe the faults as listed on the PMCS or inspection DA Form 2404.

(j) CORRECTIVE ACTION d.

1. Give the reason for the delay.

2. If the reason is a part on order, print the document number and NSN or part number for each. For parts on order from the quick supply store (QSS), print QSS and the Julian date you were told the part was not on hand. For items on order from the self-service supply center (SSSC), print SSSC and the Julian date you were told the item was not on hand.

3. If the part is canceled later, print CANCELED and the Julian date the part was canceled. If you still need the part, reorder it. Put the fault, NSN or part number and new document number on the next open line.

4. If the delay is until the next scheduled service, print SCHEDULE FOR NEXT PM SERVICE. State which service and the date it is due.

5. If the delay is for a shop backup, put the work request number in column d.

6. When possible, enter a calendar date when you expect the reason for delay will no longer apply. Circled X faults listed on this form will have a date when the limited operations will end. If no date is available, give a calendar date when the downgrade will be reviewed by the commander or designated representative. The date will be no more than 1 week from the date of the downgrade action. Print DOWNGRADED ON (date). DOWNGRADE ENDS (date).

NOTE

Maintenance supervisors, leaders and operators will review this form regularly for faults that are overdue to be fixed.

7. Do not list faults that are on a DA Form 2407 for repair.

8. More space or lines under column d may be used for the name of the person picking up parts, listing action taken, etc.

9. When the fault is corrected, the person doing the work enters the calendar date in column d.

(k) INITIAL WHEN CORRECTED e. The commander or the commander's designated representative initials when the entry is made.

NOTE

For quality control, a qualified second person will check work done on circled X status symbol faults. When that is done, the person doing the work initials the status symbol. The inspector initials in column d.

e. Disposition.

(1) The DA Form 2404 listing faults found during the performance of operator PMCS will be given to the supervisor so that he or she may take the appropriate action. This DA Form 2404, under all circumstances, will be filed in the equipment owner's section until reviewed by maintenance personnel performing unit level scheduled services or for a period not to exceed 1 year. Before filing, all information should be transcribed to the proper forms.

(a) Faults requiring repair by support maintenance must be placed on a DA Form 2407.

(b) Faults that cannot be repaired until parts are received are placed on a separate DA Form 2404 for deferred maintenance.

(2) When the DA Form 2404 carries an NMC deficiency, keep the form until the deficiency has been fixed and the equipment becomes FMC. This includes the DA Form 2404 on equipment sent to support maintenance on a DA Form 2407. The NMC time will be recorded on the DD Form 314 by the unit medical equipment maintenance personnel.

(3) Keep the DA Form 2404 that shows the performance of scheduled services on equipment not requiring the use of a DA Form 2409 or DD Form 314. This DA Form 2404 may be destroyed after the performance of the next scheduled service and the transfer of any uncorrected faults to the new DA Form 2404, if these uncorrected faults are not already on Def Maint DA Form 2404.

(4) Dispose of DA Forms 2404 used for technical inspections as the Army regulation or publication requiring the inspection directs.

2-4. DA Form 2405 (Maintenance Request Register)

a. Purpose. The DA Form 2405 is a record 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 DA Form 2405 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 Form 2405 will be used at organizational level as a quality control sheet and a record of maintenance requests sent to support units.

c. Preparation (completion instructions by column title).

(1) **JOB ORDER NUMBER a:** Enter the local work order number.

(2) **QUANTITY AND NOMENCLATURE b:** Enter the total number of items as indicated in block 16a of DA Form 2407. Enter the nomenclature of the item as indicated in block 3 of DA Form 2407.

(3) **WORK REQUESTED BY c:** Enter the name of the section or point of contact requesting the work. This information is available from block 1a of DA Form 2407.

(4) **SERIAL/REGISTRATION NUMBER d:** Enter the serial number from block 2 of DA Form 2407. If more than one serial or registration number is listed on DA Form 2407, make separate entries on the DA Form 2405.

(5) **BRIEF DESCRIPTION OF WORK e:** Briefly describe the work to be accomplished (for example, repair, inspect, overhaul, etc.).

(6) **DATE JOB ORDER RECEIVED f:** Enter the Julian date that you received the maintenance request.

(7) **STARTED g:** Enter the Julian date that you started the required action.

(8) **FINISHED h:** Enter the Julian date that you completed the required action.

(9) **MAN-HOURS i:** Enter the total number of man-hours required to complete the necessary action. This information is included in block 20(g) of DA Form 2407.

(10) **LABOR j:** Leave blank.

(11) **PARTS k:** Enter the total cost of parts used to complete the required action.

(12) **TOTAL COST OF JOB l:** Leave blank.

d. Disposition.

(1) The DA Form 2405 will be kept for 6 months after the date of the last entry in column h. Then, destroy the form.

(2) Move the open document numbers to a new register and close out the DA Form 2405 on a calendar- or fixed-year basis.

2-5. DA Forms 2407 and 2407-1 (Maintenance Request and 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. The DA Form 2407 is used by all levels of maintenance management and activities requiring their services. It is used to—

(1) Request organizational maintenance service at unit level.

(2) Request maintenance services from higher level support activities.

(3) Report warranty claims actions.

(4) Request and report the application of modification work orders.

(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 “onsite” or “repair and return to user” actions.

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

(1) *Request support maintenance.*

(a) **PAGE NO.:** Enter the sequential page number of the page you are preparing.

(b) **NO. 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.

(d) **WESDC:** Enter the end item code (EIC) if the item is reported under AR 700-138. You will find EICs listed in appendix B of AR 700-138 with the reportable item. The EIC has replaced the WESDC. If there is no EIC, leave this item blank.

(e) **ORG. PD:** Enter the priority designator for the request.

(f) **PD 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.

(h) **1a ORGANIZATION:** Enter the name of the unit requesting the maintenance.

(i) **1b LOCATION:** Enter the location of the unit listed in 1a. Units that are positioned overseas will enter the APO only.

(j) **1c UNIT IDENTIFICATION CODE:** Enter the DODAAC of the unit listed in 1a.

(k) **2 SERIAL NO.:** 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) **3 NOUN NOMENCLATURE:** Enter the noun abbreviation of the equipment.

(m) **4 LINE NO.:** Enter the LIN when the

equipment is reported under AR 700-138. Otherwise, leave blank.

(n) 5 MODEL: Enter the item's model number.

(o) 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) 7 MAINTENANCE ACTIVITY: Enter the name of the supporting activity.

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

O—Unit

F—Intermediate direct support

H—Intermediate general support

D—Depot

(r) 8 UTILIZATION: Enter the utilization code that applies to your unit and equipment. (Refer to app B, table B-1.)

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

(t) 9 ERC: Enter the equipment readiness code that applies to the item as listed in the table of organization and equipment. (Not all items will have an ERC.)

(u) 9b PACING ITEM: Leave blank (local option).

(v) 10 HOURS: Leave blank (local option).

(w) 11 MILES: Leave blank (local option).

(x) 12 ROUNDS: Leave blank (local option).

(y) 13 STARTS: Leave blank (local option).

(z) 14 FAILURE DETECTED DURING:

Place a check in the appropriate box. If no failure occurred, leave this entire item blank.

(aa) 15 FIRST INDICATION OF TROUBLE: Place a check in the appropriate box.

(ab) 16 DESCRIBE DEFICIENCIES OR SYMPTOMS: Briefly describe the fault or symptom that was 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 (RCs)

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 to continue.

(ac) 16a REMARKS:

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

2. If the fault makes DA Form 2406 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; note the status of equipment. NMCM 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:

- MAINTENANCE REQUEST RECEIVED ON (date).

- ONSITE REPAIR SCHEDULED FOR (date).

- OWNER TO RETURN ITEM ON (date) FOR REPAIR.

5. Block 24 will be filled in by support only when the onsite repair is started or the deferred item is brought back to support.

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. The receipt copy will be sent 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) 23 SUBMITTED BY/JULIAN DATE: The person submitting the DA Form 2407 signs in this block and enters the Julian date.

(ae) 24 RECEIVED BY/JULIAN DATE: 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 will check the entries in SECTION I and fill in SEC-

TION II.

(a) 16 DESCRIBE DEFICIENCIES OR SYMPTOMS: (Previously filled in.)

(b) 16a REMARKS:

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

2. When the item in block 3 needs "onsite" or "deferred" repairs, explain that. One of the following entries will be made for onsite or deferred work:

• MAINTENANCE REQUEST RECEIVED ON (date).

• ONSITE REPAIR SCHEDULED FOR (date).

• OWNER TO RETURN ITEM ON (date) FOR REPAIR.

NOTE

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

(c) 17a REPAIR ORGANIZATION/ACTIVITY: Enter the designation of the unit or activity doing the work.

(d) 17b LOCATION: Enter the location of the unit or activity doing the work.

(e) 17c UNIT IDENT CODE: Enter the DODAAC of the organization listed in 17a.

(f) 18 TYPE ORGANIZATION/ACTIVITY ACCOMPLISHING WORK: Place a mark in the appropriate block.

(g) 19 AMS ACCOUNT CODE: Leave blank.

(h) 20a ACT CODE: Leave blank.

(i) 20b FAILURE CODE: Leave blank.

(j) 20c COMPONENT/PART NOUN, SVC OR MWO NO.:

1. Indicate the parts, components, assemblies or other items you replaced or repaired. (Common hardware and bulk material like nuts, bolts, paint, etc., will be listed only as locally required.)

2. If the work being done is required by a TB, enter the TB number.

3. If more space is required, use DA Form 2407-1.

(k) 20g MAN-HOURS: Enter the number of man-hours, in hours and tenths, required to

accomplish the task.

(l) 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) 20i PART SOURCE CODE: Place a mark in this column only if the part came from cannibalization.

(n) 20j QTY: Enter the total number of parts required to accomplish the task.

(o) 20k PARTS COST: Enter the cost of each part.

(p) 20l TOTAL MAN-HOURS: Enter the total number of man-hours required in hours and tenths.

