



UNITED STATES MARINE CORPS
15TH MARINE EXPEDITIONARY UNIT
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MARINE EXPEDITIONARY UNIT ORDER 4790.2

From: Commanding Officer
To: Distribution List

Subj: MAINTENANCE MANAGEMENT STANDING OPERATING PROCEDURES FOR 15TH MARINE
EXPEDITIONARY UNIT (MEU) (Short Title: MMSOP)

Ref: (a) MCO P4790.2C W/CH 1
(b) MCBUL 3000
(c) TM 4700-15/1H
(d) MCRP 5-12D
(e) UM 4400-124
(f) UM 4790-5
(g) MCO P5600.31G W/CH 1-3
(h) MCO 4855.10B
(i) MCO P4400.160B
(j) MCO P4400.150E W/Erratum CH 1-2
(k) TI 5600

Encl: (1) MM SOP

1. Situation. To promulgate policy and procedures for the conduct of effective equipment maintenance and maintenance management programs within the 15th MEU per the references.
2. Mission. This Order establishes and provides further guidance on maintenance and maintenance management policies not adequately covered in Marine Corps Orders and/or Directives.
3. Execution. This Order is directive in nature and effective upon receipt, until cancelled or superseded. The 15th MEU will execute maintenance management in accordance with enclosure (1) of this Order and the references.
4. Administration and Logistics. Recommendations regarding the effectiveness of this Order are invited and should be submitted via the chain of command to the Commanding Officer, 15th MEU (Attn: S-4/MMO).
5. Command and Signal
 - a. Command. This Order is applicable to all units either organic or attached to 15th MEU. It will serve as a basis source document for the conduct of all maintenance management activities except when policy notices issued by the Maintenance Management Office (MMO) take precedence.
 - b. Signal. This Order is effective the date signed.


S. D. CAMPBELL

MM SOP

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Chapter 1

Command and Staff Responsibilities.

1. Command Responsibilities

a. The overall responsibility for the maintenance of equipment within this organization rests on the MEU Commander. However, commanders at all levels must provide the continuous leadership and personal attention necessary to create and sustain an effective program of maintenance management. In particular, they must know their responsibilities, equipment, operators, and demonstrate a genuine personal interest in the maintenance program.

b. The Marine Corps Integrated Maintenance Management System (MIMMS) program is a management tool used by commanders at all levels to accomplish the following:

- (1) Evaluate readiness postures in the areas of equipment reliability and maintainability.
- (2) Determine maintenance support requirements for deployments.
- (3) Automatically track equipment by serial number.
- (4) Establish positive control over the unit's publication control, modification control, calibration control, corrosion control, and tool control programs.
- (5) Establish positive control over the unit's technical manpower management program to include technical training of maintenance personnel.
- (6) Establish positive control over the unit's tool sets, kits, and chests.
- (7) Establish a detailed technical inspection program for enforcing the Commander's maintenance management policy and for correcting deficiencies when detected.
- (8) Minimize the use of personnel, funds, and support equipment needed.
- (9) Ensure accurate and timely reporting of maintenance requirements and actions performed.
- (10) To effect necessary maintenance at the lowest echelon by early detection of potential or actual equipment failure.

c. Major Subordinate Element (MSE) commanders are responsible for the proper conduct of the equipment maintenance program within their units. Those responsibilities include, but are not limited to, the following:

- (1) Advise the MEU Commander on the status of maintenance and equipment readiness within the unit;
- (2) Report all maintenance problems to the MEU S-4 that cannot be resolved through normal channels and procedures; and

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(3) Supervise the conduct and quality of all authorized maintenance on assigned equipment.

d. Battalion Commanders, Company Commanders, Officers in Charge (OIC's), and section heads within the MEU are responsible for the proper conduct of maintenance in their units. This responsibility extends down to and includes their lowest tactical and administrative elements. These commanders shall do the following:

(1) Educate their subordinates concerning the importance of their overall maintenance mission;

(2) Ensure organizational (1st and 2nd echelon) maintenance for all ground equipment is accomplished as set forth in this SOP;

(3) Be prepared at all times to advise the MEU Commander regarding the status of the maintenance effort in their unit;

(4) Monitor the conduct and quality of maintenance performed on the equipment, regardless of level of maintenance, and report immediately all maintenance problems which cannot be resolved through normal channels;

(5) Ensure that supervisory personnel within their units are proficient in the preparation and utilization of all equipment records; and

(6) Conduct periodic inspections of maintenance areas under their cognizance.

2. Staff Responsibilities

a. S-1 Officer

(1) Serves as the principal staff officer on matters pertaining to CE personnel assignment or replacement.

(2) Coordinates with the MMO to ensure that correct administrative procedures are used within CE commodity area directives/publications systems.

(3) Coordinates with the MMO to review the Publications Listing (PL) to ensure that technical publications, orders, and directives are received by the MEU CE's commodity area.

b. S-2 Officer. Serves as the executive staff officer on matters pertaining to security and intelligence in relation to the maintenance effort.

c. S-3 Officer. The S-3 serves as the principal staff officer on all matters pertaining to operations and training, including operator, technical, and maintenance supervisor training. The MMO, in conjunction with commodity managers, must effect coordination with the S-3 to ensure selected training in required technical subjects is provided for all maintenance personnel. The MMO must determine total maintenance requirements and make appropriate recommendations to the S-3 for allocating time to conduct equipment maintenance operations. Equipment maintenance operations will be included in all training schedules.

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(1) In coordination with the S-4 in regard to personnel and equipment availability for support of training/operational commitments.

(2) Coordinates with the S-4 in regard to personnel and equipment availability for support of training/operational commitments.

d. S-4 Officer

(1) Serves as the principal staff officer on matters relating to equipment maintenance.

(2) Exercise staff cognizance over the MEU MMO.

(3) Coordinates with the MMO in regard to equipment availability for support of planned operational or exercise commitments.

e. Supply Officer

(1) Serves as the special staff officer responsible for supply support for the CE equipment maintenance program.

(2) Coordinates with the MMO on supply support for MEU maintenance operations.

(3) Exercises functional control over all fiscal matters; provides technical guidance, coordination and advice on matters pertaining to utilization of appropriated funds within the MEU.

(4) Supervises his Marine(s) to ensure reconciliations are occurring in accordance with directives.

f. Maintenance Management Officer (MMO)

(1) Advises the Commanding Officer on all matters relating to the weapons and equipment maintenance effort as well as weapons and equipment readiness within the MEU.

(2) Plans, organizes, and coordinates all maintenance activities and resources within the CE and coordinates maintenance support from outside organizations as necessary.

(3) Coordinates with MSE MMOs to establish maintenance procedures and quality control throughout the MEU.

(4) Initiates action to correct or change technical publications in accordance with directives. Ensures that required allowances for technical publications are sufficient, on hand, and properly distributed within the CE.

(5) Identifies facility requirements for maintenance operations and training and coordinates their use for the CE.

(6) Monitors CE MIMMS reports to ensure timely and accurate maintenance data submission.

(7) Evaluates CE support and test equipment allowances and ensures that on hand equipment is properly maintained and calibrated.

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(8) Plans and conducts inspections to ensure the effectiveness of the maintenance effort within the CE.

(9) Ensures the proper recording of maintenance information and the upkeep of required records within the CE.

(10) Coordinates with the S-1 for CE maintenance personnel authorizations, allocations, and assignments.

(11) Coordinates with the Headquarters Commandant on scheduling appropriate training for CE maintenance personnel (as required depending on whether the Command Element is organized with the maintenance personnel under the Headquarters Commandant or under the S-4).

(12) Coordinates with the S-3 and S-4 to ensure appropriate maintenance stand down time is included in planning for operations and training exercises.

(13) Coordinates with the MEU Supply Officer on the overall maintenance effort including fiscal matters pertaining to maintenance in CONUS and overseas.

(14) Coordinates with MEU supply on required repair parts and other supply support for the CE maintenance effort.

g. Commodity Managers

(1) The following sections are under the cognizance of the S-4 with regards for maintenance:

(a) Supply;

(b) Communications-Electronics;

(c) Engineers;

(d) Ordnance/Armory;

(e) Motor Transport;

(f) Chemical, Biological, Radiological and Nuclear; and

(g) Field Mess.

(2) Commodity managers have the following common responsibilities:

(a) Serve as the technical advisor to the MEU Commander on all functions within their respective commodities;

(b) Plan maintenance, based on the maintenance level authorized, priority, availability of parts, tools, equipment, level of personnel experience, and operational commitments;

(c) Schedule, direct, and supervise the care, inspection and maintenance of assigned T/E equipment;

(d) Monitor all pertinent MIMMS output reports to ensure timely and accurate submission of maintenance related information;

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(e) Utilize MIMMS information to evaluate equipment performance and maintenance production;

(f) Ensure all maintenance information is recorded and maintenance resource records are maintained in accordance with the appropriate manuals.

(g) Ensure that operator, maintenance, and supervisory personnel are properly trained and effectively employed;

(h) Coordinate with the Supply Officer in regards to all supply support matters;

(i) Supervise daily, weekly, and biweekly validations and reconciliation's to include daily and weekly internal shop validations of MIMMS data, weekly MMO, Supply reconciliations/validations, and biweekly maintenance float and Intermediate Maintenance Activity (IMA) reconciliations/validations;

(j) Establish and manage the calibrations and commodity manager's modification control program;

(k) Ensure that required technical publications are on hand or are on order, and that cognizant personnel are instructed in their use of maintenance, to include training in the use of NAVMC 10772, changes to technical publications;

(l) Establish and manage sound maintenance production, preventative maintenance, and quality control programs, to include the use of Product Quality Deficiency Reports (PQDR's) and ensure that all PQDR's are forwarded through the MMO office; and

(m) Establish safety regulations and ensure safe practices are followed in daily operations within respective commodity.

3. Desktop Procedures And Turnover Folders

a. Desktop Procedures. In accordance with the current version of reference (a), desktop procedures will be maintained in key maintenance billets to include; dispatchers, MIMMS clerks, publications clerks, training NCOs, and repairmen. The listing of the procedures set up by these individuals should, at a minimum, contain the following information:

- (1) Current references;
- (2) Daily, weekly, monthly, quarterly, semiannual, and annual procedures;
- (3) Points of Contact;
- (4) Required reports; and
- (5) Miscellaneous information.

b. Turnover Folders. Turnover folders will be maintained by all supervisory maintenance and supply personnel. At a minimum, turnover folders will contain the following information:

- (1) Appointment letters;
- (2) Title of billet;
- (3) Reporting chain;
- (4) Billet mission;
- (5) Mission functions;
- (6) Tasks and basic operations;
- (7) Reference list;
- (8) Required reports;
- (9) Relationships with units in and outside the command;
- (10) Points of contact;
- (11) Past, pending, and planned projects; and
- (12) Miscellaneous information.

c. Desktop procedures and turnover folders will be maintained by personnel filling the billets as indicated in Figure 1-1 below. The list is not all inclusive. Smaller units may have one individual performing several billets; therefore, it may be more practical to have the desktop procedure/turnover folder address each billet separately to accommodate assignment changes.

