



P.O. Box 2172 • Cartersville, GA 30120
678-986-0894 • Fax: 770-334-2299 • charles@cmooremedical.com • www.cmooremedical.com

Annual Preventive Maintenance, Electrical Safety, & Standard Operating Procedure

Demo Account Edit

Atlanta, GA

18 Apr 2025

ES/A - Electric Safety Annual
ES/S - Electric Safety Semi-Annual
PMA - Preventative Maintenance Annual
PM/S - Preventative Maintenance Semi-Annual
II - Incoming Inspection
OT - One Time Check

[illegible]

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STANDARD OPERATING PROCEDURES

REVISED

January 1st, 2024

CMOORE MEDICAL SALES & SERVICE, INC

QUALITY ASSURANCE POLICY

Policy

CMOORE MEDICAL SALES & SERVICE, INC will track the equipment inventory according to the Equipment Management Program Agreement to ensure that the utmost quality of service is being provided. CMOORE MEDICAL SALES & SERVICE, INC will maintain computerized Inventory and Maintenance summary records to provide a high degree of accountability.

Procedure

Personnel responsible for documentation shall follow all outlined system policies. Policies are to include but not be limited to:

Bi-Annually:

- Check that services are up to date
- Review equipment history for unusual problems, operators, errors, equipment failures, etc.
- Refer to repair codes that relate **5,10, 18, 24, 26**

Annually:

- Review the equipment management program for the following if applicable:
 - PMs up-to-date
 - Equipment files up-to-date
 - Inventory up-to-date
 - Review program with staff

Repair Codes

Repair Code:

1. Initial inspection
2. PM and ES Inspections
3. Routine repair
4. Major parts replacement
5. Manufacturer defect suspected
6. Re-do/call back
7. Manufacturer update/upgrade/remanufacture
8. Damaged
9. Calibration
10. Device incident
11. Unrepairable/Removed from Service
12. Uneconomical to Repair/Remove
13. Operator Error
14. Major Repair/Labor
15. Manufacturer (OEM) or Outside Repair
16. Relocated/Install Equipment
17. Referred to Maintenance/Engineering
18. Manufacturer Recall
19. Remove from Inventory
20. After Hours Electrical Safety
21. After Hours Repair
22. PM Generated Work Order
23. Equipment Exchange
24. Warranty Repair
25. Equipment Used Before ES Check
26. Out of Box Failure
27. Training and In-Service
28. Accessory Repair
29. Technical Assist
30. Meetings/Research
31. Phone Fix
32. Intermittent
33. X-Ray Room Completely Down
34. Equipment Evaluation
35. Unit in Storage
36. De-installation of X-RAY Equipment
37. Verify operations only
38. Shipping/Transportation

Explanation of Repair Codes

Repair Code

- 1 Initial inspection** – new or used item is being put into service for the first time.
- 2 PM and ES Inspections** – Preventive maintenance and electric safety.
- 3 Routine repair** – Item is repaired in normal time and requires no major parts.
- 4 Major parts replacement** – Item is repaired by replacing a major part or parts (\$100.00 or more).
- 5 Manufacturer defect suspected** – Item presents reasonable evidence to cause the technician to suspect that the product has a manufacturer's defect.
- 6 Re-do/Call back** – Item was previously repaired and within a five-day period is returned with the same problem to be repaired again.
- 7 Manufacturer update/upgrade/remanufacture** – Manufacturer releases an update to enhance the product, done in-house or at the manufacturer's factory.
- 8 Damaged** – Drop, misuse, abuse. The item shows indications that it was dropped or abused.
- 9 Calibration** – The item required recalibration of values rather than replacement of components.
- 10 Device Incident** – The item is suspected of causing health issues, injury, or death.
- 11 Unrepairable/Removed from Service** – Parts no longer available – removed from inventory.
- 12 Uneconomical to Repair/Remove** – Cost for repair exceeds more than sixty percent of a new item.
- 13 Operator Error** – Due to the setting on equipment, an identified issue was caused by the way the operator set up the unit.
- 14 Major Repair/Labor** – Repair that takes five hours or more.
- 15 Manufacturer/OEM Outside Repair** – The item is sent out for repair.
- 16 Relocated/Install Equipment** – The item is transferred from one location to another.
- 17 Referred to Maintenance/Engineering** – The problem is left to involve maintenance engineers.
- 18 Manufacturer Recall** – The manufacturer issues a recall of the component.
- 19 Remove from Inventory** – The item cannot be located after two PM cycles.
- 20 After-Hours Electrical Safety** – Performed after normal working hours.
- 21 After-Hours Repair** – Repairs done after normal working hours.
- 22 PM Generated Work Order** – Work orders generated during maintenance.