(q) 20m TOTAL MAN-HOURS COST: Leave blank (local option).

(r) 20n TOTAL PARTS COST: Enter the total cost of all parts installed.

(s) 21 DELAY: Place a mark in the appropriate box. If no delay occurred, leave blank.

(t) 22 DATA TRANSCRIBED: Place a mark in this box only when the information has been transferred to another form.

(u) 23 SUBMITTED BY/JULIAN DATE: Previously entered.

(v) 24 RECEIVED BY/JULIAN DATE: The person receiving the request signs this block and enters the Julian date.

(w) 25 WORK STARTED BY/JULIAN DATE: The person starting the job signs this block and enters the Julian date.

(x) 26 INSPECTED BY/JULIAN DATE: The person inspecting the work signs this block and enters the Julian date.

(y) 27 ACCEPTED BY/JULIAN DATE: The person accepting the equipment for the owner signs this block and enters the Julian date.

(z) 28 DISPOSITION: Place a mark in the appropriate box.

(3) *Request or report an MWO.*

(a) 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 that need 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.

MAINTENANCE REQUEST				PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL
For use of this form, see TM 38-750; the proponent agency is DCSLOG.				1	1	CSGLD-1047(81)
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 00 EVAE Hosp DENTAL CLINIC #1		b. LOCATION FT TANEY, MD		c. UNIT IDENT CODE B4K222	
2. SERIAL NO. 90-1000	3. NOUN NOMENCLATURE DENTAL OPERATING UNIT		4. LINE NO. #95601	5. MODEL 305 G1	6. NATIONAL STOCK NUMBER 6520-00-140-7663	
7. MAINTENANCE ACTIVITY MAINT DIV TRACY, CA.	8. LEVEL D	9. UTILIZATION CODE O	10. MCMR ITEM Y	11. ERC A	12. PACING ITEM	13. HOURS
14. FAILURE DETECTED DURING (Select one - use V or X)			15. FIRST INDICATION OF TROUBLE (Select one - use V or X)			
<input checked="" type="checkbox"/> A Scheduled Maintenance <input type="checkbox"/> B Handling <input type="checkbox"/> C Test <input type="checkbox"/> D Normal Op <input type="checkbox"/> E Storage <input type="checkbox"/> F Inspection <input type="checkbox"/> G Flight <input type="checkbox"/> H Other			<input type="checkbox"/> 200 Inoperative <input type="checkbox"/> 201 Delay <input type="checkbox"/> 202 Overheating <input checked="" type="checkbox"/> 203 Low Performance <input type="checkbox"/> 204 Out of Adjustment <input type="checkbox"/> 205 Other			
16. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repairs)						
MULTIPLE LEAKS IN UNIT HOSES						
16a. REMARKS AU 343-7187 Poc Pfc J. Jones						
SAMPLE						
NMC						
PREPARATION INSTRUCTIONS <small>(Prior to using this form, read TM 38-750 for detailed preparation instructions)</small>						
<p>(1) Place a "V" or an "X" in the box for the type action required.</p> <p>(2) Enter the WESDC if the item is Material Condition Status Reportable.</p> <p>(3) Enter the priority designator as determined from the urgency of need and force activity designator.</p> <p>(4) The Unit Commander, Chief of TDA activity or their designated representative will authenticate, by signature, a priority of 01 through 08.</p> <p>(5) Block 1a. Enter the name of the organization submitting the request.</p> <p>(6) Block 1b. Enter the unit submitting the request; units overseas enter APO only.</p> <p>(7) Block 1c. Enter the unit identification code of the unit in block 1a.</p> <p>(8) Block 2. Enter the equipment serial no. For ammunition, enter the lot number. For administrative use vehicles enter the USA registration number.</p> <p>(9) Block 3. Enter the noun abbreviation of the item.</p> <p>(10) Block 4. Enter the item line number if applicable.</p> <p>(11) Block 5. Enter the model number.</p> <p>(12) Block 6. Enter the national stock number of the item listed in block 2.</p> <p>(13) Block 7. Enter the name of the support activity.</p> <p>(14) Block 7a. Enter the symbol of the maintenance category (C, F, H, D or L)</p> <p>(15) Block 8. Enter the utilization code.</p> <p>(16) Block 9. Enter the word "yes" if the item is Material Condition Status Reportable.</p> <p>(17) Block 9a. Enter the equipment readiness code, if applicable.</p> <p>(18) Block 9b. Enter the word "yes" if the item is a pacing item.</p> <p>(19) Block 10. Enter the hour reading if applicable.</p> <p>(20) Block 11. Enter the mileage from the odometer if applicable.</p> <p>(21) Block 12. Enter the total rounds fired if applicable.</p> <p>(22) Block 13. For turbine engines, enter the number of hot starts.</p> <p>(23) Block 14. Enter a "V" or "X" in the proper block.</p> <p>(24) Block 15. Enter a "V" or "X" in the proper block.</p> <p>(25) Block 16. Describe briefly the fault or symptoms needing correction.</p>						
23. SUBMITTED BY Pfc Jones	24. RECEIVED BY					
JULIAN DATE 5050	JULIAN DATE					

DA FORM 2407 MAY 61

EDITION OF JUL 78 IS OBSOLETE.

RECEIPT COPY 1

Figure 2-6. DA Form 2407, Maintenance Request, All Copies.

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

(b) 16a REMARKS:

1. The owning unit will put their telephone number in this block.

2. Support maintenance uses this block to note any items listed, but not received, and to note the status of equipment. NMCM and NMCS time for items reportable on the DA Form 2406 will be 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.

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

(c) SUBMITTED BY/JULIAN DATE: The person submitting the DA Form 2407 signs in this block and enters the Julian date.

(d) RECEIVED BY/JULIAN DATE: 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 non-standard medical equipment will be reported to USAMMA, ATTN: SGMMA-M, Frederick, MD 21701-5001 on DA Form 2407 with the information listed below.

16 DESCRIBE DEFICIENCIES OR SYMPTOMS. . . :

(1) Manufacturers name, address, and telephone number if available.

(2) All technical specifications.

(3) Date manufactured and put in service.

(4) Defense Logistics Agency (DLA) contract number.

(5) Cause of performance failure.

d. Disposition.

(1) Receipt copy (No. 1). Destroy when the equipment is returned to the unit.

(2) NMP copy (No. 2). Handle as directed by the local command except for entries on those items designated for the Field Performance Plan (SB 8-75-series). For those items, forward the copy to Commander, USAMMA, ATTN: SGMMA-M, Frederick, MD 21701-5001.

(3) Control copy (No. 3). Handle as directed by the local command.

(4) Organization copy (No. 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; that is, calibration and load or proof test, until the next service is performed.

(5) File copy (No. 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.

2-6. DA Form 2409 (Equipment Maintenance Log (Consolidated))

a. Purpose. DA Form 2409 gives a maintenance history of an item of equipment.

b. Use. The DA Form 2409 will be used—

(1) As an equipment log.

(2) As a record of safety recall information.

(3) When local or command procedures require tracking of maintenance costs.

(4) When other forms are required on an item of equipment in addition to the DA Form 2409, do not complete the DA Form 2409 section that duplicates the other records. For example, do not complete SECTION B where DD Form 314 is required.

(5) When a repair cost is required, the DA Form 2409 will be used. Only SECTION A and SECTION C will be completed on those items.

c. Special Instructions. Support maintenance will inform the owning unit of component hours added during maintenance and of any hours on replaced or new components.

d. Preparation. (Completion instructions by block title.)

(1) SECTION A—GENERAL.

(a) STOCK NUMBER: Enter the NSN of the item.

(b) MODEL NUMBER: Enter the model number of the item. If the item has no model number, enter NONE in this block.

(c) SERIAL NUMBER: Enter the serial number of the item.

(d) LOCATION: Enter the actual location of the equipment (pencil entry).

(e) FREQUENCY OF MAINTENANCE INSPECTION: Enter the type of frequency (interval) of the maintenance inspection: Weekly, monthly, semiannually, etc.

(f) NOMENCLATURE: Enter the noun.

(g) EXPECTED USEFUL LIFE: When you know it, enter the expected useful life of the equipment. If you do not know the expected life, put UNK in this block.

(h) EXPECTED DATE OF RETIREMENT:
Enter the calendar date the item is expected

to be taken out of service. You will get this date by adding the life expectancy in block

7 to the "put in service" date in block 11. If you do not have this information, put UNK in this block.

(i) **TECHNICAL REFERENCES:** Enter the number of the organizational level technical publication on the item. If there are no technical references available, list the manufacturer's literature.

(j) **MANUFACTURER:** Enter the name of the manufacturer of the item. If you do not know, put UNK in this block.

(k) **DATE PUT IN SVC:** Enter the calendar date the item was accepted into the Army inventory. If you do not know, estimate. Put EST before the estimated date (EST June 1977 for example).

(l) **UNIT COST:** Enter the cost of the item at the time the DA Form 2409 was initiated. If you have no other cost, use the price on the AMDF.

(2) SECTION B—MAINTENANCE INSPECTION RECORD.

(a) **DATE:** Enter the day, month, and year the scheduled maintenance inspection or service was done.

(b) **INITIAL:** The person doing the inspection, test, or service initials.

(c) **REMARKS:** Enter the results of the test, inspection, or service. Normally the word SERVICE is enough. When support units work on the equipment, put the job order number in this column.

(3) SECTION C—REPAIR AND COST RECORD.

(a) **DATE a:** Enter the calendar date the repair work was finished. For safety recall, put the date the recall work was done.

(b) **WORK ORDER NO. b.**

1. Enter the maintenance request or work order number if one was used.

2. For safety recalls, enter the recall number.

(c) **NATURE OF REPAIR c.**

1. Briefly describe the repair work.

2. For safety recalls, describe the recall action.

(d) **MAN-HOURS d:** Enter the total man-hours used in the work. Round to the nearest tenth of an hour.