<u>Billet</u>	<u>Desktop</u>	<u>Turnover</u>
Maintenance Management Officer	O	M
Maintenance Management Chief	O	M
Commodity Manager	O	M
Maintenance Officer	O	M
Maintenance Chief	O	M
MIMMS Clerks	M	O
Calibration Control Clerks	M	O
Publications Clerks (Librarians)	M	O
Modification Control Clerks	M	O
Records Clerks	M	O
ERO Bin/Parts Clerks	M	O
Tool Room NCO	M	O
Technical Training NCO	M	O
Quality Control NCO	M	O
Notes: M= Mandatory; O= Optional		

Figure 1-1.--Desktop Procedure/Turnover Folder Requirements Table

4. Exceptions to Policy

(1) Aviation material furnished by the Navy which is subject to policies prescribed by the Chief of Naval Operations.

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(2) Medical and dental material, which are subject to maintenance policies prescribed by the Chief of Naval Operations through the Surgeon General of the Navy:

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Chapter 2

Operations

1. Policy

a. Next to the individual Marine or Sailor, the most important asset of this command is its equipment. The equipment, when married with properly trained personnel, constitutes the MEU's combat power. Proper maintenance of this equipment will ensure that this power is realized. This point will be made clear to all equipment operators and repairmen. They must be held accountable for their actions or lack thereof.

b. The maintenance of all organic equipment will be conducted in compliance with the applicable directives and technical publications consistent with operational use and scheduled services. The MEU CE is authorized to do first and second echelon maintenance.

c. The Preventive Maintenance (PM) program will include inspections to detect and correct possible failures before they occur. PM must be performed and supervised at the lowest level. Repairs must be identified quickly and the equipment placed in the Corrective Maintenance (CM) cycle.

d. MIMMS procedures are clearly defined in the current version of references (a) and (e). Each commodity manager and detachment commander will familiarize himself with the references. They will also ensure that operators and repairmen under their charge are trained to perform their maintenance mission.

2. Shop Operations. Each shop with the mission of performing maintenance services will be internally organized to provide the following:

- a. Adequate personnel supervision;
- b. Proper management of maintenance resources;
- c. Scheduling and forecasting of maintenance support;
- d. Complete and continuous control over tools and support equipment;
- e. Quality control program;
- f. Compliance with safety requirements; and
- g. Compliance with all administrative record keeping procedures.

3. Personnel

a. Each section and detachment OIC is responsible for the maintenance functions within his section/detachment.

b. Each shop shall have an appointed maintenance chief who will supervise and control personnel in the accomplishment of a specific maintenance mission as directed by the shop OIC. This Marine can also function as the MIMMS clerk.

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c. Each shop shall have a records clerk who maintains records for all pieces of equipment as established by Marine Corps directives and as directed by the shop OIC.

4. Safety. Commanders are responsible for the prevention of mishaps involving personnel, equipment, or property within their organizations. They will incorporate operational risk management into all maintenance operations and ensure that controls are in place to mitigate or eliminate risk.

5. Assignment Of Operators

a. Marines who are MOS trained as operators and Marines assigned as incidental operators will be assigned to perform first echelon maintenance on MEU equipment. It is the section/detachment OIC's decision whether or not to assign specific gear to individual operators. Organizational (first echelon) level of maintenance will be scheduled regularly, conducted, supervised, and recorded in all commodities and units.

b. At no time will anyone operate a piece of equipment for which he is not properly licensed and trained to operate.

6. Allocation of Maintenance Time

a. Maintenance training will be given the same priority as that of other training requirements.

b. Commodity managers who provide support or accomplish missions, such as communications/electronics, must ensure that the work day/week includes operator maintenance and repairmen training.

7. Performance of Maintenance Services

a. Each commodity manager is responsible for scheduling maintenance for all equipment over which they have cognizance. CLB-15 performs organizational (second echelon) maintenance on ACE engineer equipment as necessary. This maintenance is considered overflow maintenance.

b. When equipment is entered into a scheduled maintenance cycle or when CM takes place, it is the responsibility of the assigned operator to ensure all organizational (first echelon) maintenance has been completed.

c. When needed, the MEU Commander may authorize changes to the PM intervals.

d. Maintenance stand-downs will be coordinated through the S-4 and HQCMDT. Incorporation of stand-downs to the annual training calendar/schedule will be coordinated with the S-3.

8. Equipment Repair Order (ERO) Control Procedures

a. Administrative procedures require equipment logbooks, records, required reports, and associated EROs to be controlled by the commodity manager.

b. The authority to sign EROs will be assigned in writing by the Commanding Officer and held at the MMO office. Priority assignment will be made with regards to Figure 2-1 and the following criteria:

Force Activity Designator (FAD)	Urgency of Need Designator		
	A	B	C
I	01	04	11
II	02	05	12
III	03	06	13
IV	07	09	14
V	08	10	15

Figure 2-1.--ERO Priority Assignment

(1) FAD I: used for United States forces in combat and approved by the JCS.

(2) FAD II: used when the MEU is deployed outside CONUS or when the MEU is being maintained for immediate deployment.

(3) FAD III: used when the MEU is in a non-deployed status or when the MEU CE is the only unit within the MEU.

(4) FAD IV: N/A (no status will exist for the MEU below FAD III).

(5) FAD V: N/A (no status will exist for the MEU below FAD III).

(6) Urgency of Need Designator A: Is for equipment required for immediate use without which the unit/activity concerned cannot perform assigned operational missions, OR such a condition will reasonably occur within 15 days (20 days OCONUS).

(7) Urgency of Need Designator B: Is for equipment required for immediate use without which the unit/activity concerned is impaired in its ability to perform assigned operational missions.

(8) Urgency of Need Designator C: Is for equipment requiring non-critical repair; for replenishment of stock to the authorized stockage level (PEB); for scheduled maintenance.

c. ERO Disposition. EROs will be distributed as follows:

(1) Original (white) Copy: Maintained by the agency effecting the repairs or maintenance services and kept on file in accordance with reference (a);

(2) Duplicate (green) Copy: Shop action copy;

(3) Duplicate (yellow) copy: Kept as a receipt by the owning unit;
and

(4) Duplicate (pink) copy. MIMMS key punch copy.

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d. Procedures to obtain Maintenance Support. Supervision is essential for efficient maintenance production. The MMO is responsible for keeping the most current maintenance/supply status. The following procedures will be used to obtain maintenance support.

(1) A request for corrective maintenance, scheduled maintenance, or other second/third echelon work will be initiated with an ERO.

(2) The MIMMS clerk will route the ERO to the proper shop.

(3) EROs will be key punched first before items are evacuated to higher echelons/levels of maintenance.

(4) Third echelon ERO numbers must be written on the third echelon ERO before the items are turned over to the third echelon shop.

(5) Computers, communication equipment, and office equipment will be handled by the Communication Technician and key punched by the Communication MIMMS clerk. When equipment is ready for pickup, the Automated Data Processing Equipment Technician (ADPE) from the MEU S-6 will pick up all computers, communication equipment, and office equipment.

e. Inter-shop EROs. When an item of equipment is transferred from one second echelon shop to another, an additional second echelon ERO is required. This ERO is categorized as an inter-shop ERO. The following procedures will be used to control inter-shop EROs.

(1) Second echelon shop #1 opens an ERO to second echelon shop #2 in the normal manner.

(2) The category code of shop #2's ERO must be "C". Only shop #1 can deadline the equipment. If shop #2 finds the equipment deadlined, it is shop #1's responsibility to report the item deadlined by changing the Category Code (CAT CODE) of the original ERO.

(3) Shop #1 must keep their ERO open until shop #2 has returned the equipment to the shop #1.

f. Change of ERO Priority and Category Code

(1) Once assigned, the ERO priority will not be changed to UND A without the approval of the Commanding Officer or those he has delegated in writing. All changes will be considered on a case-by-case basis.

(2) The following Category Code (CAT CODE) changes may be made at the discretion of the commodity managers:

(a) From X to M if the item becomes deadlined during the maintenance cycle though initially identified as degraded; or

(b) From M to X or N if the item has been removed from combat deadline status during any part of the maintenance cycle.

(3) CAT CODE changes must be made on the ERO itself.

g. Unit Recall EROs. The job status UNIT RECALL will only be used when an ERO is at a higher echelon of maintenance. The equipment must not be in a

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combat deadlined status. At the request of the Commanding Officer the equipment will be returned to the unit. When parts come in on the equipment that was unit recalled, the Intermediate Maintenance Activity (IMA) may recall the equipment to apply those parts.

h. Component EROs. When a component of an end item deadlines the end item, a component ERO must be opened. The nomenclature of the component ERO will reflect the component being repaired.

i. Repair Cycle Time (RCT). The following standards will be adhered to within the Command Element for all Command Element equipment.

(1) Time interval to have equipment inducted into the maintenance cycle once a required repair has been identified: (1) working day.

(2) Time interval for equipment to be evacuated to higher echelon of repair: 3 working days.

(3) Time interval for inter-shop transfer: 2 working days.

(4) Time interval for waiting for inspection while within the Command Element echelon of maintenance: 5 working days.

(5) Time interval for ordering all critical parts for deadlined equipment at this echelon of maintenance: 1 working day.

(6) Time interval for ordering noncritical repair parts for equipment at the CE echelon of maintenance: 4 working days.

j. Commanders will ensure when repair of readiness reportable and mission essential equipment is required to meet operational commitments, the equipment will be inducted into the maintenance cycle with an established required delivery date (RDD). The RDD establishes the latest possible date that the equipment must be ready to meet operational commitments. All supply actions required to assist in the repair of combat essential equipment must be expeditiously handled consistent with the established RDD. If equipment has been evacuated to the IMA, a letter will be sent via the chain of command to the Commanding Officer, Intermediate Maintenance Activity, requesting a change/establishment of an RDD on the ERO. In those instances when an operational readiness float (ORF) exchange is made based on an RDD, the organic repair parts received against the "turned in" item will be promptly forwarded to the maintenance facility managing ORF assets. Units will establish strict control procedures for repair parts identified with ORF exchanged items to ensure that back-ordered repair parts are delivered to the ORF assets manager.

9. Equipment Evacuation

a. Evacuation is the controlled process of moving equipment which cannot be repaired, modified, or serviced by an organization to another organization which is authorized to accomplish the required echelon of maintenance.

b. The CE will evacuate to the Intermediate Maintenance Activity (IMA) any equipment that requires repairs/modifications that the 2nd echelon capability of the CE is not authorized to conduct. This will be accomplished within 24 hours or as soon as possible after detection of the defect or required modification.

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c. 1st Maintenance Battalion. 1st Maintenance Battalion, 1st Marine Logistics Group (MLG), is the IMA tasked with providing the CE with maintenance support beyond its own capabilities from R+30 to E-180.

d. The CE is authorized to go directly to 1st Maintenance Battalion utilizing a courtesy third echelon ERO.

e. Combat Logistics Battalion (CLB). The Maintenance detachment of the CLB is the IMA tasked with providing the CE, Ground Combat Element (GCE), and Aviation Combat Element (ACE) ground equipment with maintenance support beyond their own capabilities during work-ups and deployment, from E-180 days to R+30 days.

f. Equipment that Exceeds Maintenance Capabilities

(1) During pre-deployment training, equipment requiring repairs exceeding the owning unit's maintenance capabilities will be evacuated to the supporting intermediate maintenance activity or replaced by the owning unit's parent command.

(2) Equipment may be evacuated to the next higher echelon/level of maintenance, regardless of echelon of work required, if it is a combat-essential item and is dead-lined for lack of facilities or personnel.

(3) During deployment, requests for maintenance support will be submitted to the MSE MMO on the Equipment Repair Order, or if the situation dictates, by rapid request form.