- 23 Equipment Exchange** – Equipment is exchanged permanently.
- 24 Warranty Repair** – Repairs covered under the manufacturer's warranty.
- 25 Equipment Used Before ES Check** – Equipment must be used before adhering to inspection protocol.
- 26 Out-of-Box Failure** – A new device fails upon incoming inspection.
- 27 Training and In-Service** – Used for training received or given.
- 28 Accessory Repair** – Repair for accessories related to the main equipment.
- 29 Technical Assist** – Time spent assisting in repair.
- 30 Meetings/Research** – Used for documenting staff meetings or research.
- 31 Telephone Fix** – Fixes performed over a phone call.
- 32 Intermittent** – An ongoing problem that is not immediately apparent.
- 33 X-Ray Room Completely Down** – X-ray system is non-functional.
- 34 Equipment Evaluation** – Verification of equipment condition.
- 35 Unit in Storage** – The unit is removed from service and placed in storage.
- 36 De-installation of X-RAY Equipment** – Equipment is removed or relocated.
- 37 Verify Operations** – Required verification of operation.
- 38 Shipping/Transportation** – Items requiring shipping or transport.

CMOORE MEDICAL SALES & SERVICE, INC

INVENTORY POLICY

Policy

It is the responsibility of the customer to supply CMOORE MEDICAL SALES & SERVICE, INC with information to maintain a current, accurate, and unique inventory of all equipment included in the Equipment Management Program. Scheduled preventive maintenance will be performed on all equipment included in the program.

Procedure

The inventory will be itemized by facility name and item list. Each item in a department will include the following:

Description:

Manufacturer:

Serial number:

Model number:

Facility or tag number:

The inventory may include non-clinical equipment when that equipment poses a hazard during normal use in a clinical environment.

CMOORE MEDICAL SALES & SERVICE, INC

NEW EQUIPMENT POLICY

Policy

Upon receipt of any new device or system that would be included in the Equipment Management program, the customer will notify CMOORE MEDICAL SALES & SERVICE, INC of the incoming inspection. A schedule will be made to project the time frame for the completion of preventive maintenance inspection and electrical safety testing for each department's inventory. The frequency of preventive maintenance (PM) inspections is dependent on the manufacturer's requirements and on the maintenance requirements, and the eligibility criteria stated below.

Procedure

1. At the customer's request, CMOORE MEDICAL SALES & SERVICE, INC will check the equipment using existing PM procedures, or the manufacturer's recommended testing guidelines, and verify that the device operates within the manufacturer's specifications. Information will be recorded on an incoming inspection sheet or PM sheet. **DEVICES NOT MEETING SPECIFICATIONS OR ACCEPTED PERFORMANCE STANDARDS WILL NOT BE PUT INTO SERVICE, AND THE CUSTOMER AND MANUFACTURER WILL BE NOTIFIED.**
2. On completion of the incoming inspection sheet, the equipment will be evaluated for inclusion in the equipment management program. Equipment of the same type already included in the program need only be added to the inventory. New equipment without any previous history should be judged using the eligibility criteria.

Eligibility Criteria

The only equipment that meets minimum criteria requirements is included in the equipment management program. Each device is evaluated using the Risk Evaluation Score (**RES**) formula. The **RES** number is based on the following characteristics:

- **FUNCTIONS RISK (FR) (1-10 pts)** Table 1
- **PHYSICAL RISKS (PR) (1-5 pts)** Table 2
- **MAINTENANCE REQUIREMENTS (MR) (1-5 pts)** Table 3
- **INCIDENT HISTORIES (IH) (1-5 pts)** Table 4

The **RES** number is calculated using the following formula:

$$\mathbf{RES = FR + PR + MR + IH}$$

A description of these categories is contained in Tables 1-4. A device specified under the contract is included in the program if:

1. The device's **RES** number is equal to or greater than 8.
2. Similar devices with a less than 8 **RES** are already in the program for other reasons (e.g. equipment accountability, equipment incident history, and specified equipment under contract).