(e) **COST:**

1. **PARTS e:** Enter the cost of the parts

used. Do not include cost of common hardware, items you get from the cannibalization point, etc.

2. **LABOR b:** Leave blank.

3. **TOTAL g:** Leave blank.

(4) SECTION D—MODIFICATION RECORD.

(a) **MODIFICATIONS REQUIRED:** Enter all required MWOs that apply to the equipment no matter what level of maintenance will do the work.

(b) **MWO NO. a:** Enter the MWO number.

(c) **DATE OF MWO b:** Enter the date of the MWO.

(d) **PRIORITY c:** Enter the letter U for Urgent, L for Limited Urgent and N for Normal. The MWO will tell you which one applies for that specific MWO.

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

(f) **MWO TITLE OR KIT NUMBER(S) e:** Enter the MWO kit number.

(g) **DATE MWO APPLIED f:** Enter, in pencil, the date the MWO is to be applied.

(h) **MODIFICATIONS COMPLETED:** The unit that applies the MWO completes columns f through i.

(i) **DATE MWO APPLIED f:** Erase the pencil date. Enter, in ink, the day, month, and year the MWO was applied.

(j) **MAN-HOURS g:** Enter the man-hours used to apply the MWO.

(k) **ORGANIZATION APPLYING MWO h:** Enter the name of the unit that applies the MWO.

(l) **SIGNATURE i:** The person who confirms the MWO signs his or her name and rank.
e. Disposition.

(1) Six months after the date of the last entry in SECTIONS B or C, throw out the DA Form 2409. For local use, this form may be kept 1 year after the date of the last entry in SECTION B or C.

(2) Transcribe the following information to a new DA Form 2409.

(a) **SECTION A.** All entries.

(b) **SECTION C.** Put the date in column a and the word CONSOLIDATED in column c. Carry the totals from the old form's columns d and e to the new form.

(c) **SECTION D.** All entries.



SECTION A - GENERAL

1. STOCK NUMBER 6520-00-140-7663	2. MODEL NUMBER 305G1	3. SERIAL NUMBER 90-1000	4. LOCATION Dental Shelter #1	5. FREQUENCY OF MAINT INSPECTION 5
6. NOMENCLATURE Dental Operating Unit Field Port		7. EXPECTED USEFUL LIFE (In years) 10		8. EXPECTED DATE OF RETIREMENT Oct94
9. TECHNICAL REFERENCES MFP, DES		10. MANUFACTURER ADEC		11. DATE PUT IN SVC Oct84
			12. UNIT COST \$2908.50	

SECTION B - MAINTENANCE INSPECTION RECORD

DATE a	INITIAL b	REMARKS c	DATE a	INITIAL b	REMARKS c
5 MAR 85	DL	Semi Annual - PM - OK			
4 Sept 85	DL	" " " "			
10 MAR 86	DL	ADJUST PRESSURE Semi Annual - PM - REGULATOR - OK			

SAMPLE

DA FORM 2409
1 APR 82

* GPO : 1962, O-637037

EQUIPMENT MAINTENANCE LOG (CONSOLIDATED)
(TM 38-750)

Figure 2-8. DA Form 2409, Maintenance Inspection Record (Front).

SECTION C - REPAIR AND COST RECORD

DATE <i>a</i>	WORK ORDER NO. <i>b</i>	NATURE OF REPAIR <i>c</i>	MAN-HOURS <i>d</i>	COST		
				PARTS <i>e</i>	LABOR <i>f</i>	TOTAL <i>g</i>
19FEB85	5050-0001	Replaced Leaking EVACUATOR HOSES	3.0	22.50		22.50

SAMPLE

SECTION D - MODIFICATION RECORD

MODIFICATIONS REQUIRED					MODIFICATIONS COMPLETE				
MWO NO. <i>a</i>	DATE OF MWO (Day - Month - Year) <i>b</i>	PRIORITY <i>c</i>	ECH <i>d</i>	MWO TITLE OR KIT NUMBER(S) <i>e</i>	DATE MWO APPLIED (Day - Month - Year) <i>f</i>	MAN-HOURS <i>g</i>	ORGANIZATION APPLYING MWO <i>h</i>	SIGNATURE (Certification of MWO Application) <i>i</i>	

Figure 2-9. DA Form 2409, Repair Cost and Modification Record (Back).

Section II. VERIFICATION AND TEST RECORDS OR FORMS

2-7. General

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

2-8. DA Form 5621-R (Leakage Current Measurements, General)

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

b. Use. The DA Form 5621-R will be used to record current leakage measurements taken on medical equipment when the equipment fails the electrical safety test.

c. Preparation. (Completion instructions by block title.) Entries will be legibly made with a blue, blue-black, or black ballpoint pen or indelible pencil. Felt-tip pens, pencils, or grease pencils will not be used. DA Form 5621-R will be locally reproduced on 8½- by 11-inch paper. A copy for local reproduction is at the back of this bulletin.

(1) AREA/LOCATIONS. Enter the area, section, department and room and building number where the equipment is located.

(2) DATE. Enter the date current leakage measurements were accomplished.

(3) HOSPITAL. Enter the unit or activity.

(4) INSPECTED BY. Enter the technician's name and code.

(5) TYPE. Leave blank.

(6) RESULTS. Annotate whether the equipment measurements are within maximum limits identified.

(7) INDEX NUMBER. Leave blank (local option).

(8) NOMENCLATURE; MODEL NUMBER. List equipment nomenclature and model number.

(9) TEST I—RESISTANCE (m Ω). Measure and record ground resistance from the grounding pin of the plug to the equipment's grounding test point or to its chassis.

(10) TEST II—CURRENT (μA). GROUNDED NORMAL: Measure and record leakage current with equipment in the ON and OFF mode.

(11) GROUND LIFTED—POLARITY: NORMAL; REVERSED. Measure and record leakage current on equipment in the GROUND LIFTED: NORMAL and REVERSED polarity mode.

d. Disposition. The DA Form 5621-R with noted deficiencies will be attached to the number 5 copy of the DA Form 2407 requesting corrective action. The attached DA Form 5621-R will be disposed of in accordance with the disposition instructions of the number 5 copy of the DA Form 2407.

2-9. DA Form 5622-R (Leakage Current Measurements, EKG)

a. Purpose. The DA Form 5622-R provides a record of electrical leakage current measurements for electrocardiographs and electrocardiographic monitors.

b. Use. The DA Form 5622-R will be used—

(1) To record current leakage measurements taken on equipment located within medical treatment facilities.

(2) By all medical maintenance activities.

c. Preparation. (Completion instructions by block title).

(1) DA Form 5622-R will be completed when deficiencies are detected by the person performing electrical safety leakage tests. Entries will be legibly made with a blue or blue-black ball-point pen or indelible pencil. Felt-tip pens, pencils, or grease pencils will not be used. DA Form 5622-R will be locally reproduced on 8½- by 11-inch paper. A copy for local reproduction is located at the back of this bulletin.

(2) AREA/LOCATION. Enter area, section, department, and room and building number where equipment is located.

(3) INSPECTION DATE. Enter date current leakage measurements were accomplished.

(4) HOSPITAL. Enter unit or activity.

(5) MODEL. Enter equipment model number.

(6) SERIAL NUMBER. Enter equipment serial number.

(7) INDEX NUMBER. Leave blank (local option).

(8) PERSON PERFORMING TEST. Print legibly the technician's name conducting the test.

(9) INSTRUMENT MANUFACTURER. Enter the manufacturer of the equipment being tested.

(10) TYPE. Leave blank.

(11) TEST I. Measure and record current leakage from an exposed conductive surface of the equipment chassis with the equipment ON/OFF switch in both the ON and OFF positions

LEAKAGE CURRENT MEASUREMENTS, GENERAL				AREA/LOCATION OR #2			DATE 6 JAN 84				
				HOSPITAL OO EVAC HOSPITAL			INSPECTED BY PFC JONES				
TYPE		RESULTS		INDEX NUMBER	NOMENCLATURE	MODEL NUMBER	TEST I RESISTANCE (mΩ)	TEST II - CURRENT (μA)			
A	B	OK	NO					GROUNDING	GROUNDING NORMAL	GROUND LIFTED - POLARITY	
									NORMAL	REVERSED	
		X		SN 214117-01	SUCTION APPARATUS	9700	90 mΩ	ON	7 μA	37 μA	40 μA
								OFF	8 μA	20 μA	20 μA
								ON			
								OFF			
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LEAKAGE CURRENT MEASUREMENTS, EKG		AREA/LOCATION TRIAGE SECTION SHELTER #2		INSPECTION DATE JAN 6, 84	
HOSPITAL OO EVAC HOSPITAL		MODEL 40B	SERIAL NO. B05034B	INDEX NO.	PERSON PERFORMING TEST (Print) PC JONES
INSTRUMENT MANUFACTURER TEKTRONIX		TYPE	GROUNDED-NORMAL POLARITY	GROUND LIFTED-NORMAL POLARITY	GROUND LIFTED-REVERSE POLARITY
		A	B	A=100µA/B=500µA	A=10µA/B=50µA
TEST I 		ON	3 µA	3 µA	50 µA
		OFF	2 µA	3 µA	50 µA
TEST II 		A=10µA/B=50µA	A=10µA/B=50µA		
		ALL	3 µA	2 µA	3 µA
TEST III 		RA	2 µA	2 µA	3 µA
		LA	5 µA	2 µA	3 µA
		RL	2 µA	2 µA	3 µA
		LL	1 µA	2 µA	5 µA
		C	6 µA	9 µA	5 µA
LEAD I POSITION OR NORMAL OPERATION 		RA-RL	1 µA	2 µA	3 µA
		LA-RL	1 µA	2 µA	2 µA
		RA-LA	2 µA	2 µA	3 µA
TEST V W/PATIENT CABLE 		A=20µA/B=500µA	REMARKS		
			1.0 µA		
TEST VI 		A/B=150 mΩ	77,3 mΩ	mΩ	
					SAMPLE
					TEST RESULTS
					SATISFACTORY ✓
					ACTION NEEDED B

DA FORM 5622-R, Jan 87 PREVIOUS EDITION WILL BE USED REPLACES DD FORM 1941, 1 JUL 75, WHICH WILL BE USED.