(4) Sources of external maintenance support other than CLB-15 and 1st MLG (e.g. Army or Navy maintenance activities) require the approval of the 15th MEU Commander.

(5) Authorization to Exceed Designated Echelon of Maintenance. All requests for authority to exceed the designated echelon of maintenance will be submitted to this Headquarters (S-4/MMO) via the chain of command, per the criteria established in reference (a). Requests approved by this Headquarters will not exceed a period of six months and will be maintained in the organizational MMO's turnover file. Increases required beyond the initial six month period will not be considered without the addition of a copy of the letter to Headquarters Marine Corps (HQMC) requesting a change to the organization's T/O mission statement.

g. Evacuation Procedures

(1) All required organizational maintenance will be performed to the maximum extent possible.

(2) Equipment will be clean, complete, and have all records up to date.

(3) An ERO will be opened and entered into MIMMS before the equipment is evacuated.

(4) All non essential gear will be removed from the equipment before it is evacuated to the IMA.

(5) Equipment involved in a mishap or showing signs of abuse must have a statement indicating such with the ERO. It must be signed by the MMO, the Supply Officer, or the investigating officer.

(6) The equipment and the ERO will be delivered to the appropriate IMA shop. The IMA mech/tech accepting the equipment will annotate on the ERO and sign for all components and SL-3 items that must remain with the item. The yellow copy will be kept by the evacuating commodity as a receipt for the equipment.

(7) When the repairs have been completed, the CE will be notified for pickup. An inventory of all components (by serial number) and SL-3 items will be conducted by CE mech/tech before accepting equipment. The green copy of the ERO will be retained by the IMA for their records.

h. Equipment Receipt. Personnel authorized to receipt for equipment at the IMA should be qualified to inspect and accept equipment. A Letter of Authorization for personnel authorized to receipt for equipment must be on file at the IMA and signed by the Commanding Officer.

i. Float Items. Refer to Chapter 3, Supply.

10. Intermediate Maintenance Contact Teams

a. A Limited Technical Inspection (LTI) is the principal maintenance action requiring contact teams. However, all other maintenance contact team support will be provided by the CLB while the MEU is chopped.

b. All requests for contact teams will be addressed to the Commanding Officer, Combat Logistics Battalion-15 (S-3) via the MEU S-4/MMO. The exception is while ashore during deployment. All requests will be submitted directly to the CSSOC.

11. Maintenance Records

a. Maintenance records are maintained for two specific purposes. First, at the unit level, they provide documentation that preventative maintenance checks and services are being performed at the required intervals, and that corrective maintenance and other maintenance services are being performed properly and in a timely manner. Second, at the Marine Corps level, they provide a history that all maintenance requirements are being fulfilled, in addition to being used as an indicator of problematic trends, or potential trends, which may form for certain equipment.

b. Maintenance records are managed in accordance with reference (c). Entries in equipment records will be made at the time the maintenance is performed by the technician/mechanic.

c. ERO Utilization. An ERO will be used as the standard maintenance document down to and including the commodity level. EROs will be prepared, maintained, filed, and destroyed within the using unit maintenance shop.

d. Local Records. Local records/reports will only be used at the CE if Marine Information Systems Coordinating Office (MISCO) records/reports cannot fulfill a history requirement. For example, when connectivity does not exist due to being in a field environment.

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e. Records. Records are the responsibility of every person involved in the maintenance effort. Each repairman will ensure that records are kept in accordance with current directives as soon as the repairs are made. Supervisory personnel must make frequent checks to ensure complete and accurate record keeping.

12. Reports. The reports generated by MIMMS provide the commodity manager with complete visibility of all equipment under his cognizance that has been inducted into the maintenance cycle.

a. MIMMS Submissions. This section deals with internal procedures to be followed by the CE.

(1) The primary method for inducting an item into the maintenance cycle is the ERO. The pink copy of the ERO is forwarded by the originator for key punching NLT 1400 on Mondays through Thursday and 1300 on Fridays. After key punch, the pink copy is returned to the originator where it will be maintained to verify processing by use of the Daily Transaction Listing.

(2) As equipment is moved through the maintenance phase its status may change. All defect and job ID changes will be recorded on the original (white) copy of the ERO.

(3) ERO Shopping List (EROSL). The EROSL is used in conjunction with the ERO to requisition, receipt for, cancel, or maintain visibility on scrounged parts. The EROSL is not required to be in the equipment record jacket after the ERO has been closed. Copy of EROSL will be endorsed by the MEU Maintenance Management Office prior to submission to Supply.

b. Maintenance Reports

(1) Daily Transaction Listing (DTL). This report provides the commodity manager with a listing of all transactions that were input on the indicated day only. It is retained for one month by the MMO. It is divided into three sections:

(a) Transactions processed with no errors. This section lists all the transactions made with no errors.

(b) Transactions processed with noncritical errors. This section lists all transactions that were accepted by the system with minor errors and lists the error code.

(c) Transactions that did not process. This section lists inputs that were REJECTED and lists the error code.

(2) Daily Process Report. This report lists active EROs by shop section and is used by managers at all levels. It shows all current maintenance and supply information. It is retained by the MMO for one month.

(3) Weekly LM2 Report. This weekly report reflects the readiness of equipment held in the command. Subject equipment is listed in accordance with reference (b). The MMO will retain the three latest reports. The LM2 remarks include all information concerning T/E deficiencies, temploans, command adjustments administrative deadlines, combat deadlines, and the status of excess equipment.

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(4) Weekly Owning Unit Maintenance Table of Authorized Materiel Control Number (TAMCN) Report. This report provides the MMO with a ready reference in TAMCN sequence of all equipment undergoing repair. The MMO will retain the three latest reports.

(5) Weekly Maintenance Exception Report. This report displays, in a narrative format, suspect supply or maintenance conditions for equipment under repair. The MMO will retain the three latest reports.

13. Maintenance Production. Maintenance production involves the physical performance of the various maintenance functions. These functions are preventive maintenance checks and services (PMCS), Corrosion Prevention and Control (CPAC), corrective maintenance (CM), modification, calibration, modernization, overhaul, and rebuild. The CE is authorized to perform PMCS, CPAC, CM, modification, and calibration while modernization, overhaul, and rebuild functions are performed only at the depot level.

14. Maintenance Phases. The maintenance process consists of four separate phases: the equipment acceptance phase, the equipment induction phase, the active maintenance phase, and the equipment close-out phase. The process of specific maintenance action usually consists of all four phases. However, it must include at a minimum, the acceptance and close-out phases.

15. Preventive Maintenance Checks and Services (PMCS)

a. PMCS is the care and servicing performed at the organizational level with the purpose of maintaining equipment in a satisfactory operating condition. A systematic PMCS program of inspecting, cleaning, servicing, lubricating, and adjusting is instrumental to equipment readiness and to reducing CM requirements. PMCS scheduling is the responsibility of the commodity manager, while the CONDUCT of 1st echelon PMCS is the responsibility of the appropriate section/detachment OIC.

b. PMCS is, in general, cyclic in nature; one cycle being complete each year of equipment life. This is frequently referred to as "scheduled maintenance" and includes the following:

(1) PMCS performed by the operator on a daily, weekly, or special occurrence basis;

(2) PMCS performed by maintenance personnel, assisted by the operator as necessary, on a calendar, mileage, rounds fired, or hours of operation basis; or

(3) Physical examination of equipment records using PLMS which lists all Modification Instructions (MI) that apply to specific equipment, and the those listed in reference (k) which lists new MIs not yet incorporated into PLMS.

c. Section/detachment OICs are responsible for the PMCS on their equipment. Deviations from TM authorized procedures are not permitted.

d. Scheduled PMCS Phases

(1) Scheduling. Using the respective Technical Manual (TM) as a reference, each piece of equipment is incorporated into the preventive maintenance schedule.

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(2) Induction. Induction is the physical commitment of the ERO and associated equipment requiring maintenance into the assigned repair shop. Induction will be based on priority.

(3) Active. This phase is conducted in a sequence of steps, per the appropriate TM-10, designed to ensure that the required maintenance is conducted in an efficient and effective manner.

(4) Closeout. This phase starts when the equipment has been serviced and returned to the owner.

(5) The equipment chief (engineer, motor transport, etc.) is responsible for scheduling all required PMCS, using the PMCS schedule established in the appropriate commodity chapter of the reference (c) and guidance contained in the reference (a). When a stated requirement exists in the equipment's manual to schedule PMCS but no interval is recommended, the local commander will establish an interval of no less frequently than semi-annually per reference (a). When no requirement is stated or no equipment manual exists, PMCS schedule is not required. This does not relieve the unit from its responsibility to perform first echelon PMCS. In preparing PMCS rosters, care must be taken to ensure that the workload is staggered so that all items of one type of equipment are not scheduled for PMCS at the same time. Preventive Maintenance Checks and Services will be integrated with CM (and vice versa) to the greatest extent practical to obtain the most economical use of all available equipment.

16. Corrective Maintenance (CM)

a. CM is the combination of maintenance actions performed to restore equipment to a serviceable condition. The CM process starts when an item of equipment is reported as requiring CM. It terminates when the item is restored to a serviceable condition, is declared not repairable, or when otherwise directed by competent authority such as a command assigned investigating officer.

b. CM Phases

(1) Acceptance. The maintenance activity accepts equipment reported as requiring CM into the maintenance activity, conducts an initial inspection, determines the economic feasibility of repair or replacement of the equipment, and assigns the equipment to the appropriate maintenance shop.

(2) Induction. Induction is the physical commitment of the ERO and associated equipment requiring maintenance to the assigned shop. Induction will be based on priority.

(3) Active. Production actions performed following induction of the ERO and its associated equipment into the shop constitutes the active phase.

(4) Close-out. The close-out phase of the CM process starts when the equipment has been repaired and the serviceable item is returned to the owner, or when a decision has been made to dispose of the equipment.

17. Modification Control Program

a. General. Marine Corps equipment modification consists of certain maintenance actions required to effect necessary design changes in the

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assembly, characteristics, system, or components of equipment in order to improve functions, maintainability, reliability, and/or safety. To direct and control this program, the Commandant of the Marine Corps issues a MI to the field.

b. Procedures. Modifications will be performed only as directed and authorized by MIs. Changes to equipment directed by Technical Instructions (TI), bulletins, or Supply Instructions (SI) are not considered modifications for reporting purposes.

c. MI Classifications. MIs, when published, are assigned a priority classification of either URGENT or NORMAL.

(1) Urgent MI. Urgent MIs are used to prevent injury or death to personnel, prevent major damage to equipment, or to make changes that are considered so essential to equipment that their application at the earliest possible time is required. A required completion date will accompany an urgent MI by message if the equipment is to be deadlined until the modification is completed, that information will be communicated by message.

(2) Normal MI. Normal MIs are to be accomplished within the normal workloads of the unit. At the very least they are to be accomplished within one year of the MI being published.

d. Control Procedures. The objective of a modification control program is to ensure that all necessary modifications are properly applied to the unit's equipment in a timely manner.

(1) The responsibility for the maintenance of modification records resides at the commodity manager. Therefore, the section that is responsible for equipment PMCS is responsible for the verification of that equipment's modifications as well as the proper recording of this information in the equipment record jacket and modification control record.