Table 1
Function Risk (FR)

10	Life Support	Life Support
9	Surgical and Intensive Care	Critical Therapeutic
8	Physical Therapy and Treatment	Critical Diagnostic
7	Surgical and Intensive Care Monitoring	Essential Therapeutic
6	Additional Physiological Monitoring and Diagnostic	Essential Diagnostic
5	Analytical Laboratory	Ancillary Therapeutic
4	Laboratory Accessories	Ancillary Diagnostic
3	Computer and Related	Miscellaneous Therapeutic
2	Patient Related and Other	Miscellaneous Diagnostic
1		To be evaluated

Table 2
Physical Risks (PR)

A Device Malfunction Could Result In:

- | | |
|---|--|
| 5 | Safety Alerts, PM Failures, Incident Reports |
| 4 | Probable Cause or Patient Death |
| 3 | Probable Cause or Patient Injury |
| 2 | Could Cause Patient Injury |
| 1 | No Physical Risk |

Table 3
Maintenance Requirements (MR)

- | | |
|---|------------------------|
| 5 | 20-100 Hours/Year/Item |
| 4 | 10-20 Hours/Year/Item |
| 3 | 5-10 Hours/Year/Item |
| 2 | 2-5 Hours/Year/Item |
| 1 | 0.5 2 Hours/Year/Item |
| 0 | 0.5 Hours/Year/Item |

Table 4
Incident History (IH)

Total Range	PM Schedule
5	Very Frequent >Two times/yea
4	Frequent > One time/year
3	Some 0-1 time/year
2	Seldom 0/year
1	Very Seldom 0-2 times/year
0	No incidents Recorded

Incident History Scoring:

- A. Any device found to have had an adverse effect on an equipment operator or patient would be “trended” and scored accordingly.
- B. Any device having a “return repair call” within a 14-day period will be analyzed for rescoring.
- C. Any device in our professional opinion, that necessitates immediate rescoring or removal from the inventory will be appropriately scored and immediately brought to the attention of the customer.

Incoming Inspection Sheet

ACCOUNT: _____

Date: _____

Description: _____

Service Date: _____

Manufacturer : _____

Service Provided: _____

Model #: _____

Location: _____

Serial #: _____

Accessories:

Function (FR): _____ Risk (ER): _____ Complexity (EC): _____ RES: _____

PM Level: PM -1 PM-3 PM Interval: ANNUAL or One Time Check Base Month: _____
PM -2 PM-4

Original P/O #: _____ Purchase Cost: _____ Received Date: _____

Facility Tag #: _____ Warranty Period: _____ months

Service or Operation Manuals? Yes ___ No ___ If No, Notify Department ___ / ___ / ___

Procedure Description: **Electrical Safety**

PASS/FAIL

Ground .5 ohm: _____, chassis leakage 300uamp: _____

____ _

Inspect mechanical integrity of latches, controls, switches, and so forth:

____ _

Check cleanliness of unit and ventilation/ filtration:

____ _

Check physical condition of power cord & plug:

____ _

Perform a function test and any internal diagnostics:

____ _

Comments:

Technicians: _____

CMOORE MEDICAL SALES & SERVICE, INC

PREVENTIVE MAINTENANCE & ELECTRIC SAFETY POLICY

Policy

All equipment in the management program will be assigned a PM schedule and PM interval according to the Equipment Management Program Agreement.

PM Schedules are developed for each type of equipment in accordance with; **NFPA, AHA, AAMI, and JCAHO** standards as well as the manufacturer requirements (electric safety is defined as a PM schedule and referred to as a PM). The frequency of preventive maintenance (PM) inspections is dependent on the maintenance requirements criteria shown in New Equipment Policy or the **RES#**. All devices classified as average to extensive maintenance requirements or have a **RES#** of fourteen (14) or above will be PM'd at intervals not to exceed six (6) months. Items with less-than-average requirements or **RES #** less than fourteen (14) will be PM'd annually. Items with less than average requirements or **RES#** less than eight 8 will require an eighteen-month 18 check or one-time check.

A 30-day grace period beyond the scheduled PM month is allowed before equipment is considered overdue. CMOORE MEDICAL SALES & SERVICE, INC performance standard is 99% completion of all PM'S scheduled on time. The calculation formula is PM completion % = equipment completed within the planned maintenance interval divided by the equipment in the program.

Procedure

Preventive maintenance shall be performed as outlined in the device's specific service manual and/or general inspection procedure.

Each item will have a PM worksheet completed during its scheduled PM. A protocol procedure description will be printed on each preventive maintenance work sheet. The PM work sheet shall also show the equipment PM schedule and shall state the PM interval and base month. Each item upon completion of the scheduled PM will receive a CMOORE MEDICAL SALES & SERVICE, INC sticker showing the date and initials of the technician performing the PM of the equipment. Failures found during PM will be documented on the PM worksheet and reported to the user.

Documentation of completed work sheets will be maintained in the customer facility.

SAFETY SCHEDULE:

PM1/PM2/PM3PM4

The procedure code number and the PM interval code of the safety test.