(TB 38-750-2)

Figure 2-11. DA Form 5622-R, Leakage Current Measurements, EKG.

in the GROUNDED and GROUND LIFTED modes.

(12) TEST II. Measure and record leakage current between all patient electrodes (connected together in common) and electrical ground with equipment in the ON position GROUNDED and GROUND LIFTED (normal and reversed) modes.

(13) TEST III. Measure the leakage current between each patient electrode (individually) and electrical ground with equipment in the ON position GROUNDED and GROUND LIFTED (normal and reverse) modes.

(14) TEST IV. Measure and record the leakage current between all combinations of patient electrodes with equipment in the ON position. For electrocardiographs and electrocardiographic monitors only, the phrase "between all combinations of patient electrodes" is interpreted to mean "between right arm and right leg, between left arm and right leg, and right arm and left arm electrodes, while the unit is in the Lead I or normal measuring mode." This test does not apply to equipment not having patient electrodes.

(15) TEST V. Measure and record leakage current through all patient electrodes as shown with the equipment switch in the ON position. This test does not apply to equipment without patient electrodes.

(16) TEST VI. Measure and record the resistance from the ground pin of the power plug to any exposed conductive surface of the equipment being evaluated.

(17) REMARKS. Self explanatory.

(18) TEST RESULTS. Enter a check mark indicating if the test was SATISFACTORY or if ACTION NEEDED.

d. Disposition. The DA Form 5622-R with deficiencies noted will be attached to the number 5 copy of the DA Form 2407 requesting corrective action. The attached DA Form 5622-R will be disposed of in accordance with the disposition instructions of the number 5 copy of the DA Form 2407.

2-10. DA Label 175 (Defibrillator Energy Output Certification).

a. Purpose. The Defibrillator Energy Output Certification label provides a record for the certification of energy output.

b. Use. DA Label 175 will be used by medical units for documenting energy output on all defibrillators.

c. Preparation. (Completion instructions by column title.)

(1) DA Label 175 will be 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 delivered entry levels in

joules (WATT-SECONDS) adjacent to the corresponding control setting in item (2) above.

NOTE

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

(4) DATES. Enter the date of CERTIFICATION and the EXPIRATION date.

(5) INSPECTOR. Record legibly, the name of the person performing output certification.

d. Disposition. Affix DA Label 175 as close as possible to the control panel on the defibrillator. When the label cannot be affixed to 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.

(TB 38-750-2)

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 Sep 84	EXPIRATION 5 Sep 85
INSPECTOR SSG J. C. [Signature]	

SAMPLE

DA LABEL 175
JAN 87

REPLACES DD FORM 1042, 1 JUN 74, WHICH WILL BE USED.

Figure 2-12. DA Label 175, Defibrillator Energy Output Certification.

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

(3) Affix the label to the outside lid of the case. Labels previously affixed to the equipment will be voided, removed, and destroyed, or new labels will be placed over the old labels.

2-11. DA Form 5624-R (DC Defibrillator Inspection Record)

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

b. Use. DA Form 5624-R will be used for documenting energy output and defibrillator performance inspection.

c. Preparation. Capital letters indicate the title of appropriate blocks on this form. When performing tests and inspections, follow instructions as per equipment item technical manual or manufacturer's literature. DA Form 5624-R will be locally reproduced on 8½- by 11-inch paper. A copy for local reproduction is located at the back of this bulletin.

(1) **Heading:** This section will be completed by placing an "X" in the appropriate block when the inspection and performance testing have been completed. Enter LOCATION, SERIAL NUMBER, INDEX NO. material management control number (MMCN), DATE OF INSPECTION, MANUFACTURER, MODEL, WORK ORDER NUMBER, and NEXT INSPECTION DUE DATE.

(2) **Visual Inspection.** Visually inspect items listed. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate action needed in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(3) **Operation.**

(a) 9A through C. Measure and record the leakage current to chassis in the equipment's ON and OFF positions. Circle unacceptable values. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate action needed in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(b) 10A through C. Measure and record leakage current to paddles in the equipment's ON and OFF positions. Circle unacceptable values. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(c) 11 OUTPUT ENERGY (WATT-SECONDS). List defibrillation energy CONTROL SETTING. Record energy output indicated on the defibrillator and record ENERGY DELIVERED measured at each control setting in the columns provided. Record PREVIOUS VALUE measured from a prior performance test and record the change in output. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate ACTION NEEDED in the column provided. When required action has been taken, enter date and initials in the ACTION TAKEN column.

(d) 12 CHARGING TIME TO MAXIMUM ENERGY SETTING. Measure and record charging time to the maximum energy setting. Record the previous value from a prior performance inspection. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(e) 13 INTERNAL DISCHARGE OF STORED ENERGY. Charge the defibrillator to its maximum energy level. Test and verify discharge of stored energy through internal discharge circuitry. If no action is required, place an "X" or "✓" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(f) 14 ENERGY DELIVERED AFTER 1 MINUTE. Set the defibrillator control setting to MAXIMUM SETTING and charge. Measure and record the maximum energy delivered after a 1 minute storage. If no action is required, place an "X" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(g) 15 OUTPUT OF TENTH REPEATED DISCHARGE. Charge and discharge the defibrillator at MAXIMUM SETTING 10 times. Measure and record the energy output of the 10th repeated discharge. If no action is required, place an "X" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(h) 16 SYNCHRONIZER OPERATION. Test and verify synchronizer operation. If no action is required, place an "X" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(i) 17 OTHER FEATURES (Specify). Inspect; verify operational test of optional features not listed. If no action is required, place an "X" in the OK column. If action is required, annotate the ACTION NEEDED in the column provided. When required action has been taken, enter the date and initials in the ACTION TAKEN column.

(4) **CERTIFICATION.** After energy output levels have been verified and inspection indicates no action needed, DA Label 175 will be completed and affixed to the defibrillator. Enter an "X" in the block "DA LABEL 175 REPLACED."

DC DEFIBRILLATOR INSPECTION RECORD				ACTION		
LOCATION		SERIAL NO.		<input checked="" type="checkbox"/> NOT NEEDED	<input type="checkbox"/> NEEDED	<input type="checkbox"/> TAKEN
MANUFACTURER		MODEL		INDEX NO.	DATE OF INSPECTION	
WORK ORDER NO.		NEXT INSPECTION DUE				
BQ EUC Hosp		2220A02296		M3579	10 Sep 84	
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. 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)	OFF	ON				
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)						
CONTROL SETTING	ENERGY		PREVIOUS VALUE	CHANGE		
	INDICATED	DELIVERED				
60	60	63	60	+3	✓	
100	100	105	99	+6	✓	
150	150	158	150	+8	✓	SAMPLE
200	200	210	200	+10	✓	
250	250	260	248	+12	✓	
300	300	310	300	+10	✓	
360	360	375	352	+17	✓	

DA FORM 5624-R, AUG 87

EDITION OF JAN 87 IS OBSOLETE.

(TB 38-750-2)

Figure 2-13: DA Form 5624-R, DC Defibrillator Inspection Record (Front).

		OK	ACTION NEEDED	ACTION TAKEN (Date and Initials)
12. CHARGING TIME TO MAXIMUM ENERGY SETTING				
6 SEC TO	360 W-SEC	✓		
	PREVIOUS VALUE SEC			
13. INTERNAL DISCHARGE OF STORED ENERGY		✓		
14. ENERGY DELIVERED AFTER 1 MINUTE 30 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)				
CERTIFICATION				
PROVISIONAL AUTHORIZATION ONLY		X	DA LABEL 175 REPLACED.	
COMMENTS AND DESCRIPTION OF DEFICIENCIES (Refer to Item Numbers)				
SAMPLE				
INSPECTED BY (Type or Print Name and Grade)			SIGNATURE	
Checker, Jenny SSG			Jenny Checker	

(a) **COMMENTS AND DESCRIPTION OF DEFICIENCIES.** Annotate any additional comments or continuations of deficiencies previously listed. (Refer to item numbers.)

(b) **INSPECTED BY.** Type or print the name legibly of the technician conducting the inspection.

(c) **SIGNATURE.** The technician's signature who performed the inspection.

d. Disposition.

(1) If no deficiencies are noted, the DA Form 5624-R will be maintained on file pending the next certification of performance inspection. DA Form 5624-R will be locally reproduced on 8½- by 11-inch paper. A copy for local reproduction purposes is located at the back of this bulletin.

(2) If deficiencies are noted, the DA Form 5624-R will be attached to the number 5 copy of the DA Form 2407 requesting corrective action. The attached DA Form 5624-R will be disposed of in accordance with the disposition instructions of the number 5 copy of the DA Form 2407.

2-12. DD Form 2163 (Medical Equipment Verification/Certification)

a. Purpose. The DD Form 2163 label will be affixed to all items of biomedical equipment requiring verification or certification to—

(1) Certify that the equipment has been verified or certified to the required accuracy.

(2) Indicate the date the equipment was verified or certified and when the next verification or certification is scheduled.

(3) Identify the facility that provided verification or certification services and the individual who performed this action.

(4) List six consecutive certification or verification actions before replacement is required.

b. Use. DD Form 2163 is to be used only by DOD medical activities and distribution will be limited to these activities. This label will be used by all medical activities.

c. Preparation. The person who performs the verification or certification action will complete the label (DD Form 2163) as indicated below. Entries will be legibly made with a blue, blue-black, or black ballpoint pen, or indelible pencil. Felt-tip pencils and pens or grease pencils will not be used. Completion instructions are by block title.

(1) **1 ID NUMBER.** Enter the ID number of the equipment when assigned by command directive.