(2) Publications Library Management System (PLMS) is the primary means for identifying current applicable modifications. It lists MIs and TIs by TAMCN. Possession of all MIs and TIs is mandatory for each TAMCN the commodity manager possesses regardless of the echelon required to perform the modification. PLMS is a quarterly publication and must be reviewed as it is received.

(3) Upon receipt of equipment from any source (Example: Gear attached to the CE that is command adjusted), all applicable modifications to that item will be verified as part of acceptance.

(4) Establishing a Modification Control Program. Commodities tasked with the responsibility of exercising modification control over equipment will accomplish the following:

(a) Modification Record. For each item of equipment requiring control, the NAVMC 11053/11054 will be used to track modifications.

(b) Scheduled PMCS. All applicable modifications will be inspected during scheduled PMCS.

(c) Follow Up. All non-applied modifications which are applicable to an item will be accomplished as soon as it is practical. In

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the case of an urgent MI, the item will be deadlined and inducted into the maintenance cycle immediately.

(d) MI/TI Library. Each commodity will retain on file all its appropriate MI's and TI's per the CE T/E.

(e) No equipment will be modified unless there is a MI authorizing the modification. Any equipment found to have unauthorized modifications will require an investigation into the circumstances.

(f) If it is identified that a piece of USMC ground equipment would function more effectively/efficiently with a certain modification to it, a PQDR will be submitted via the chain of command to HQMC per reference (h). If it is deemed advantageous for that piece of equipment to be modified Marine Corps wide, then an MI will be issued directing the modification.

18. Calibration Control Program

a. The Marine Corps Calibration Control Program has been developed to ensure all calibration equipment within a unit is tested and performs its intended function. The current version of reference (a) directs and details the program.

b. Reference (g) lists all equipment that requires calibration within the Marine Corps.

c. All equipment that requires calibration is required to have either a tag, sticker, or seal affixed to it describing the level of calibration, date last calibrated, and its status. Commodities will submit a Calibration Report to the Maintenance Management Office monthly.

d. Within the CE, the S-6, S-4, Motor Transport, and the Armory have Test, Measuring, and Diagnostic Equipment (TMDE) which needs to be calibrated.

e. The MMO will be responsible for monitoring the TMDE for the CE. It is important to ensure all equipment that will become due for calibration during deployment is calibrated before the deployment begins.

Chapter 3

Supply

1. General. Essential to any maintenance program is the delivery of supplies and repair parts in a timely manner. The maintenance effort of this command works primarily within the MIMMS and SASSY systems.

2. Maintenance And Supply Coordination. Continuous coordination and reconciliation between maintenance and supply is essential to the proper functioning of the maintenance program. Maintenance personnel must be familiar with, and actively support, the supply system.

3. Repair Parts/ Secondary Repairables (SECREPS)/SL-3 Control

a. Except for those items meeting the criteria for inclusion in a Pre-Expend Bin (PEB), all parts held by the maintenance shops must be associated with an open ERO.

b. After issue, each section is responsible for temporary storage of repair parts.

c. Commodity clerks are required to reconcile with maintenance and supply personnel at least once a week.

d. Selective Interchange. Selective Interchange is the exchange of a serviceable part from one item of equipment with an unserviceable part from another of the same item. It is used to reduce the number of pieces of dead-lined equipment of the same type. It should only be done when the required repair parts cannot be delivered in a timely manner due to extensive backorder time or non-availability. A scrounge EROSL will be completed to record the transaction. Only the Commanding Officer can authorize selective interchange.

e. Cannibalization. Cannibalization is the removal of serviceable parts from one item of equipment to install them in another without an exchange. Cannibalization should be performed only in emergency situations where mission accomplishment is impossible without it.

f. Corrective maintenance in the form of cannibalization or selective interchange will be employed only to ensure that a minimum amount of equipment is dead-lined at any one time for lack of a critical repair part(s). Maintenance by cannibalization or selective interchange is considered to be an exceptional procedure and is authorized only for mission critical equipment when an operational commitment is imminent, and only when the required part cannot be obtained in time to accomplish the mission. At the time of the interchange/cannibalization, strict managerial control practices must be enforced to ensure that the owner of the equipment having serviceable parts or components removed concurs with the details of the interchange or cannibalization.

g. Maintenance by selective interchange/cannibalization must be on a case-by-case basis and authorized by one of the following:

- (1) Commandant of the Marine Corps;
- (2) MSE Commanding Officer;

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(3) For MSEs and attachments of the 15th MEU desiring selective interchange, a request must be made to the Commanding Officer, via the MMO stating a valid requisition has been made for the part(s) involved; and

(4) The commander of any unit authorized by the T/O cover page to perform at least intermediate third echelon maintenance and/or is an authorized maintenance float or sub-float holder.

h. Pre-Expended Bins

(1) PEBs may be established in organizational maintenance activities in strict accordance with reference (a), and this Manual. While PEBs are not a substitute for the normal means of obtaining seldom-used repair parts, PEBs are encouraged. The first source of supply for low-cost fast-moving repair parts is the PEB. When an organizational unit deploys, the PEB is even more critical than while in garrison. Planning/communication between the MMO, maintenance section, and Supply Officer on the items to be put in the PEB will ensure each item meets stockage criteria.

(2) Stockage Criteria

(a) Cost for PEB items is outlined in reference (j).

(b) Fast-moving, meaning PEB items that are low cost, expendable items that enhance maintenance operations and economical repairs of unit assets.

(c) PEB consumables will not exceed 30 days of supply for each using unit, based on average demands over the previous 12 months.

(d) Those demands applied in quantities less than U/I; BX, MX, etc, will not be held to exceed 2 full U/I except if 30 days of supply is the greater quantity.

(3) The decision by the organizational commander to authorize PEBs, and what they may contain, should be made with the below considerations:

(a) Time and effort of maintenance personnel required to stock and account for the materiel.

(b) An organization's funds will be expended before the materiel is used, rather than when used, as is the case with Purpose Code A stocks.

(4) When it is determined that a PEB will enhance the maintenance effort, the unit commander or designated representative will publish a letter authorizing specific items to be included in the PEB. Letters of authorization must be reviewed and approved at least annually.

(5) Once an item is procured and issued to the PEB, normal management dictates that simple procedures are required for locating/identifying the items and establishing when to replenish the items in the PEBs. Some examples of such procedures are:

(a) Within the PEBs, separate the items by specific NSN into a separate compartment/box/container which is labeled with the NSN.

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(b) Establish a reorder point (ROP). This requires periodic review of assets held within the PEB to determine if the ROP has been reached.

(c) Place the reorder point quantity of items in a bag, and when the mechanic/repairman must open the bag for the item, it is time to reorder.

(6) Internal procedures established for identifying, locating, reordering PEB items must be published by the unit maintenance/maintenance management office.

(7) For those repair parts where only a portion of the repair part is required, such as items with the unit of issue of a hundred, the unused portion should be placed in the PEB with a note identifying the item as a broken unit of issue and the date added to the PEB. These parts will be used until exhausted.

(8) Requisition Procedures

(a) All PEB items will be ordered using shop overhead EROs, utilizing the "dummy" ID number and TAMCN (currently loaded to the MIMMS ID Standards File) corresponding to the commodity area.

(b) Each PEB item applied in a quantity equal to, or in multiples of the U/I, will be recorded against an open ERO for that item of equipment with a 4/Add parts transaction citing advice code.

(c) Parts costing under \$25.00, and thus not associated with an ERO, will be accounted for and tracked using a logbook.

i. Excess Repair Parts. Excess repair parts or materials for secondary repairable items will not be held by maintenance shops. Excess repair parts obtained through normal requisitioning channels represent wasted maintenance dollars. Excess repair parts obtained through non SASSY means represent repair parts not available to other organizations that may have a need. The monetary loss to organizations and the Marine Corps based on stockage of excess repair parts is unacceptable and will not be tolerated at any level. Excess repair parts will be identified to unit Supply Officers for roll back transactions.

j. Maintenance Float. Maintenance Float (Bldg 210845) is the source for all secondary repairable items for Camp Pendleton. All floated items will be delivered in a clean and complete condition. If the item has been damaged through other than normal wear and tear, a letter of explanation must accompany the item stating that it has been released from investigation. Usually an exchange is made immediately. If no exchange is made the float item will be put on back order for pickup at a later date. "Issue without turn-in" will be authorized only under exceptional circumstances such as operations ashore or field ops in which log trains are authorized to carry SECREPS. The unserviceable SECREPS (and un-issued SECREPS) will then be turned in as soon as it is operationally feasible.

k. SL-3. All SL-3 items will be inventoried monthly by the Consolidated Memorandum Receipt (CMR) holder in order to accurately track them and provide justification, if necessary, for ordering them. These inventory sheets will be maintained in the equipment's record jacket for a period of one year. The SL-3 inventory must be supervised so there is 2-person accountability. The "supervisor signature" block must be signed for the inventory to be valid.

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1. ERO Parts Bins. ERO parts bins are a means of controlling and accounting for repair parts within the unit. Repair parts can be traced from date of requisition to receipt through ATLASS and MIMMS output reports; however, once repair parts are received by the organization, automated accounting stops. There is, therefore, a requirement to establish internal manual accounting control procedures within the organization.

(1) An ERO parts bin is defined as a controlled location in the maintenance area where parts received from supply are stored until installation can be effected.

(2) Each ERO parts bin will be clearly marked with the appropriate ERO number and equipment serial number for which the parts were ordered. Separate ERO parts bins will be set aside for storage of replacement parts received on each open ERO. All small parts received for the same ERO will be stored together in the same ERO Parts Bin. Large parts, by virtue of their size, require a larger area and are normally stored together in an appropriate location and clearly tagged with the applicable ERO and document number to which they belong.

(3) The shipping document will be attached to each part stored in the ERO parts bin. If a shipping document was not issued with the part, the part must be tagged or marked with the pertinent ERO/Document number prior to departure from the supply point.

(4) Accounting for parts received, issued to a technician for application, or canceled will be as indicated in reference (a) and reference (c).

(5) Parts that have been removed from an item of equipment to facilitate repair may be stored in the ERO parts bin; however, the parts will be tagged or marked with the appropriate ERO number. Parts that have been removed from an item of equipment will not be used to repair another item of equipment because the transfer of parts would constitute cannibalization.

(6) Scrounge (SC) Advice Code. Usage of repair parts received from other than the normal sources of supply (other than PEB) will be reported via a "4" transaction with advice code SC.

m. EROSL Annotation. When a maintenance shop receipts for repair parts at the organizational supply the following actions will be accomplished:

(1) The NSN on the part will be compared to the NSN on the applicable EROSL.

(2) Verify the existence and the serviceability of the repair part.

(3) The maintenance shop representative will annotate the appropriate parts trailer (on the left hand side) with the date, (quantity received, and his initials.

(a) When parts are transferred from the ERO Parts Bin to the mechanic/technician for application, the following actions will be accomplished:

1. The mechanic/technician will inventory all parts in the parts bin against the applicable EROSL.

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2. Verify the serviceability of the part.

3. The mechanic/technician will annotate the appropriate parts trailer (on the right hand side) with the date, quantity received, and his initials.

(b) An EROSL will be annotated to indicate the transfer of received parts from one ERO to another. Such transfer actions will be documented in MIMMS in accordance with the current edition of UM4790-5.

(c) Any part removed from an ERO bin must be substantiated by a maintenance action noted on the ERO. Repair parts held in ERO bins must be validated at least every two weeks. Validation procedures will be per appendix C of reference (a).