PM1 Schedule:

The procedure code number and the schedule interval of the PM level. The interval of time between tests will be greater than PM1, PM2, and PM3. This calls for more specific maintenance requirements than PM1, PM2, and PM3

PM2 Schedule:

The procedure code number and the schedule interval of the PM level. The interval of time between tests will be greater than PM1 and PM2. This usually requires more specific maintenance requirements than a PM1 and PM2.

PM3 Schedule:

The procedure code number and the schedule interval of the PM level. The length of time between tests will be greater than PM1. This usually requires more specific maintenance requirements than a PM1.

PM4 Schedule:

The procedure code number and the schedule interval of the PM level. This is the least or lowest level of preventative maintenance. The frequency of tests will be greater than a PM

CMOORE MEDICAL SALES & SERVICE, INC

EMERGENCY AFTER-HOURS CALLS POLICY

Policy

CMOORE MEDICAL SALES & SERVICE, INC provides emergency call service at **(678) (986-0894)**. The technician on call will return your call within a reasonable length of time (normally within one hour).

Procedure

Information should be given stating:

- A. The account name/location/phone or extension number
- B. The person requesting service
- C. The nature of the problem observed
- D. State whether the situation is considered an emergency

CMOORE MEDICAL SALES & SERVICE, INC

TEST EQUIPMENT CALIBRATION POLICY

Policy

Test equipment scheduling owned by CMOORE MEDICAL SALES & SERVICE, INC will be maintained and tested as required.

CMOORE MEDICAL SALES & SERVICE, INC

REPAIR POLICY

Policy

If during a scheduled inspection, a device fails the testing regiment outlined for that device and requires unscheduled repairs, a work sheet will be completed. Repairs will be made in accordance with the Equipment Management Program Agreement.

Procedure

Upon receipt of a repair request from the customer, the priority will be evaluated. Repairs will be made as priority dictates. CMOORE MEDICAL SALES & SERVICE, INC will be called, and a purchase order issued for a demand service call. Repairs will be in accordance with manufacturer specifications and only approved parts will be used.

CMOORE MEDICAL SALES & SERVICE, INC

REPAIR POLICY

Policy

I. User Department Responsibility: Call CMOORE MEDICAL SALES & SERVICE, INC at (678) 986-0894) to report a problem. Information to be given:

- A. Customer name, location
- B. Phone number and contact person
- B. Phone number and contact person
- D. Equipment type
- E. Brief description of the problem
- F. Priority of response (stat, 2 hours, same day, etc.)

EXCEPTION: If the customer has a contract with the manufacturer or another vendor please place the repair call to the appropriate company.

II. CMOORE MEDICAL SALES & SERVICE, INC Responsibility

1. Determine if a repair requires the dispatch of the technician or having the device shipped to the service center

2. CMOORE MEDICAL SALES & SERVICE, INC will not do any unauthorized modifications to medical equipment.

III. Technician Responsibility

- 1. Information is logged on the technician's daily work log (Work Order) form.
- 2. Department is called immediately by a technician to set up a time to check the device, verify the problem and assign priority.
- 3. Indicate the time of the telephone call on the daily work log to show that the "response time" was satisfied.
- 4. Work orders are completed within five (5) days unless parts are not readily available.
- 5. Upon completion of work, a work order is signed by the responsible party (preferably the person who called in the request). The yellow copy is left with the customer; the white copy stays with a technician to be filed. It is the technician's responsibility to check the work order log at the end of the day to ensure all calls are logged and responded to.

Notes:

1. Be sure to use the most correct repair code. Ensure that what is written matches the repair code.
2. Be sure to document the amount of time expended during the repair of the device.
3. Indicate Preventive Maintenance (PM) and Electrical Safety checks on any repair in which the integrity of the device has been compromised.
4. Indicate that the repaired item was given a functional check and it passed.
5. Ensure that the repaired item has a current PM sticker before returning it to the user.

CMOORE MEDICAL SALES & SERVICE, INC

DOCUMENTATION AND RECORD KEEPING POLICY

Policy

CMOORE MEDICAL SALES & SERVICE, INC will maintain a documentation system to provide high accountability. All testing, inspecting, and repair procedures will be documented on computer software or Work orders by the Equipment Management Program Agreement.

Procedure

1. All work will be documented on PM worksheets, repair work orders, or other generated documentation.
2. All hard copies of documentation will be filed in an equipment history file maintained on-site.
3. All work will be printed on a maintenance history printout, PM / ES for semi & annual distribution to customer.
4. Equipment inventory printouts will be distributed to customers for semi-annual review.
5. Other documentation will be provided as necessary when requested by the contract coordinator.