(2) **2 MODEL NO.** Enter the model number of the equipment as assigned by the manufacturer. If none is available, use the locally assigned model number.

(3) **3 SERIAL NO.** Enter the serial number assigned to the equipment by the manufacturer. If none is available, use the locally assigned serial number.

(4) **4 AUTHORITY.** Enter the authority authorizing the verification or certification; that is, JCAHO requirements, 21 CFR requirements, or American Society of Pathologists requirements.

(5) **5 LEVEL.** Enter the proper verification or certification level code as shown below.

(a) *Code D (depot).* Verification or certification performed by medical depot personnel.

(b) *Code I (maintenance).* Verification or certification performed by in-house medical maintenance personnel.

(6) **Block 6.** Enter verification or certification frequency code as follows:

(a) *Code M.* Identifies an item requiring 30-day verification or certification.

(b) *Code Q.* Identifies an item requiring 90-day verification or certification.

(c) *Code S.* Identifies an item requiring 180-day verification or certification.

(d) *Code A.* Identifies an item requiring 360-day verification or certification.

(7) **UIC.** Enter the UIC of the activity providing the verification or certification service or the Federal Supply Code for Manufacturers (FSCM) number when the manufacturer service is provided by a commercial source.

(8) **CERTIFIED BY.** Enter the initials of the person performing the verification or certification procedure.

(9) **DATE COMPLETE.** Enter the calendar date on which the verification or certification was completed.

(10) **DATE DUE.** Enter the calendar date on which the next verification or certification procedure is due.

d. Disposition. The label (DD Form 2163) will, when possible, be affixed to the front of the calibrated instrument or in a conspicuous place when there is no surface that can be considered the front. When the label cannot be affixed to 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 item.

(3) Affix the label to the outside lid of the case. (This applies to medical instruments and devices routinely kept in individual cases.) Labels previously affixed to the equipment will be voided,

removed, and destroyed, or new labels will be placed over the old labels.

MEDICAL EQUIPMENT VERIFICATION/CERTIFICATION								
1. I.D. NUMBER		2. MODEL NO.		3. SERIAL NO.				
		78660A		2220AD2296				
4. AUTHORITY			5. LEVEL		6. FREQUENCY			
ANST DF 2			I		A			
UIC	CERTIFIED BY	DATE COMPL.	DATE DUE	UIC	CERTIFIED BY	DATE COMPL.	DATE DUE	
222	JC	9/14/55	9/15					

DD FORM 2163, 1 NOV 78

SAMPLE

Figure 2-15. DD Form 2163, Medical Equipment Verification/Certification Label

2-13. DD Form 2164 (X-ray Verification/Certification Worksheet)

a. Purpose. The DD Form 2164 provides a record of x-ray verification, certification, and corrective action taken to assure compliance.

b. Use. DD Form 2164 will be used to record action taken in conjunction with verification and certification of x-ray systems.

c. Preparation. One copy of the DD Form 2164 will be completed by the person performing the verification and certification for each x-ray system. Spaces not requiring entries due to the configuration or type of the equipment will be annotated as "not applicable" or N/A. Entries will be legibly made with a blue or blue-black ballpoint pen or indelible pencil. Felt-tip pens and pencils or grease pencils will not be used.

(1) *Heading.* Enter the name and LOCATION of the unit or activity, building and room number where the system is located, work order number, DATE AND TIME OF SERVICE, and the DATE NEXT SERVICE DUE.

(2) *ACTION.* Complete by placing an X in the appropriate block when the service has been completed.

(3) *Section I, EQUIPMENT IDENTIFICATION.* Enter the MANUFACTURER, MODEL, type, style, size, focal spots, or other designation placed on the components by the manufacturer, and the SERIAL NUMBER assigned by the manufacturer in the space provided.

(4) *Section II, VISUAL INSPECTION OF EQUIPMENT.* Visually inspect the items listed. If no action is needed, place an X in the NOT REQUIRED column. If action is required, annotate the TYPE REQUIRED. When the required action has been performed, indicate so in the ACTION

TAKEN column and enter the INITIAL(s) AND DATE.

(5) *Section III, OPERATIONAL TESTING OF EQUIPMENT.* Perform operational checks on items listed. If no operating problems are found, place an X in the NOT REQUIRED column. If action is required, enter the required action in the TYPE REQUIRED column. When the required action is completed, indicate so in the ACTION TAKEN column and enter the initial(s) of the technician performing the action and the date in the INITIAL AND DATE column.

(6) *Section IV, RADIOGRAPHIC CERTIFICATION.* Perform the indicated procedures and enter the results in the spaces provided. Record line voltage in item 21 (single phase) or item 22 (three phase) as appropriate.

(a) *Item 23, TRANSFORMER BALANCE.* This test is performed only on an annual basis.

(b) *Item 24, EXPOSURE TIMER TEST.* In the TIME SETTING ON CONTROL blocks, enter the time setting that is indicated on the control. In the ACTUAL TIME MEASURED blocks, enter the actual exposure time as measured.

(c) *Item 25, KILOVOLTAGE AND MILLIAMPERAGE VERIFICATION.* The kilovoltage (kVp), as indicated on the x-ray control, is preprinted in the top blocks. The milliamperage, as indicated on the control panel, is to be entered in the extreme left side of the form only in the blocks preprinted with MA. The highest mA indicated on the control panel will be entered in the uppermost block. All other blocks will have the mA indicated in descending value with the bottom block containing the lowest mA station that is indicated on the control panel. The blocks containing the diagonal lines will be used for recording the actual milliamperage and kilovoltage measured for each mA station and kVp station on the control. In the top portion of the blocks with diagonal lines, enter the kilovoltage as measured for each value of kVp that is indicated. In the bottom portion of the blocks, enter the mA as measured for each mA station indicated on the control.

(d) *Item 26, PENETROMETER FILM DENSITY.* Enter a check in the correct box as to whether the penetrometer film density is satisfactory or not.

(e) *Item 27, RADIOGRAPHIC PHOTO-TIMER TEST.* Indicate the type of exposure variation received with a film in the table BUCKY, CHEST unit, or OTHER phototiming device by exposing a phantom at 90 kVp, 200 mA with density controls in DARK (+), NORMAL, LIGHT (-). Record the actual mA received in the appropriate block.

(7) *Section V, FLUOROSCOPIC CERTIFICATION.* Perform the indicated procedures and enter the results in the spaces provided.

(8) *Remarks.* Remarks pertaining to the x-ray system undergoing verification or certification can be made on a separate sheet of paper. Ensure that item numbers are used to indicate the portion of the test to which the remark applies.

(9) *Inspected by.* The person performing the verification or certification will type or print his or her name, grade, and organization in this block and sign the form in the space provided.

d. Disposition. DD Form 2164 will be maintained on file (file number 40) for 1 year, pending completion of the next scheduled verification or certification services.

X-RAY VERIFICATION/CERTIFICATION WORKSHEET <i>(Use additional sheet for remarks. Identify item by number.)</i>				ACTION				
LOCATION <i>(Include Building and Room Number)</i> BLDG 1423 Rm 201 FT SWAMPY, FL 39000				DATE AND TIME OF SERVICE 1 JAN 89		DATE NEXT SERVICE DUE 1 JAN 90		
W O #: 9001-0001								
I. EQUIPMENT IDENTIFICATION								
COMPONENTS	MANUFACTURER	MODEL <i>(Include type, style, size, focal spots, etc.)</i>	SERIAL NUMBER <i>(Housing)</i>					
1. CONTROL NO. 1 <i>(Master Control)</i>	1	GENERAL ELECTRIC	DXD 350	KXD51452-001				
2. CONTROL NO. 2 <i>(Room control)</i>								
3. RADIOGRAPHIC TUBE	GENERAL ELECTRIC	MAXI-RAY 75 1.0/1.0	KXD52783-004					
4. RADIOGRAPHIC TUBE <i>(Auxiliary tube)</i>	SAMPLE							
5. FLUOROSCOPIC TUBE								
II. VISUAL INSPECTION OF EQUIPMENT								
ITEMS FOR VISUAL INSPECTION	ACTION			INITIAL AND DATE				
	NOT REQUIRED	TYPE REQUIRED	ACTION TAKEN					
6. CERTIFICATION LABELS ARE AFFIXED AND VISIBLE	X			RTH 1 JAN 89				
7. STEEL COUNTERWEIGHT CABLES	X			RTH 1 JAN 89				
8. SHOCK-PROOF HIGH TENSION CABLES	X			RTH 1 JAN 89				
9. TUBE HANGER ASSEMBLY AND YOKE/S	X			RTH 1 JAN 89				
10. INDICATOR LIGHTS	X			RTH 1 JAN 89				
11. X-RAY TUBES FOR OIL LEAKS	X			RTH 1 JAN 89				
III. OPERATIONAL TESTING OF EQUIPMENT								
ITEMS FOR OPERATIONAL INSPECTION	ACTION			INITIAL AND DATE				
	NOT REQUIRED	TYPE REQUIRED	ACTION TAKEN					
12. INTERLOCKS	X			RTH 1 JAN 89				
13. LOCKS	X			RTH 1 JAN 89				
14. BACKUP SAFETY TIMERS	X			RTH 1 JAN 89				
15. TABLE AND TUBESTAND MOTION	X			RTH 1 JAN 89				
16. BEAM LIMITING DEVICES <i>(Manual and automatic mode)</i>	X			RTH 1 JAN 89				
17. TABLE ANGULATION LIMIT SWITCHES	X			RTH 1 JAN 89				
18. DOES TUBE OVERLOAD PROTECTION CIRCUIT DISABLE EXPOSURE CIRCUIT?				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO			
19. IS THE PRODUCTION OF X-RAYS INHIBITED UNTIL ANODE IS UP TO SPEED?				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO			
20. DOES BRAKE ON HIGH SPEED STATOR OPERATE CORRECTLY? <i>(Record coast down time for anode after exposure _____)</i>				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO			
IV. RADIOGRAPHIC CERTIFICATION								
21. SINGLE PHASE LINE VOLTAGE AND LINE DROP				22. THREE PHASE LINE VOLTAGE AND LINE DROP				
NO LOAD LINE VOLTAGE		VOLTS		NO LOAD LINE VOLTAGE		VOLTS		
A. L 1 TO GROUND		110 V		A. PHASE A TO B				
B. L 2 TO GROUND		110 V		B. PHASE B TO C				
C. L 1 TO L 2		220 V		C. PHASE A TO C				
LINE DROP TEST		VOLTS		LINE DROP TEST		VOLTS		
D. L 1 TO L 2		.5 V						
23. TRANSFORMER BALANCE ¹				D. PHASE A TO B				
A. ANODE VOLTAGE TO GROUND AT 100 KVP		100 KVP		E. PHASE B TO C				
B. CATHODE VOLTAGE TO GROUND AT 100 KVP		100 KVP		F. PHASE A TO C				
24. EXPOSURE TIMER TEST								
TIME SETTING ON CONTROL	.02	.05	.1	.25	.5	.75	1.0	2.0
ACTUAL TIME MEASURED	.02	.05	.102	.252	.505	.753	1.02	2.03