4. Tool Sets, Chests, and Kits

a. Accountability of tool sets, chests, and kits will be in accordance with Appendix D of reference (a). MMOs will ensure that control measures (e.g., Internal Inspection Program Arid Training) exercised over tool sets, chests, and kits.

(1) Shops will establish a method to account for issues and receipts of special/components tool kits and individual tools. For MSEs, this method will be established in a unit policy notice. For the Command Element, the log book will be used to account for issues and receipt for special/components tool kits and individual tools. The following examples are a few methods to account and receipt for tools:

- (a) Log book;
- (b) Stamped tags; and
- (c) Sign-out cards.

(2) As part of the inventory, supervisors should ensure that serviceability of tools is carefully reviewed. This will preclude maintenance actions halting due to broken/unusable tools.

(3) MMOs and Supply Officers need to be especially sensitive to requisitions for tools. Verification of changes to SLs, investigations into excessive missing/lost tools, and monitoring of expenditure of SL-3 moneys are just a few methods of ensuring resources are not wasted. Tool sets, chests, and kits that are issued to an individual are inventoried monthly. Organizational MMOs will establish the frequency required for tool inventories in a policy letter. Shop SNCOICs/Officers will sign the inventory as "Supervised By".

b. Maintenance. The inventory will include an inspection of all tools for serviceability and cleanliness ensuring the tools are free of rust and dirt. Tools that are unserviceable will be repaired.

c. Each set, chest, or kit will be assigned in writing to a Marine or signed out on an ECR card with a joint issue and turn-in inventory.

d. The SL-3 lists each tool and quantity for the set, chest, or kit.

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e. All tool requisitions will be made through the Supply section. All excess tools will be rolled back to the supply system via the Supply section.

f. All inventories will be held on hand for one year.

5. Introduction Of New Equipment

a. General. New equipment is continuously being introduced into the Marine Corps inventory. All new equipment will require some degree of operator training, maintenance personnel training, and required repair parts, publications, and support/test equipment.

b. Concept. Prior to releasing the equipment to the field, HQMC will publish an User Logistics Support Summary (ULSS) directing specific guidance with respect to allowances, requisitioning authority, required tools and equipment, initial logistics provisioning, and publications and training requirements.

c. The review of Letter of Adoption and Procurement (LAP)s/ULSSs and related correspondence comes under cognizance of the Assistant Chief of Staff, G-4/MMO.

d. Responsibilities

(1) Commanding officers of organizations receiving new items of equipment will:

(a) Ensure all new items of equipment received are maintained on Administrative Deadline (ADL) until operationally released for service by this Headquarters;

(b) Promptly report any deficiencies encountered with placing the equipment into service to this Headquarters (AC/S, G-4/MMO and appropriate Division commodity manager); and

(c) If the equipment is MARES reportable, ensure RM4 remark cards are entered reflecting equipment placed on ADL.

(2) Commanders will ensure that an acceptance check is performed. Unless a deficiency or a problem area is discovered no administrative action will be required. However, if a problem is discovered, it will be reported on a PQDR.

(3) Equipment that has not been placed in service may be used to meet urgent requirements or for the training of operator and maintenance personnel. Prior to using new items for training, units must: request approval from this Headquarters. When equipment is used, and it becomes deadlined or degraded, it will be reported in MIMMS with the appropriate category code.

(4) The MEU Commander will grant approval to place an item of equipment in service. Using organizations will request to place an item of equipment in service through the 15th MEU once all of the following actions have been completed:

(a) Adequate stock levels/allowances of initial support items are on hand;

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(b) Trained operators for the new item of equipment are available at the using unit level; and

(c) Trained technicians/mechanics for the new item of equipment are available at each appropriate echelon/level of maintenance.

6. Validation and Reconciliation

a. Validation. Validation is the process by which you confirm your supply requirements. It involves confirmation of requirements which are still needed, cancellations, receipts, scrounges, and current status. When confirming needed requirements, the customer must ensure the need still exists and the requisition is resident in the supply system.

b. Reconciliation. Reconciliation is the process by which an organization ensures that validated requirements are properly logged within the MIMMS/ATLASS output reports. As required personal responsibility is assigned to commanders, the organization MMO, Supply Officer, and commodity managers assisted by MIMMS/ATLASS clerks.

Chapter 4

Training and Inspections

1. General

a. Maintenance and maintenance management training is a command responsibility. Every organization has a responsibility to implement maintenance and maintenance management training commensurate with its level of authorized maintenance and maintenance management personnel.

b. Four areas of maintenance-related training require emphasis: operator training, technician training, maintenance supervisor training, and maintenance management functional area training. Operator and technician training requirements may be identified by a review of the appropriate T&R by OCCFLD.

c. Commanders will ensure all technicians are proficient and able to perform all authorized maintenance services under tactical conditions.

2. Training Requirements

a. Maintenance training programs will be contained in the organization's published training plans/schedules. Additionally, records for this training must be maintained for two years. The organization MMO will include maintenance and maintenance management training requirements in the long range training plan of the organization. Maintenance/maintenance management training may be accomplished by formal schools, on-the-job training (OJT), or class room instruction at the organizational level.

(1) Maintenance management training will be conducted for maintenance management personnel, commodity managers, and selected supply/logistics personnel.

(2) MIMMS AIS training will be conducted periodically by the MMO/commodity manager for all maintenance management personnel. In addition to the training provided, organizations will develop a continuous program for training of all personnel involved with MIMMS input, equipment maintenance status, and other related automated logistical management reports.

(3) MOS training will be conducted under the supervision of the organization MMO or appropriate commodity manager who are responsible for developing maintenance training programs within their commodity to include performance objectives. Training of maintenance personnel will include, but not be limited to:

(a) Mechanics and technicians will be provided the level and degree of instructions to enable them to perform maintenance duties commensurate with their rank and MOS.

(b) Unskilled mechanics and technicians will be placed on a planned schedule of directed training.

(c) Maintenance supervisory training will be provided to all personnel, SSgt and above, involved in the maintenance effort. This training requirement must provide the expertise required to effectively and economically operate the organization's maintenance program, and to achieve the desired end results. Organization MMOs are the focal point for providing

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this training. Sgts who are filling a SNCO line number or are considered a "Chief" in their section or in a maintenance activity will be considered supervisors for this purpose.

3. Formal Schools

a. The S-3 will exercise staff cognizance over quotas including nominations for all Marine Corps formal schools. Requests for quotas for formal school training will be submitted to this Headquarters (S-3/TRNG) for consideration as quotas become available.

b. Service schools will be used to the fullest extent possible. In addition, targeted training can be requested on an "as required" basis.

c. Quotas and prerequisites for all school training will be published by this Headquarters (S-3/TRNG).

4. Field Training

a. Commanders will ensure that maintenance personnel are provided maintenance training in a field environment and are technically proficient in the performance of all authorized maintenance services under tactical conditions. Commanders will also ensure that necessary maintenance periods are specifically designated on training schedules while operating under field conditions.

b. The performance of organizational maintenance is more challenging during deployments and/or field operations due to increased equipment usage and dispersion of equipment. During such periods, commanders must place an increased emphasis on the performance of organizational (1st and 2d echelon) maintenance. Field maintenance training exercises will include equipment recovery, evacuation, and the use of field maintenance expedient exercises. Also, this provides maximum training for maintenance personnel to perform unit maintenance functions in simulated combat conditions. Maintenance is not deferred until the war is over.

5. On the Job Training (OJT)

a. OJT may be used as a program to enhance MOS proficiency or as required training as identified in applicable ITS orders and T&R Manuals. Personnel undergoing OJT must be teamed with experienced and qualified personnel to ensure that only proper methods and procedures are highlighted to trainees. OJT will be scheduled, documented, and recorded in training records. This type of training is often done on an opportune basis, particularly when a new or unfamiliar method, problem, or procedure is encountered during normal maintenance production. Another example is the use of "Motor Stables" which is a demonstration/application class and should be documented as such. When applied properly, OJT can be used to effectively accomplish MOS training, maintenance cross training, and new equipment training. Supervision and instruction of OJT must stress the application of approved maintenance procedures and techniques to instill sound maintenance principals and habits in personnel being trained. Personnel undergoing OJT will be tested at least annually to determine their progress. Results of the testing will be documented.

b. Maintenance training is available from the IMA; training support from IMAs will be dependent on commitments.

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c. The Marine Corps Institute (MCI), the Department of the Army, as well as other services offer a wide range of maintenance-related correspondence courses. Commodity managers are strongly encouraged to coordinate with MMOs and S-3s to determine the content and availability of such courses for unit maintenance personnel. Maintenance Management Officers will pay close attention to the series maintenance-related courses developed and offered by MCI. Group enrollment is strongly encouraged for those MCI courses related to the maintenance management functional areas.

6. Technical Training

a. Specific technical training classes will be scheduled and conducted when new equipment is introduced, when new maintenance personnel are introduced to unit equipment, and as required by the appropriate T&R.

b. Periodic testing of technician knowledge will be conducted upon completion of technical training using ITSSs and T&R manuals as a guide, and refresher training will be conducted for noted deficiencies. Moreover, specific classes will be scheduled and conducted regarding title use and maintenance of all support and test equipment, use and care of tools, etc.

c. All commodity sections will ensure personnel are adequately trained in the proper use and care of tools and equipment (TMDE) within their respective commodities.

7. Cross Training

a. While the cross training of maintenance personnel is not directed by this or higher headquarters, it is encouraged as a management tool to be used at the organizational level to assist in the overall maintenance effort.

b. Additionally, cross training provides the shop/maintenance officer increased flexibility in maintenance operations.

c. When cross training is used, commodity managers and/or MMOs will ensure that:

(1) Cross training is normally confined to personnel within the logistics and services community and/or related occupational fields;

(2) Cross training of personnel from different occupational fields is being accomplished only to fill valid requirements;

(3) Cross trained personnel are used effectively within the organizational maintenance program; and

(4) Maintenance shops keep a record of all personnel who have been cross-trained.

8. Training Documentation

a. Training records provide the manager with the means to record training that has been accomplished. The training program may suffer from an inadvertent omission of necessary training.

b. The following training records will be kept by MMOs/commodity officers for training which falls under their purview.

(1) Long range training plans are published annually and contain information on training planned for the calendar year. The MMO will publish a Commander's Policy Statement on Maintenance Management Training for inclusion into the Annual Training Plan. Commanders will provide their intent and minimum maintenance and maintenance management training to be performed during the next year in this statement. (At a minimum, 12 hours per quarter will be conducted).

(2) The quarterly training directive identifies specifically what classes will be conducted during the quarter. Some classes during future quarters will be based on formal internal inspections and will be announced during the quarter prior. The MMO will ensure to maximum extent possible that all classes being taught are of the most current and valid information possible on the subject.

(3) Periodic (quarterly at a minimum) evaluation of maintenance training will be conducted. This evaluation will be accomplished by the MMO and respective maintenance/commodity officers. Records of such evaluations will be maintained by the sponsor of this training. It is suggested that these evaluation results be provided to the owning Marine commodity in as formal a policy letter as possible, but it is not required if the optempo does not allow it.

(4) The MMO will maintain a current file of lesson plans for maintenance management training. Commodity/maintenance officers will maintain a file of current lesson plans pertaining to their respective section as well.

(5) Attendance rosters will be completed for each period of instruction given. It is a good idea and suggested that the instructor also provide at least two critique sheets to be completed for each period of instruction given but these are not required. These records will be maintained for one year.