CMOORE MEDICAL SALES & SERVICE, INC

INCIDENT INVESTIGATION POLICY

Policy

The customer will investigate and evaluate any report of equipment involved in an incident related to the activity of patient care according to the terms of the Equipment Management Program Agreement.

Procedure

Upon notification of an incident, the Customer will evaluate the problem and complete an incident report sheet.

The equipment will be isolated and tagged – **“DO NOT USE”**. If the incident is considered serious (patient injury) then the equipment will be placed in a secured area (under lock) until a complete evaluation can be made.

No repairs will be made to the related equipment until the proper authorities clear the incident. CMOORE MEDICAL SALES & SERVICE, INC will be notified regarding any equipment investigation.

CMOORE MEDICAL SALES & SERVICE, INC

INCIDENT REPORT

Call CMOORE MEDICAL SALES & SERVICE, INC immediately to report any incident. When equipment is involved in an incident, have the piece of equipment isolated immediately. Make sure the equipment settings and setups are left "as is" until the piece of equipment can be examined by two or more people together. Document all settings before moving the unit to the secured area. Do not make any statements regarding the equipment

Date: _____ Technician: _____

Customer: _____

Incident reported by: Phone _____ Written Report _____ in Person _____

Who made report _____?

Type of Incident: Class A: Patient involvement in medical equipment
 Class B: No patient involved, but patient-related
 Class C: No patient involved, CMOORE MEDICAL personnel involved

An incident as Reported:

What: _____

Where: _____

How: _____

Why: _____

List any person who might have information regarding this matter and their involvement:

If the patient was involved:

Name: _____ ID# _____

Doctor: _____ Room Number: _____

Was any other equipment used on the patient at the time?

Was the customer incident report filled out? Yes _____ No _____

Please advise CMOORE MEDICAL SALES & SERVICE, INC whom to contact to receive a copy of the incident report.

Name: _____

CMOORE MEDICAL SALES & SERVICE, INC

RECALLS & ALERTS POLICY

Policy

CMOORE MEDICAL SALES & SERVICE, INC will inform the customer to investigate all notifications concerning medical device recalls and alerts brought to our attention by proper authorities. The customer will also inform CMOORE MEDICAL SALES & SERVICE, INC of any notifications from the manufacturer or other sources of any equipment recalls or safety alerts

Procedure

The customer will issue a demand service call to CMOORE MEDICAL SALES & SERVICE, INC so that the equipment involved can be removed from service or brought up to manufacturers' standards.

CMOORE MEDICAL SALES & SERVICE, INC

EQUIPMENT MODIFICATIONS POLICY

Policy

CMOORE MEDICAL SALES & SERVICE, INC will not do any unauthorized modifications to medical equipment.

Procedure

1. Medical equipment should not be modified or “**manipulate**” in any way except in response to written manufacturers' directions.
2. Repairs on medical equipment should be made using replacement parts according to the manufacturer's specifications or identical substitutions.
3. Circuits, alarm levels, buzzers, speakers, or other warning systems should not be bypassed.
4. In the event of a manufacturer's update or field modification, a work order should be generated and include the information included in the manufacturer's directions.
5. A hard copy of the directions should be filed in the equipment file.
6. The field update should be performed according to the manufacturer's recommendations; if there is no urgency, perform the field modification at the next scheduled PM or at your convenience.

CMOORE MEDICAL SALES & SERVICE, INC

NON-OWNED EQUIPMENT POLICY

Policy

Non-owned electrical devices shall be allowed by the customer policy. Rental or borrowed equipment must be processed and inspected in the same way as new equipment. Should customer policy allow non-owned or leased devices, an inspection of said devices shall follow CMOORE MEDICAL SALES & SERVICE, INC New Equipment Policy. The following exceptions apply:

1. Equipment borrowed from a facility that has a biomedical equipment management program in which the borrowed equipment is included (attach a list of approved facilities).
2. Equipment rented from companies that have a stated PM and Safety program for their rental equipment (attach a list of approved companies and their policy statement).

CMOORE MEDICAL SALES & SERVICE, INC

FIELD SERVICE TECHNICIANS INOCULATION

Policy

All CMoore Medical Field Service Technicians are inoculated and tested annually for the following:

Influenza

Pneumonia

Shingles (if over 50 years old)

Tested for TB

Tested for COVID 19

CMOORE MEDICAL SALES & SERVICE, INC will use the following schedule of color-coded "Equipment Checked" stickers to identify patient care equipment due or overdue for preventive maintenance and electrical safety.

January–December:2024 YELLOW

January–December:2025 WHITE

January–December:2026 PINK

January–December:2027 GREEN

LOANER UNIT WHITE

ONE TIME CHECK WHITE