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Figure 2-16. DD Form 2164, X-Ray Verification/Certification Worksheet (Front)

25. KILOVOLTAGE AND MILLIAMPERAGE VERIFICATION																
CONTROL SETTINGS	KILOVOLTAGE															
	20	40	60	80	100	120	140	150								
MA 300	297	21	300	41	300	60	300	80	300	101	301	121	302	141	302	152
MA 200	199	21	200	45	200	60	200	80	200	101	200	121	200	142	201	152
MA 150	149	20	150	40	150	60	150	80	150	100	150	121	150	141	151	151
MA 100	99	20	100	40	100	60	100	80	100	100	100	120	100	140	99	150
MA 75	74	20	75	40	75	60	75	80	75	100	75	120	75	140	75	150
MA 50	50	20	50	40	50	60	50	80	50	100	50	120	50	140	50	150
MA 25	25	20	25	40	25	60	25	80	25	100	25	120	25	140	25	150
MA																

26. PENETROMETER FILM DENSITY SATISFACTORY UNSATISFACTORY

27. RADIOGRAPHIC PHOTOTIMER TEST (Record MAS)

	BUCKY	CHEST	OTHER
A. NORMAL	RTN 1 JAN 89	RTN 1 JAN 89	
B. LIGHT			
C. DARK			

V. FLUOROSCOPIC CERTIFICATION

28. KILOVOLTAGE VERIFICATION			29. AUTOMATIC BRIGHTNESS CONTROL																									
MA SETTING	KILOVOLTAGE PEAK		<input type="checkbox"/> SATISFACTORY <input type="checkbox"/> UNSATISFACTORY																									
	FLUORO	ACTUAL																										
1.0	40		30. SPOTFILM KILOVOLTAGE VERIFICATION <table border="1"> <thead> <tr> <th colspan="2">KILOVOLTAGE PEAK</th> <th>ACTUAL</th> </tr> <tr> <th>SPOT FILM SETTING</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>50 @</td> <td>_____ MA</td> <td></td> </tr> <tr> <td>80 @</td> <td>_____ MA</td> <td></td> </tr> <tr> <td>100 @</td> <td>_____ MA</td> <td></td> </tr> <tr> <td>120 @</td> <td>_____ MA</td> <td></td> </tr> <tr> <td>1.0</td> <td>MAXIMUM</td> <td></td> <td>120 @</td> <td>_____ MA</td> <td></td> </tr> </tbody> </table>		KILOVOLTAGE PEAK		ACTUAL	SPOT FILM SETTING			50 @	_____ MA		80 @	_____ MA		100 @	_____ MA		120 @	_____ MA		1.0	MAXIMUM		120 @	_____ MA	
KILOVOLTAGE PEAK		ACTUAL																										
SPOT FILM SETTING																												
50 @	_____ MA																											
80 @	_____ MA																											
100 @	_____ MA																											
120 @	_____ MA																											
1.0	MAXIMUM		120 @	_____ MA																								
1.0	60																											
1.0	80																											
1.0	100																											
1.0	120																											
1.0	MAXIMUM																											

31. SPOT FILM MILLIAMPERAGE AND SPACE CHARGE VERIFICATION

FIXED MA STATION	ACTUAL MILLIAMPERAGE AT		
	LOW KVP	NEUTRAL KVP	HIGH KVP

32. FLUOROSCOPIC MILLIAMPERAGE VERIFICATION

MA STATION	NEUTRAL KVP SETTING	ACTUAL MA

33. FLUORO TIMER TEST (Timer set at 5 minutes)

A. WARNING DEVICE ALARMED AT _____ MINUTES

B. TIMER TERMINATED AT _____ MIN _____ SEC

C. DID TIMER TERMINATE EXPOSURE?
 YES NO

D. IS TIMER TIMING CORRECTLY WHEN CHECKED AGAINST CALIBRATED STOP WATCH?
 YES NO

34. SPOT FILM TIMER TEST

	SATFY	UNSATFY
A. SHORT TIME		
B. MEDIUM TIME		
C. LONG TIME		

35. PHOTOTIMER TEST

	RECORD MAS
A. NDRMAL SETTING	50
B. LIGHT SETTING (-)	40
C. DARK SETTING (+)	70

INSPECTED BY (Type or print name and grade): **JOHN P. DOE, EG**

SIGNATURE: *John P. Doe*

Figure 2-17. DD Form 2164, X-Ray Verification/Certification Worksheet (Reverse).

APPENDIX A REFERENCES

Section I. REQUIRED PUBLICATIONS

- AR 700-138 Army Logistics Readiness and Sustainability.
(Cited in paras 1-8 and 2-5c(1)(d) and (m).)
- SB 8-75-series Army Medical Department Supply Information.
(Cited in paras 1-7 and 2-5d(2).)

SECTION II. RELATED PUBLICATIONS

- AR 40-60 Policies and Procedures for the Acquisition of Medical Materiel
- AR 40-61 Medical Logistics Policies and Procedures
- AR 220-1 Unit Status Reporting
- AR 310-25 Dictionary of United States Army Terms (Short title: AD)
- AR 310-50 Authorized Abbreviations and Brevity Codes
- AR 700-4 Logistic Assistance Program
- AR 700-127 Integrated Logistic Support (ILS)
- AR 702-7/DLAR Reporting of Product Quality Deficiencies Across Component Lines (RCS DD-BR&E
4155.24/
NAVMATINST
4855.8/AFR
74-6/MCO
4855.5
- AR 702-7-1 Reporting of Product Quality Deficiencies within the U.S. Army
- AR 710-2 Supply Policy Below the Wholesale Level
- AR 725-50 Requisitioning, Receipt, and Issue System
- AR 750-1 Army Materiel Maintenance Policies
- Pam 738-750 The Army Maintenance Management System (TAMMS)
- TB 750-8-1 Maintenance Expenditure Limits for Medical Materiel

Section III. PRESCRIBED FORMS

- DA Form 5621-R
Leakage Current Measurements, General. (Prescribed in para 2-8.)
- DA Form 5622-R
Leakage Current Measurements, EKG. (Prescribed in para 2-9.)
- DA Form 5624-R
DC Defibrillator Inspection Record. (Prescribed in para 2-11.)
- DA Label 175
Defibrillator Energy Output Certification. (Prescribed in para 2-10.)
- DD Form 2163
Medical Equipment Verification/Certification. (Prescribed in para 2-12.)
- DD Form 2164
X-Ray Verification/Certification Worksheet. (Prescribed in para 2-13.)

Section IV. REFERENCED FORMS

- DA Form 1687
Notice of Delegation of Authority—Receipt for Supplies
- DA Form 2028
Recommended Changes to Publications and Blank Forms
- DA Form 2028-2
Recommended Changes to Equipment Technical Publications
- DA Form 2404
Equipment Inspection and Maintenance Worksheet
- DA Form 2405
Maintenance Request Register

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DA Form 2406

Material Condition Status Report (MCSR)

DA Form 2407

Maintenance Request

DA Form 2407-1

Maintenance Request—Continuation Sheet

DA Form 2409

Equipment Maintenance Log (Consolidated)

DD Form 314

Preventive Maintenance Schedule and Record

SF 368

Product Quality Deficiency Report (NSN 7540-00-105-0078)

APPENDIX B CODES AND TABLES

**Table B-1
Utilization code**

Code	Description
*0	Active components (except as otherwise listed)
1	Depot stock
*4	Operational readiness float (ORF)
5	Installation maintenance and service equipment
*7	Army National Guard except MATES
*8	Army National Guard (MATES)
*A	Army Reserve units, except equipment pools
B	Army Reserve units, equipment pools
D	Army ROTC
G	Defense Atomic Support Agency
N	Prepositioned stock in Europe except POMCUS
R	Military Assistance Program (MAP)
X	Repair Cycle Float (RCF)
Y	POMCUS in Europe

*Denotes equipment utilization codes which require that separate DA Forms 2406 be submitted by the activities and units required to report.