(6) The use of formal school lesson plans and power-points is encouraged but not required. From E-180 through R+30, the optempo of the MEU can have a tendency to get out of control. It is imperative that training be conducted when the opportunity is presented, even if that means in "hip pocket" style. Therefore training materials are not restricted to the use of formal school material, but MMOs will ensure that the material they are using is accurate and per the appropriate orders and directives and the instructor will do everything they can to ensure the training is recorded. If the specific training plan cannot be recorded, they should make a note/memo of such on the roster or in formal letter depending on the optempo.

9. Inspection Policy

a. Equipment and maintenance management inspections are instruments by which a commander may ascertain equipment serviceability and whether effective maintenance procedures and a sound maintenance management program are in place. Inspections will be constructive and critical. This will maximize the training benefit of the inspection. The inspection will be objective and based on realistic and measurable inspection standards. Judgments must be objective.

(1) Maintenance inspections are conducted at all levels by commanders and staffs. Such inspections may be conducted utilizing various methods for

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a variety of reasons. The type of inspection used should be determined by the inspection objective desired.

(2) There are two basic types of inspections: formal inspections and informal visits. The names are descriptive of the atmosphere in which the inspections are conducted and not necessarily of the content of the inspection itself.

b. The frequency and scope of internal inspections conducted by organization/unit commanders and their staffs will be determined by those individuals based on the perceived condition of the organization/unit and mission requirements. The frequency and scope of internal inspections/visits conducted by this Headquarters can be scheduled with formal letters and/or formal emails/calendar events with attachments. Results of those inspections will also be published via formal letters and/or emails with attachments.

c. Commanders will ensure quality control is established and followed in accordance with reference (a).

10. Formal Inspections

a. Formal inspections are those conducted by the FSMAO team and the Commanding General, I MEF. Formal inspections are usually announced in advance. This Headquarters will coordinate, schedule, and/or conduct all formal inspections of division organizations. Formal inspections will require the inspected unit to make available all required personnel and equipment. All aspects of the unit are subject to inspection during the inspection period.

b. The Marine Corps Manual requires commanders to conduct inspections of their organizations to ensure combat readiness. The 15th MEU MMO provides MMOs with current copies of the checklists. These checklists are recommended for use in internal inspections.

c. Organization commander's inspections may be classified as formal inspections depending on the inspection objectives, the areas inspected and inspection procedures. When the formal technique is utilized to inspect technical areas, commanders must ensure the following:

(1) That checklists utilized are accurate and current for each functional area inspected;

(2) That follow-up corrective action is taken to correct discrepancies;

(3) That all functional/technical areas are covered; and

(4) That all discrepancies are recorded and reported appropriately.

d. Each organization will conduct an internal maintenance management inspection semiannually. Results will be documented and retained on file for a one-year period. A report of the results of these inspections will be forwarded via the chain of command to the Commanding Officer. The MMO will require corrective action reports be submitted by the inspected commodity/section head, and conduct follow-up inspections to ensure such action has been taken/initiated.

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11. Informal Inspections

a. Informal inspections are used to obtain first hand information about an organization and its operating procedures. Visits may be conducted in a formal manner, in which, case they take on the aspects of a formal inspection; or they may be conducted in an informal manner, which stresses the exchange of information and ideas. The feature which distinguishes a visit from an inspection is the absence of a senior commander or officer designated as an inspector.

b. The most common type of visit is the staff assistance visit (SAV), where by one or more staff sections/commodities of a senior headquarters visit a subordinate organization for a specific purpose. Staff assistance visits are performed between scheduled inspections to investigate troublesome areas and to exchange information with the opportunity for immediate feedback. The unit commander should always be notified of the visit beforehand, with entry and exit briefings provided if so desired.

c. Visits for the exchange of information, familiarization, and coordination are frequently necessary and are beneficial between units without a senior/subordinate relationship, although they may have a common superior. Visits between maintenance managers of units operating adjacent to each other and between supported units and their support maintenance activity are encouraged. Organizations may request an informal visit through this command (S-4/MMO).

12. Field Supply Maintenance Analysis Office (FSMAO) Analysis Visits

a. FSMAO visits are established to provide the CMC with direct field representation at the organization level by analyzing the effectiveness of supply and maintenance management procedures. The purposes of FSMAO are to:

- (1) Analyze the effectiveness of supply and maintenance procedures.
- (2) Determine the efficiency of the organization being analyzed.
- (3) Furnish assistance and guidance in supply and maintenance operations and procedures.

b. Analysis visits are announced approximately 30 days in advance by letter from FSMAO to the unit concerned. Analysis are scheduled and conducted in two separate functions: supply and maintenance management. Analysis visits are normally one week in duration for infantry and artillery organizations, and two weeks or longer for equipment intensive organizations.

c. Reference (i) provides detailed information/requirements concerning FSMAO analysis visits.

13. Formal Inspection Reports

a. Inspecting parties from this Headquarters will provide oral critiques to commanders covering all findings noted during formal inspections. Such critiques will be detailed in nature, provide for immediate resolution of findings, and should provide an overall grade rating.

b. Inspection reports will be prepared by all maintenance management and commodity area inspectors for all formal inspections conducted by this Headquarters. In addition to completed checklists, formal inspection reports

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will include comments and recommended corrective actions for noted discrepancies. Formal inspection reports will not cite discrepancies which have not been briefed during post-inspection oral critiques.

c. Formal inspection reports prepared by this and higher headquarters will be reviewed by the AC/S, Readiness and consolidated, analyzed, and maintained by cognizant Division staff officers.

d. Inspection reports prepared by this and higher headquarters as well as FSMAO reports with endorsements will be maintained for a minimum of two years.

14. Correction of Discrepancies. All discrepancies noted during inspections will be corrected in an expeditious manner. Preparation for future inspections will include special emphasis of previously noted discrepancies to ensure they are not repeated. Reports of action taken/planned to correct noted discrepancies will be submitted to this Headquarters via, S-4/MMO based upon requirements contained in related inspection reports not later than 30 days after conclusion of the inspection.

15. Quality Control and Quality Assurance

a. The objective of each quality control and assurance program is to maximize equipment readiness through increased equipment efficiency command reliability by ensuring that proper and effective maintenance is performed on all equipment undergoing repair or servicing. This program further seeks to detect improper procedures utilized in repair, to determine and properly report deficiencies detected, whether they are isolated in personal performance, training support equipment, or in equipment design. MMOs and commodity managers are responsible to their commanders for implementing positive control procedures required to ensure all equipment is repaired according to direct specifications and that personnel are properly supervised in the accomplishment of all equipment maintenance activities associated with equipment repair and servicing. These procedures are an integral part of maintenance production/shop operation procedures and are outlined in reference (a).

b. Quality Control Inspector. Each commodity will assign at a minimum, a primary and an alternate Quality Control Inspector. Such assignment will be made in writing.

c. Quality Control Procedures

(1) Initial Receipt of Equipment

(a) Upon receipt of an item into the organizational maintenance facility, the item will be inspected to determine repair and/or modifications required. This initial inspection must be conducted with the intent/desire to identify all equipment defects, above and beyond the defect(s) which caused the equipment to be introduced into the maintenance cycle. Required modifications will be noted on the ERO and action initiated to accomplish the modification, if authorized at the unit level, or to evacuate the equipment for modifications to be performed at a higher echelon.

(b) The item will then be sent to the appropriate section where it will be inspected by the supervisor who will determine the degree and nature of the repairs and the parts required. This will be determined

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without regard as to what is specified in the ERO. Any additional repairs or parts requirements will be added to the ERO and the shop office control section will be notified. This will ascertain the repair costs as well as the quality of maintenance procedures. Where fault isolation is required, the inspector will conduct the isolation/troubleshooting process, using applicable TMs, and will annotate the ERO with appropriate maintenance tasks.

(2) Repairs in Progress

(a) Constant and detailed supervision of maintenance performance is essential to any quality control program. Experienced personnel must be assigned to supervise and work with inexperienced personnel at every level.

(b) Work in progress will be inspected at appropriate stages to ensure completeness, accuracy of assembly, and installation of each component. Items considered borderline should be replaced while the equipment is being repaired or disassembled.

(c) Appropriate support and test equipment will be used to the fullest extent during all maintenance phases. After final assembly, equipment will be tested to determine proper functioning. This should include road testing and performance testing whenever possible.

(d) Inspection conducted by an inspection section does not relieve the particular maintenance section supervisor of the responsibility for supervision and inspection to ensure quality work performance at the using shop level.

(3) Repair Completion. When the repair section has determined that the equipment repair is completed, the item will be processed through a final inspection phase. The inspector will perform a detailed inspection to include visual and operational checks to the degree necessary to assure that no additional repairs are required. If the work performance is unsatisfactory or marginal, the shop officer will be allotted and appropriate action taken to determine the nature and cause of the deficiency. Prompt and thorough action to fix the cause and/or responsibility for the discrepancy will be taken and appropriate corrective measures initiated to prevent the recurrence of the discrepancy. The final phase of the quality control inspection will be a review of associated equipment records to ensure that they are correct. The review of equipment records will include a verification of commodity modification control records as they apply to that particular end item or component, and the equipment record jacket. When the equipment and its associated records have passed the quality control inspection, the inspector will complete the "9 card portion" of the ERO and sign it in the "inspected by" block.

d. Quality Assurance. Quality assurance is a planned system of actions, beginning with the manufacturers, with the objective providing confidence that item of equipment will meet or surpass all specifications of its intended role by providing feedback from the user to the procurement agency with respect to design, function, and performance.

e. PQDRs

(1) Maintenance shops are strongly encouraged to submit PQDRs (Standard Form 368) per reference (h). PQDRs are used to provide information

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to Department of Defense activities concerning deficiencies in materiel, design, or procurement so that corrective action may be initiated.

(2) A PQDR will be initiated by the individual who discovers the deficiency, with the advice and assistance of the cognizant commodity officer/chief. MMOs will establish a PQDR log book.

(a) Establish a control number log and issue control numbers upon demand per reference (c).

(b) Review all organizational PQDRs prior to submission to ensure correctness of required information, as specified by reference (h).

(c) Maintain a file of all PQDRs submitted. This file will contain the following:

1. Copy of the PQDR;
2. MCLB Albany Notification;
3. Photographs;
4. Summary Reports;
5. Investigation;
6. Defense Logistics Agency Letters; and
7. Final reports from MCLB Albany.

(3) Review the status pending PQDRs and report current status to appropriate originating point within the organization.

(4) Forward a copy of all organizational PQDRs submitted to the MEU MMO and appropriate Division commodity managers.

(5) Ensure copies of PQDRs are maintained either in the initiating commodity or in the MMO office for one year.

(6) A PQDR shall be submitted when a deficiency in materiel meets the criteria set forth in reference (h) and reference (c).

f. Maintenance Float

(1) Reconciliation of pending supply documents with the supporting unit supply and the Maintenance Float Issue Point.

(2) Reconciliation of the LM2 Unit Readiness Report, the MAL, and the current reference (b).

(3) Prompt evacuation of equipment requiring repairs.

(4) Coordination with Maintenance Information Systems Coordination Office (MISCO) to ensure timely and accurate MIMMS LOI for deployment.

Chapter 5

Publications and Directives

1. Responsibilities. The responsibility for an effective maintenance and maintenance management effort, to include a technical publications control system, rests with the commander. The overall operation of an organization's publications control system is the responsibility of the S-1 Adjutant with the advice and assistance of the MMO. The S-1/Adjutant, in close coordination with the MMO, will be responsible for publications control within their command/organization/unit. Internal distribution control will be accomplished by section OICs/commodity managers, monitored and assisted by the MMO.

2. Publications Control System. Publications control system responsibilities are divided into four functional areas: allowance control, internal distribution control, inventory control, and requisition control. Appendix B of reference (a) contains specific responsibilities pertaining to these functional areas.

a. Allowance Control. Each activity receiving direct distribution of publications issued at the direction of the publications sponsor shall manage a control system which will facilitate internal distribution and retrieval of the publications it maintains. The control system shall be maintained by the Adjutant/S-1 section/administrative section and is comprised of:

- (1) A locally automated system;
- (2) NAVMC 2761, Catalog of Publications; and
- (3) Comprehensively annotated publications list (PL) that shows locations and quantities of those publications being managed.

b. Internal Distribution Control. The key document in the internal distribution control system is the Internal Distribution List (IDL). An IDL is a list from each commodity/section containing the following information for each of their publications: publication control number, short title, quantity required/authorized, and quantity on hand. Commodity managers/section heads must be aware of internal distribution control procedures in order to properly manage on-hand publications and recommend changes to the IDL. The most important feature of the IDL is the Req/Auth column for each line entry. The quantity shown in this column must match the corresponding quantity found on the PL. A mismatch causes confusion regarding exactly how many copies of certain publications are inbound and to whom they belong. Often an organization will diligently conduct a PL review and have changes made without ensuring that commodity/section IDLs are concurrently updated. A simple comparison of the IDL with the PL will quickly pinpoint problem areas.

c. Inventory and Requisition Control. The number of publication libraries, including those needed to meet contingency/deployment requirements, and the number of copies of each publication per library, will be determined by the organizational unit taking into account several factors:

- (1) The activity's concept of employment contained in the TLA cover page;

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- (2) The activity's contingency plans and periodic deployments; and
- (3) The activity's shop locations. Are shops spread out over several buildings or are they centralized? Factors to be considered in determining the number of copies of each publication in each library are:
 - (a) The type and quantity of equipment in the library;
 - (b) The number of maintenance/operator teams that may simultaneously require a given publication; and
 - (4) The location where the publication will be used (i.e., in a clean shop or outside, around oil and grease where it will last only a short time?).

3. Publication Control Forms. Each section/commodity with an organization/unit will maintain publication control forms for their publications. The publication control form is required for each library to identify, account for, and locate publications. Forms produced by PLMS or some other local procedures or database, may be used for this purpose, provided they contain all the documents contained in reference (a). Checking out publications for use must be strictly monitored to maintain positive control. The following methods are recommended:

a. Extended Periods of Time. When a publication is removed from its file location for an extended period of time (duration will be determined by the commodity/section manager), a locator sheet will be put in its place to indicate the current location of the publication.

b. Short Periods of Time. When a publication is removed from its file location for a shorter period than specified above, a logbook will be used.

c. General Inventory Control. General inventory should be conducted by commodities at least quarterly to ensure that their publications are staying up to date and serviceable. When they do note changes and serviceability issues with technical publications, the MMO should be notified immediately.

d. Changes to Publications. Publication changes are issued either by Naval Message or published document. Changes range from simple pen changes to page replacements. When a change to a publication is received, take the following action:

- (1) Complete the change in the basic publication as directed, ensuring pen changes are complete and legible and old pages are removed and destroyed;

- (2) Annotate the cover page of the publication with "W/Ch XX" immediately following the publication short title;

- (3) Record the changes on The "Record of Changes" page in the basic publication; and

- (4) Update the Pub control card, IDL and PL as applicable.

e. Excess Publications. Excess publications returned to stock list will be published in the SL 1-3 and must be in "issue ready" condition, without changes inserted by means, other than the original printing process. Excess

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publications should be returned for re-issue to the publications stock point, MCLB, Albany if:

- (1) There are significant quantities (10 or more copies);
- (2) They are serviceable binders; and
- (3) They have a total value of \$50 or more.

4. Recommendations. Recommended changes/corrections to publications and Logistics Maintenance Data Codes (SMR Codes) will be submitted to Marine Corps Logistics Base, Albany GA on NAVMC 10772 (Recommended Changes to Publications/Logistics Maintenance Data Coding). The use of NAVMC 10772 by all maintenance/operator personnel is strongly encouraged. Maintenance Management Officers and appropriate commodity/staff officers will maintain copies of all NAVMC 10772s submitted by subordinates. This information may now also be submitted via local area network (LAN) directly to Albany by organizational MMOs.

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Chapter 6

Command Relationships

1. General. Maintenance management for units in a deploying MAGTF is often confusing. Higher headquarters' orders are written for garrison units and the automated information systems' programs are not designed with the flexibility needed by deploying units. This chapter will delineate maintenance and supply responsibilities and procedures that the MEU CE, GCE, ACE, and LCE will use in their maintenance effort.

a. Terms

(1) MSE. An MSE is defined as a Battalion Landing Team, CLB, or Squadron (Rein), identified by a Reporting Unit Code (RUC) and deployed in its entirety. A Battalion Landing Team (BLT) is an infantry battalion with attachments from 1stMarDiv and is the GCE of the MAGTF. The BLT uses the infantry battalion's RUC. CLB is sourced from MLG to be the LCE of the MAGTF but, unlike the BLT, a CLB is stood up permanently. The Aviation Combat Element (ACE) is a composite squadron of fixed and rotary wing aircraft assembled around a CH-46 squadron.

(2) Parent Unit/Command. A non-deploying command from which MEU forces are sourced. For a unit that is assigned to the MEU as a detachment smaller than a battalion/squadron, the parent unit is the battalion/squadron from which that unit/det was sourced. For battalion/squadron sized units that are assigned to the MEU (Infantry battalion/HMM squadron), the parent units are the Infantry Regiment/Air Group from which they were sourced. The parent unit for the CLB is the MLG.

(3) Attachment. An attachment is part of a unit/command that falls under the operational and administrative command of a deploying unit (i.e. AAV Plt, LAR Co, Tank Plt). They require a deployed ERO matrix distinguishable from its parent unit for reporting purposes. The matrix is assigned by the deploying unit (MSE) to which attached.

(4) ERO Matrix. Series of ERO numbers that are set aside for specific units in order to properly record and track maintenance of equipment.

(5) Intermediate Maintenance Activity. Units within the MLG that provide third or fourth echelon maintenance for non-organic equipment. Ordnance Maintenance Company is an example of an IMA. When chopped and deployed, CLB-15 is the IMA for the entire MEU.

(6) Limited Technical Inspections (LTI). Equipment inspections which do not necessarily require the full examination of each technical facet of the equipment but have as their purpose a specific lesser objective.

(7) Maintenance Stand-down. Period of time during which the focus of a unit and all its personnel are geared towards maintenance of equipment, to include PMCS, LTIs, CM, and corrosion control.

(8) "Fill or Kill". Term used to describe the supply function of filling a supply request or canceling the request based on stockage instead

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of putting the request on back order. This is used to shorten the "tail" of supply support for a redeploying unit.

(9) Equipment Density List (EDL). Lists that include every item of equipment the unit will take on the deployment. This list is used by the MEU MMO, and the CLB maintenance and supply officers. The CLB uses the list to help generate the Class IX repair parts block and the secondary repairable block. The MEU MMO and MEF G-4/MMO use the EDL for general accountability.

(10) Pre-Expended Bin (PEB). Collection of repair parts that are stored at the using unit level and authorized in writing by the Commanding Officer. It is used to eliminate the Order/Ship Time (OST) of high usage, inexpensive repair parts by keeping them on hand. Usage is tracked to determine reorder points and justify continued stockage.

2. Relationships Between MEU and MSEs

a. Roles

(1) MEU Command Element (CE)

(a) The CE of the MEU extends and compliments, rather than duplicates, the staff capabilities of subordinate elements. As a consequence, subordinate commanders may direct their attention primarily to the command of their respective units. Within the MEU, principal reliance is placed on direct liaison among the MSEs to achieve the necessary coordination of air and ground operations. Staff services to the commander are oriented principally toward matters which affect the entire force and those involving higher, adjacent, and supported commands.

(b) The MEU S-4 acts as the primary coordinator for all maintenance and supply issues with units external to the MEU. The MEU S-4 also provides central coordination and mediation between MSEs for all maintenance and supply issues internal to the MEU.

(2) GCE, ACE and LCE. The S-4 section for each MSE provides all coordination and support internal to that unit, including their attachments. Once deployed, the MSE S-4s will not initiate coordination external to the MEU. Certain DIRLAUTH between MSEs is authorized, encouraged, and even necessary for efficient operations and maintenance. However, MSE S-4s will keep the MEU S-4 informed and will not set policy outside their MSE and will not deviate from published MEU policy.

b. Parent Command

(1) Pre-Deployment. Parent Command support is vital during the Pre-Deployment phase in order to ensure that the equipment being transferred to the MEU MSEs is in mission capable condition before E-180. Proper coordination is essential so that, as equipment is command adjusted to the MSE's, the units' CMRs and LM2s are updated in accordance with reference (j).

(2) Post-Deployment. The MEU will ensure that post-deployment LTIs are conducted on all equipment (as feasible with embark space limitations) beginning approximately R-45 to identify maintenance discrepancies prior to redeployment. Parent units will be prepared to accept equipment back from the MEU MSEs on R+30. Funding for maintenance repairs will be funded by the 15th MEU prior to returning equipment to parent units. All CMRs and LM2s

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will be updated as in paragraph 2.a above. MSCs will receive funding for discrepancies identified during the post-deployment JLTIs conducted by parent unit, the MEU, and the MEF. Any LTIs conducted after R+30 will have to be approved by the MEU CE and the MEF in order to receive funding for discrepancies identified.

3. Responsibilities

a. Repair Parts. Each MMO (in coordination with the Embark Officer) is responsible to ensure that each TAMCN their unit is bringing is listed on the EDL. Each MMO shall ensure that his attachment OICs screen CLB Supply's Class IX and SECREP block for completeness. Each MMO will also ensure that PEBs are developed and used for maintenance support for the MEU. MSEs will utilize the local SMU as the source of supply up until final embarkation. This will allow the CLB to build and embark its supply block. Upon deployment, the CLB will be the first source of supply for 1st through 4th echelon supply and maintenance support until redeployment.

b. Corrosion Control. Corrosion control must be a constant and supervised effort once the MEU is deployed. It is imperative that corrosion control training be held for all operators of equipment prior to deployment. The MMO is responsible for coordinating that training within his unit. The MMO is responsible for ensuring that corrosion control PEBs are developed and filled. All MSEs will deploy with a 60 day supply of corrosion control supplies to include compounds, brushes, pads, etc. Pre- and post-deployment scheduling and use of the MEF CARC program shall be done through the 15th MEU CE MMO. Special attention must be paid to any equipment that stays in well decks, and any equipment that is moved ashore by LCACs/LCUs. While deployed, corrosion control inspections must be held weekly by designated Corrosion Control SNCOIC/Managers of each MSE, with the results forwarded to the MEU MMO weekly.

c. Fiscal Responsibility. The 15th MEU CE funds all MSEs between E-180 and R+30. When a repair parts requirement cannot be filled by the LCE's Class IX block, the requisition is passed to the SMU using the MSE's document number and MEU funding as available. From approximately R-45 until R+30 the MEU will provide funding, as available, for dead-lining repair parts identified during post-deployment LTIs. MSE's must stay within their budgets as published by the MEU Supply Officer.

d. Pre-Deployment Training. MMOs are responsible for conducting training with their MIMMS personnel, mechanics, technicians, and operators per reference (a) before and during chop to the MEU. Those personnel are also expected to be proficient in the use of radios, current spreadsheets, and word processing software, and Naval messaging software.

e. Reports. During pre-deployment and deployment, the intent is for the MSEs to pull their Class I reports through their own 3270 access. If connectivity or other problems are encountered, the 15th MEU MMO will be notified for resolution through higher headquarters or MISCO.

f. Maintenance Stand-down. Maintenance stand downs will occur as directed by the MEU training plan. A pre-deployment stand down will make sure that all the MEU equipment is in the best condition possible and that corrosion prevention has been performed. There is no reason for the MEU to deploy with equipment that is not fully functioning. A post deployment stand down (during final transit) will serve to identify and put on order as many

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repair parts as possible and to repair as much equipment as possible before the equipment is returned to its parent command. While deployed, stand downs will be scheduled as required/possible, specifically after exercises and in conjunction with the final agricultural wash down.