**Table B-2
Equipment category codes (ECCs)**

Code	Description
O	Medical and dental equipment
OA	Anesthesia apparatus
OB	Blood Gas apparatus/analyzer
OC	Centrifuge
OD	X-ray film processing systems
OE	Defibrillator/monitor
OF	Dental operating units
OG	Compressor/dehydrator
OH	Table, operating field
OI	Radiographics
OJ	Refrigerators/freezers
OK	Respirator/ventilator
OL	Sinks
OM	Sterilizers
ON	Suction and pressure apparatus
OO	Medical Equipment Set (MES)
OP	Medical Equipment Set (MMS)
OQ	X-ray apparatus
OR	Miscellaneous
OX	Ancillary equipment
OZ	Tools and test equipment

GLOSSARY

Section I. ABBREVIATIONS

AA	all of the above
ACT	activity (code)
AMDF	Army Master Data File
AMS	Army management structure (code)
APO	Army Post Office
ARNG	Army National Guard
AR	Army regulation
ATE	automatic test equipment
BITE	built in test equipment
CFR	Code of Federal Regulations
CL	calibration
COMSEC	communications security
C/S	calibration and safety test
D	depot
DA	Department of the Army
Def Maint	deferred maintenance
DLA	Defense Logistics Agency
DMWR	depot maintenance work requirements
DOD	Department of Defense
DODAAC	DOD activity address code
D/W	daily/weekly
D/W/M	daily/weekly/monthly
EAC	echelon above corps
ECC	equipment category code
EIC	end item code
EIR	equipment improvement recommendation
EKG	electrocardiogram
ERC	equipment readiness code
ESC	equipment serviceability criteria
EST	estimate
F	intermediate direct support
FMC	fully mission capable
FSCM	Federal Supply Code for Manufacturers
H	intermediate general support
HQDA	Headquarters, Department of the Army
ID	identification (number)
ILS	integrated logistic support
JCAH	See JCAHO
JCAHO	Joint Commission on Accreditation of Healthcare Organizations (formerly JCAH)
kVp	kilovoltage peak
L	limited urgent
LIN	line item number
LRU	line replaceable unit
mA	milliamperes(s)
mΩ	milliohm(s)
μA	microampere(s)
MAC	maintenance allocation chart
MACOM	major Army command
MAP	Military Assistance Program
MATES	mobilization and training equipment site
MCSR	materiel condition status reportable
MFP	Materiel Fielding Plan

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Mfr Lit	manufacturer's literature
MMCN	materiel management control number
M/S	monthly/semiannually
M/S/A	monthly/semiannually/annually
MST	mechanics support team
MTOE	modification table(s) of organization and equipment
MWO	modification work order
N	normal
NGB	National Guard Bureau
NICP	national inventory control point
NMC	not mission capable
NMCM	not mission capable maintenance
NMCS	not mission capable supply
NMP	national maintenance point
NSN	national stock number
O	unit
OEM	on equipment material
ORF	operational readiness float
ORG	organization
P/C	PMCS and CL
PCB	printed circuit board
PD	priority designator
PIP	Product Improvement Program (number)
PM	preventive maintenance
PMCS	preventive maintenance checks and services
POMCUS	prepositioning of material configured unit sets
PRON	procurement request order number
P/S	PMCS and safety test
QSS	quick supply store
RC	recoverability code
RCF	repair cycle float
ROTC	Reserve Officers' Training Corps
SMR	source, maintenance, and recoverability (code)
SOP	standing operating procedure
SSSC	self-service supply center
ST	safety test
SVC	service
TDA	table of distribution and allowances
TB	technical bulletin
TM	technical manual
TMDE	test, measurement, and diagnostic equipment
TOE	table(s) of organization and equipment
U	urgent
UIC	unit identification code
UNK	unknown
USAMMA	U.S. Army Medical Materiel Agency
USAR	U.S. Army Reserve
UUT	unit under test
W/C	with charge
WESDC	A code formerly assigned to reportable items by AR 700-138. (This code is no longer used.) (See EIC above and para 2-5c(1)(d).)
Y	yes

Section II. TERMS

Assembly	A combination of components and/or modules and parts used as a portion of, and intended for, further installation in an equipment end item (for example, engine, transmission, rotor head, electronic chassis/rack/cabinet).
Automatic test equipment (ATE)	TMDE that performs a predetermined program to test functional or static parameters for fault isolation of unit malfunctions, including quality assurance tests, to evaluate the degree of performance degradation. The decisionmaking control, or evaluation functions are conducted with minimum reliance on human intervention.
Available days	This term applies to rating your equipment's ability to do its combat or combat support job. Available days are the days equipment is on hand in your organization and fully able to do its mission. The time your equipment is FMC.
Built in test equipment (BITE)	Any identifiable removable device that is part of the unit under test (UUT) and is used for the express purpose of testing that UUT.
Calibration	The comparison of an instrument of unverified accuracy, with an instrument of known and greater accuracy to detect and correct any discrepancy in the accuracy of the unverified instrument.
Certification	Documented portrayal that the accuracy of an instrument has been verified as correct by comparison to an instrument of known and greater accuracy (standard or item of TMDE).
Computer/Module	A combination of parts mounted together in manufacture, which may be tested, replaced as a unit, or repaired (for example, starter, generator, fuel pump, line replaceable unit (LRU), and printed circuit board). The term "module" is normally associated with electronic equipment.
Contract maintenance	Any materiel maintenance operation performed under contract by commercial organizations (including the original manufacturers of the materiel).
Controlled exchange	The removal of serviceable parts, components, and assemblies from unserviceable, economically repairable equipment and their immediate reuse in restoring a like item of equipment to a combat mission capable condition.
Deferred maintenance	Authorized delay of maintenance or repair of uncorrected faults. The commander or commander's designated representative must authorize the delay in correcting a fault.
Deficiency	<p>A deficiency is a fault or problem so severe that it causes the equipment to malfunction. Faults that make the equipment NMC are deficiencies.</p> <p>a. A defect is a deficiency when it—</p> <ol style="list-style-type: none"> (1) Makes an item, subsystem, or system inoperable. (2) Is listed in the "equipment is not ready/available if" column of the operator's PMCS list. (3) Makes the equipment unsafe or endangers the operator or crew. (4) Will seriously damage the equipment if it is operated. (5) Makes the equipment so inaccurate, it cannot do its mission as needed. (6) Causes an operating problem that cuts down on communications security (COMSEC) equipment's ability to protect defense information. <p>b. You assign a status symbol X to a deficiency. All the situations above are deficiencies and will carry an X status symbol.</p>

Department of Defense Activity Address code (DODAAC)	A six-digit code that gives a delivery address for supplies and equipment.
Depot maintenance work requirements	A maintenance serviceability standard for depot maintenance operations. It prescribes the scope of work to be performed on an item by organic depot maintenance facilities or contractors; types and kinds of materiel to be used; quality of workmanship. Also, repair methods; procedures and techniques; modification requirements; fits and tolerances; equipment performance parameters to be achieved; quality assurance discipline; and other essential factors to ensure that an acceptable and cost effective product is obtained.
Designated representative	For this bulletin a designated representative is someone authorized to sign for and/or represent the commander. This bulletin sometimes asks for the signature of the commander or the commander's designated representative. The commander may use a memorandum, orders, or DA Form 1687 (Notice of Delegation of Authority), to appoint a designated representative. The commander holds full responsibility for the safety of personnel and the status of equipment. Designated representatives must be picked carefully. They should be knowledgeable, experienced, and readily available to the people needing their signatures and help.
Equipment end item	A final combination of assemblies, components/modules and parts which is designed to perform an operational function and is ready for intended use.
Equipment improvement recommendation	A written report on an SF 368 (Product Quality Deficiency Report) to report an EIR and faults in design operations and manufacturing of new equipment received which is below standard quality in workmanship under AR 702-7/DLAR 4155.24/NAVMATINST 4855.8/AFR 74-6/MCO 4855.5 and AR 702-7-1.
Equipment performance data	Historical information relating to the maintainability, reliability, and supportability characteristics of systems, subsystems, and components of weapons and equipment end items accumulated during their operational application or tests simulating actual operations.
Equipment readiness code	<p>A one-digit code explaining an item's importance to a unit's combat or combat support mission. These codes are assigned to items on MTOEs. Since equipment can serve different purposes, the same item may have a different code in different units. AR 220-1 governs ERCs. ERCs go on DA Form 2407 and DA Form 2406.</p> <p>a. ERC A applies to primary equipment. These are items essential to and used directly in the assigned mission.</p> <p>b. ERC B applies to auxiliary equipment. These are items which supplement ERC A items or take the place of ERC A items if they become inoperative.</p> <p>c. ERC C applies to administrative support equipment. ERC C items support the assigned mission or operators.</p>
Evacuate to EAC	End items that fall within this classification are evacuated to EAC when the items are damaged or become inoperable. Replacement items are issued to the unit.

Forward support maintenance	Maintenance oriented toward quick turnaround to the user in order to maximize combat time by minimizing repair and evacuation time. A thrust to repair end items as far forward within tactical time criteria, or to recover and evacuate to the point where repair can be accomplished.
Fully mission capable	Equipment is FMC when it can perform all its combat missions without further endangering the lives of crew or operators. <ol style="list-style-type: none"> a. FMC equipment must be complete and fully operable with no deficiencies listed in the "equipment is not ready/available if" column of the operator's PMCS. b. The terms ready and/or available and FMC refer to the same status: Equipment is on hand and able to perform its combat missions.
General purpose TMDE	TMDE which is used or possesses the potential to be used without significant modifications, for test, measurement, and diagnosis of a range of parameters for two or more items of equipment or systems.
Go/no-go	Condition or state of operability of a unit which can have only two parameters: <ol style="list-style-type: none"> a. Go = Functioning properly. b. No-go = Not functioning properly. Such conditions are displayed using meters, and/or visual or audible alarms, sensors, or similar mechanisms.
Integrated logistic support (ILS)	A composite of all the support considerations necessary to ensure the effective and economical support of a system for its life cycle. ILS is an integral part of all aspects of system acquisition and fielding. The principal elements of ILS related to the overall system life cycle are contained in AR 700-127.
Logistician	A command or agency, other than the materiel developer, combat developer, trainer, or user representative responsible for ILS program surveillance and evaluation in the materiel acquisition process (AR 700-127 and AR 40-60).
Maintenance capability	Availability of those resources (facilities; tools, TMDE; drawings; technical publications; trained maintenance personnel; engineering and management support; spares; and repair parts) required to perform maintenance operations.
Maintenance capacity	A quantitative measure of maintenance capability usually expressed as the number of man-hours of direct labor that can be applied within a specific maintenance activity or shop, during a 40-hour week (one shift, 5 days).
Maintenance operations	That subfunction of materiel maintenance which encompasses the management and physical performance of those actions and tasks involved in servicing, repairing, testing, overhauling, modifying, calibrating, modernizing, inspecting, etc., of materiel in the operational inventory and the provision of technical assistance to equipment users in support units of the Army Logistics Systems.
Maintenance performance data	Information relating to the use and results obtained from the application of maintenance resources (for example, work force, equipment and funds) to perform maintenance operations on Army materiel.

days are the days the equipment was not able to do its missions, the time your equipment is NMC. This term is used for DD Form 314 and DA Form 2406.

Not mission capable

Equipment that cannot perform any one of its combat missions.

a. Equipment is NMC when the equipment has a fault that appears in the "not ready" column of the operator's PMCS. When a PMCS has not been published, use the equipment serviceability criteria (ESC) or a similar item's PMCS as a guide. Some equipment may not have an ESC or a similar item with a PMCS. For those items—and whenever other faults are considered—the unit commander judges the equipment able or not able to perform its combat mission.

b. Equipment at organization or support maintenance for only normal scheduled preventive maintenance services or inspection is FMC. Equipment with faults that do not affect its operational ability—like painting or minor body work—is ALSO FMC. But the equipment becomes NMC if you find a fault listed in the "not ready" column of the PMCS. Support will tell the owning unit if the equipment should be carried NMC.

c. Publications other than this bulletin and the PMCS may describe faults as deficiencies. But unless those faults are also in the operator's PMCS in the "not ready" column, do not count them as NMC for the DA Form 2406.

Not mission capable maintenance (NMCM)

Equipment that cannot perform its combat mission because of maintenance work underway or needed.

a. NMCM 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 it is still physically at support. Equipment is normally FMC on the day it is inspected and signed out in block 26 of the DA Form 2407.

b. 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, NMCS time starts.

c. *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.

d. 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 for the DA Form 2406.

Not mission capable supply

Equipment that cannot perform its combat missions because of a supply shortage.

a. NMCS time starts when no more maintenance work can be done on an NMC fault because a needed part is not on hand.

b. NMCS covers time spent waiting for repair parts, chassis, assemblies and subassemblies, and components. NMCS time also includes time waiting for delivery of direct exchange items when an exchange item is not available.

c. Both NMCS and NMCM time can occur on an item or system on the same day. Count the entire day for the one 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 one that has existed the longest time.

Maintenance significant item/ materiel	An end item, assemblage, component, or system proposed or intended for issue to the Army in the field, the maintenance support concept for which envisions the performance of corrective maintenance services on a recurring basis.
Maintenance standard	A measure which specifies the minimum condition to which material must be restored by repair, overhaul, or some other maintenance function to ensure its satisfactory performance for a specified period of service.
Major component	An assemblage or combination of parts, subassemblies and assemblies connected in such a manner as to be a self-contained unit which, although part of a larger item, is capable of operating independently of the larger item and is separately identified by type, model, and series. Examples are receivers or receiver-transmitters in radio sets and machine guns or other weapons in secondary armament subsystems of combat vehicles.
Materiel maintenance	The function of sustaining materiel in an operational status, restoring it to a serviceable condition, or updating and upgrading its functional usefulness through modification or other alteration. It includes the subfunctions of maintenance engineering and maintenance operations.
Mechanics support team	A team formed from the resources of a maintenance activity, organization, or unit, and specifically tailored to provide maintenance support to a designated unit or operation for specified tasks.
Medical equipment	Refers to those equipment items listed in the Federal Supply Catalogs, DOD Section, Medical Materiel, and comparable nonstandard equipment.
Medical Standby Equipment Program	Medical assets used in support of critical health care equipment and includes end items, components, or assemblies used to provide supported activities with serviceable items for unserviceable economically repairable items.
Mission-essential materiel	That materiel authorized and assigned to approved combat and combat support forces which should be immediately employed to: Destroy the enemy or the enemy's capacity to continue war; provide battlefield protection of personnel; communicate under war conditions; detect, locate, or maintain surveillance over the enemy; and permit continuous combat transportation and support of soldiers and materiel. Equipment assigned to training missions that is of the same type and configuration as that assigned to combat and combat support forces, and designated to be immediately employed for the purposes enumerated above is also mission-essential materiel.
Module	An assembly containing a complete self-contained circuit or subcircuit. It may consist of a single PCB, in which case it is synonymous with a PCB, or it may be comprised of two or more PCBs mechanically attached to one another and removable from the next higher assembly as a single unit.
National maintenance point	An activity established by a commodity manager to facilitate the maintenance function.
Nonavailable days	This term is used on the DA Form 2406 in rating your equipment's ability to do its combat or combat support mission. Nonavailable

d. *Unit* NMCS covers the time equipment is in *unit* control and "awaiting parts" for an NMC fault.

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

- Off-site maintenance That maintenance authorized to be performed in support of sites by designated maintenance facilities not integral to the site.
- On-site maintenance That maintenance authorized to be performed at a site by authorized site personnel.
- Pacing items These are major weapons or equipment systems of such importance that they are subject to continuous monitoring and management at all levels of command. Pacing items are identified in AR 220-1. Pacing items are noted on DA Form 2407.
- Part An item which cannot normally be disassembled or repaired, or is of such a design that disassembly or repair is impractical (for example, bracket, gear, resistor, toggle switch).
- Printed circuit board Consists of printed or etched lines (conductors) to which discrete components and/or parts are affixed to form an electronic circuit.
- Quality deficiency report The authorized means for users of Army equipment to report, either by message or SF 368, equipment faults in design, operation, and manufacture.
- Rebuild To restore an item, to a standard as nearly as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item. Inspection of all parts or components, repair or replacement of worn or unserviceable elements using original manufacturing tolerances and specifications and subsequent reassembly of the item.
- Repair The restoration or replacement of parts and/or units to maintain efficient operating conditions.
- Subsystem A separately authorized item issued or intended to work with other items to form an operational unit.
- System A combination of equipment end items, assemblies, components, modules and/or parts assembled as a single functional unit to perform a task or mission. For the purpose of this policy, "System" is not restricted solely to weapon and/or reportable systems.
- Test, measurement, and diagnostic equipment Any system or device capable of being used to evaluate the operational condition of a system or equipment to identify and/or isolate any actual or potential malfunction.
- Unit identification code A 6-character code assigned to a specific unit. When this bulletin asks for a UIC, all units, organizations, and activities will use their own UIC.
- United States Army Medical Materiel Agency (USAMMA) The command activity assigned the national level logistical support responsible for medical equipment and materiel.
- Verification Testing or comparison, accomplished to determine the accuracy of an instrument or function, as by comparison, investigation, or reference.
- Workday A workday is defined as the normal duty shift set by the local command. For the purposes of this pamphlet, a normal duty shift will not exceed a 12-hour period.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

Commander
Stateside Army Depot
ATTN: AMSTA-US
Stateside, NJ 07703

DATE SENT

10 July 1979

PUBLICATION NUMBER

TM 11-5840-340-12

PUBLICATION DATE

23 Jan 74

PUBLICATION TITLE

Radar Set AN/PSC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
2-25	2-28		
3-10	3-3	3-1	
5-6	5-8		
		FO3	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.

REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and accelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.

Item 5, function column. Change "2 db" to "3db."

REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3db (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, "Replace cover plate removed in step e.1, above."

REASON: To replace the cover plate.

Zone C 3. On J1-2, change "+24 VDC to "+5 VDC."

REASON: This is the output line of the 5vdc power supply. +24 VDC is the input voltage.

DETACH ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SSG I. M. DeSpirito 999-1776

SIGN HERE:

SSG I.M. DeSpirito

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UNIT'S ADDRESS

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DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

Commander
US Army Medical Materiel Agency
ATTN: SGMMA-M
Fort Detrick, Frederick, MD 21701-5001

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DATE SENT

PUBLICATION NUMBER
TB 38-750-2

PUBLICATION DATE

PUBLICATION TITLE
Maintenance Management Procedures
for Medical Equipment

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
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IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

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TEAR ALONG PERFORATED LINE

LEAKAGE CURRENT MEASUREMENTS, GENERAL					AREA/LOCATION			DATE			
					HOSPITAL			INSPECTED BY			
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	
								ON			
								OFF			
								ON			
								OFF			
								ON			
								OFF			
								ON			
								OFF			
								ON			
								OFF			
								ON			
								OFF			
								ON			
								OFF			

TEST I		MAXIMUM LIMITS			TEST II	
		I	Resistance		A	B
			Current (Grounded)		150 mΩ	150 mΩ
			Current (Ground Lifted)		10 μA	50 μA
		II	Current (Ground Lifted)		100 μA	500 μA

LEAKAGE CURRENT MEASUREMENTS, EKG		AREA/LOCATION		INSPECTION DATE	
HOSPITAL		MODEL		SERIAL NO.	
INSTRUMENT MANUFACTURER		TYPE		INDEX NO.	
				PERSON PERFORMING TEST (Print)	
				GROUND LIFTED-NORMAL POLARITY	
				GROUND LIFTED-NORMAL POLARITY	
				GROUND LIFTED-REVERSE POLARITY	
				A=100µA/B=500µA	
				A=10µA/B=50µA	
I		ON			
		OFF			
II		A=10µA/B=50µA		A=10µA/B=50µA	
		ALL			
III		RA			
		LA			
		RL			
		LL			
		C			
IV		RA-RL			
		LA-RL			
		RA-LA			
V		A=20µA/B=500µA		REMARKS	
VI		A/B=150 mΩ			
		mΩ		TEST RESULTS	
				SATISFACTORY	
				ACTION NEEDED	

DC DEFIBRILLATOR INSPECTION RECORD				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				

		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 FORM CCCC REPLACED			
COMMENTS AND DESCRIPTION OF DEFICIENCIES <i>(Refer to Item Numbers)</i>					
INSPECTED BY <i>(Type or Print Name and Grade)</i>		SIGNATURE			