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Chapter 7

Ground Corrosion Prevention and Control Program

1. Purpose. To publish information and procedures concerning the 15th MEU's Ground Corrosion Prevention and Control program (GCPAC).

2. Background. Critical to maintaining combat readiness within the MEU is the maintenance of its equipment. Corrosion control is a continuous challenge for MEUs, particularly as it relates to equipment deployed aboard amphibious shipping. In an effort to combat this problem, the MEU will implement a GCPAC program during deployments.

3. Objective. The objective of the MEU's GCPAC program is to raise awareness, clearly assign responsibility, and publish procedures for combating the degrading effects of corrosion on MEU equipment. Quality corrosion control can be accomplished by:

a. Training/educating first echelon (operator) and second echelon (maintenance) personnel on corrosion control procedures utilized for inspecting, cleaning, painting, lubricating and preserving equipment.

b. Ensuring that assigned equipment operators and maintenance personnel are thoroughly familiar with the operational characteristics and maintenance procedures associated with their specific equipment.

c. Ensuring that commanders/OICs are held strictly accountable for the state of their equipment with regard to corrosion.

4. Responsibilities. MSE commanders and CE section/det OICs are responsible for the following:

a. Ensuring that the GCPAC program is implemented and properly supervised within their unit.

b. Ensuring appropriate GCPAC materials and consumables are budgeted for, purchased, HAZMAT certified as necessary, and embarked for deployment.

c. Assigning, in writing, GCPAC Managers. These designated personnel will be at least SNCOs and will be assigned the following duties:

(1) Instruct and supervise equipment operators and maintenance personnel on how to inspect, prepare, and preserve equipment per their respective equipment TMs.

(2) Submit Weekly Corrosion Control Report through respective MMO to the MEU S-4/MMO (along with the Situation Report (Sitrep)).

(3) Schedule inspections as needed to ensure all equipment is inspected at least once monthly.

(4) Report all corrosion problems through the appropriate MMO to the MEU MMO. Also, provide pertinent comments and recommendations for improving the GCPAC program to the MEU MMO.

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(5) Ensure that a qualified SNCO is trained to assume the responsibility as GCPAC Manager prior to the departure of the existing GCPAC Manager.

5. Procedures

a. Inspection. Thorough inspection of vehicles and equipment is the first step in the CPAC process.

b. Cleaning. Removing rust, oxidation, dirt, salt, and other contaminants from the surface of metal is the second step in corrosion prevention and control.

c. Preservation. Preservation of the clean, corrosion-free surfaces is the third and final step of the CPAC process.

6. Record Procedures. GCPAC inspections/actions will be performed on a quarterly scheduled basis. All corrosion control actions will be recorded on the 15th MEU Quarterly Corrosion Control Report and forwarded to the MEU S-4.

7. Action

a. MSE Commanders and CE section/det OICs will ensure implementation of the GCPAC Program.

b. Corrosion Control SNCOIC/Manager will complete the assigned responsibilities listed in paragraph 4c of chapter 7.

c. MEU MMO will provide assistance to MSE's and sections/dets by:

(1) Coordinating non-organic supply support as necessary.

(2) Coordinating with external agencies for conducting CPAC during in port periods, agricultural wash downs, etc.

d. MSE MMOs

(1) Conduct a Quarterly reconciliation with respective unit/attachment GCPAC Managers to ensure timely, accurate submission of the Quarterly Corrosion Control Report.

(2) Assist attachments with all GCPAC issues.

(3) Ensure all corrosion control deficiencies requiring corrective maintenance are documented and that the documentation is filed with the corresponding ERO when closed.

(4) Report all corrosion control problems to the MEU MMO.

(5) Coordinate with respective ship's Team Embarkation Officer (TEO) before handling or applying any hazardous materials to equipment aboard ship. Also, coordinate with the TEO for any vehicle movement required to effectively conduct GCPAC.

(6) E-270 MSE's will induct their own equipment into the GCPAC.

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(7) MSE's chop to the MEU at E-180 with all GCPAC done and any required modifications are completed. These items will be inspected during the In-chop Joint Limited Technical Inspections (JLTI).

(8) E-180 through E-day monthly inspections will be conducted on all equipment.

(9) E-day through R-day weekly inspections will be conducted during motor stables aboard ship and vehicle start ups will be conducted twice a week.

(10) R+30 days post deployment responsibilities will be conducted.

Chapter 8

Deployed Maintenance Procedures

1. General. Due to supply support limitations, lack of maintenance space, and a corrosive environment, maintaining an aggressive maintenance program while in a deployed status can be very challenging. This chapter will provide guidance and delineate responsibility in order to ensure the MEU maintains the highest possible equipment readiness status while deployed.

2. Pre- and Post-Deployment Inspections

a. Pre-Deployment Inspections. Pre-deployment inspections are conducted in order to ensure that all equipment slated for the MEU is fully mission capable, SL-3 complete, and in satisfactory condition. Prior to E-180, parent commands are responsible for conducting inspections on all equipment assigned to units/dets being attached to the MEU. To this end, parent commands will repair or replace dead-lined equipment with mission capable equipment. Understanding that this is not always possible due to low density items, MSE MMOs must ensure that all required CM is initiated with the support of parent command funding.

b. Post-Deployment Inspections. Post-deployment inspections are conducted by parent units in order to ensure that all maintenance discrepancies are identified on equipment prior to being returned to its parent command. The MEU will make every effort, within fiscal constraints, to fund dead-lining repair parts identified on the post-deployment inspections. JLTIs are conducted between the MEU, the parent command, and the MEF. All discrepancies are identified at that time and repair parts and SL-3 is put on order at that time using MEU funding. Anything outside of the MEU's capability to fund is forwarded to the MEF comptroller in order to receive the remainder of the required funding.

3. Reports

a. Class I Reports. Maintenance update data will be transmitted and received to and from the I MEF MISCO via E-mail. All Class I reports normally received in garrison may be accessed via 3270 or through the 1st MLG website. The MEU MMO will serve as the coordinator for all maintenance management couriers and will develop and publish an LOI for their use and transmittal prior to deployment. Deployed MIMMS training will be scheduled for all MMOs/MMCs with MISCO personnel between E-60 and E-30.

b. Equipment Density List (EDL).

(1) Per reference (f), all MSEs are tasked with providing an EDL for deployment to I MEF G-4 and the MEU CE at E-180. This is used to:

(a) Determine Authorized and On-hand quantities for accurate Sitrep reporting.

(b) Enable the MSE supply section to begin building the Class IX/SECREP parts block.

(c) General accountability of equipment, specifically serialized equipment.

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(2) Because every piece of equipment initially transferred to the MEU at E-180 may not be embarked for deployment, each MSE MMO will reconcile their EDL and provide the MEU MMO with an updated EDL no later than E+3. This final EDL will list all ground equipment actually embarked on ship for deployment by the respective MSE. Equipment not embarked will be deleted from the EDL and the Sitrep's "on-hand" quantities.

c. Weekly Situation Report. From E-180 to R+30, the MSE MMOs will provide the MEU S-3 with all required equipment readiness information for inclusion into the MEU Weekly Sitrep. MSEs will submit their readiness information to the MEU S-3 beginning at E-180. Details on submission procedures and required information will be published SEPCOR.

(1) MEU S-4 will brief the MEU commander on readiness daily at the operations intel brief. No later than 1600 daily updates will be turned in to the MEU Maintenance Management Office.

4. Reconciliation Procedures. The MEU MMO will hold a weekly maintenance reconciliation meeting (LM2 Meeting) with the MSE MMOs/MMCs, Supply Officers, and MSE maintenance representatives in order to verify the current status of all equipment and identify any problems being encountered with maintenance or supply support. MEU MMO will schedule these weekly meetings to correspond to the Sitrep submission deadline.

5. Vehicle Startup Program. In order to maintain vehicles in their highest state of combat readiness and to identify problems early, it is imperative that they are started and allowed to run on a regularly scheduled basis. Each ship's TEO will coordinate a vehicle startup schedule with his respective ship's CCO/LT. MSE MMOs will ensure that vehicle startups are coordinated with the TEO and that all vehicles are started. Vehicle startups will be conducted twice a week.

6. Corrosion Control. MSEs will establish a corrosion control program in accordance with chapter 7 of this order.

7. PMCS. As always, the timely and thorough completion of PMCS is key to maintaining equipment in a combat ready condition. During deployment, PM services (i.e. motor stables, weapons cleaning) will be conducted on all equipment. The exception to this rule lays in 2nd echelon PM services which require the changing of POL fluids. Due to a limited amount of hazardous material storage and vehicle maintenance space, annual PM services which would normally become due during the deployment will be conducted prior to E-Day. 1st Echelon PMCS can be conducted in conjunction with Corrosion Control inspections and/or vehicle start-ups/motorstables.

8. CM

a. Timeliness of Repairs. A deployed MEU must be capable of executing a mission with as little as six hours notice. To ensure these capability maintenance problems must be aggressively sought out, identified and repaired as rapidly as possible.

b. Echelons of Maintenance. Units will not exceed their authorized echelon of maintenance while deployed with the MEU. Equipment requiring maintenance beyond the unit's organic capability will be evacuated to the CLB for repair. Equipment repairs which exceed the CLB maintenance capability will be evacuated to the appropriate maintenance facility by the CSSE if

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possible. Guidance and procedures on evacuating equipment and obtaining higher echelon maintenance support will be published and distributed by the CLB prior to deployment.

9. Pre-Expended Bin (PEB). MSEs are required to deploy with PEBs fully loaded to their authorized quantities. Maximum use of PEBs will greatly reduce the number of items waiting on maintenance due to a "short parts" status. PEB reorder points must also be aggressively tracked due to the long shipping time for repair parts.

10. Selective Interchange. Only the MEU CO may authorize selective interchange.

11. Motor Stables. Between E-180 and final embarkation, motor stables will be conducted at the Command Element at least one day weekly. All incidental operators within the Command Element will be expected to participate in motor stables at least once monthly in order to get preventive maintenance training. A roster will be published of licensed operators that do not attend motor stables at least once monthly from the Command Element.