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From: Commandant of the Marine Corps
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Subj: ENTERPRISE LIFECYCLE MAINTENANCE PROGRAM (ELMP)

Ref: (a) MCO 4000.57A
(b) 10 U.S.C. 146
(c) MCO P4790.10B
(d) MCO 4000.56
(e) DOD 4140.1-R, "DoD Supply Chain Materiel Management Regulation," May 23, 2003
(f) MCO 4790.21
(g) DOD Instruction 4151.18, "Maintenance of Military Materiel," March 31, 2004
(h) DOD Instruction 4151.19, "Serialized Item Management for Materiel Maintenance," December 26, 2006
(i) DOD Instruction 4151.20, "Depot Maintenance Core Capabilities Determination Process," January 5, 2007
(j) DOD Instruction 4151.21, "Public-Private Partnership for Depot Level Maintenance," 25 April 2007
(k) DOD Instruction 4151.22, "Condition Based Maintenance Plus (CBM+) for Materiel Maintenance," December 2, 2007
(l) MCO 4081.2
(m) SECNAVINST 5400.15C
(n) DOD 7000.14-R, "Department of Defense Financial Management Regulation," Volume 6A, Chapter 14, August 2011
(o) MCO 5311.1D
(p) MCO 4400.194
(q) MCO 4400.193
(r) MCO P4790.9
(s) MCO 3900.15B
(t) MCO 4790.19
(u) MCO P4790.1B
(v) SECNAV M-5210.1

Encl: (1) Overview of the ELMP Planning, Programming, Budgeting and Execution (PPBE) Process Levels
(2) Depot Maintenance Float Allowance (DMFA) Methodology
(3) List of Acronyms and Abbreviations

1. Situation. In accordance with references (a) through (v), this Order outlines the Commandant of the Marine Corps (CMC) policy for implementing and managing the Marine Corps Enterprise Lifecycle Maintenance Program (ELMP).

a. ELMP is defined as an enhanced, collaborative approach to maintenance planning that expands the existing Depot Level Maintenance Program (DLMP) to include all relevant stakeholders across the Marine Corps. Within the context of ELMP, "enterprise" refers to stakeholders including Headquarters

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Marine Corps (HQMC), Deputy Commandant, Installations and Logistics (DC, I&L); DC, Programs and Resources (P&R); DC, Combat Development and Integration (CD&I); DC, Plans, Policies and Operations (PP&O); Marine Corps Systems Command (MARCORSYSCOM); Marine Corps Logistics Command (MARCORLOGCOM); and the Marine Operational Forces (MARFORs).

b. ELMP improves upon previous methods of planning and executing depot level maintenance by addressing challenges with communication and coordination among Marine Corps stakeholders, standardization of planning processes across weapon systems, and visibility of maintenance requirements data. ELMP supports the broader TLMC effort across the Department of Defense (DOD). The ELMP framework is designed to integrate independent stakeholders' contributions to develop a standardized planning process for all ground weapon systems, as well as improve visibility of maintenance requirements data. ELMP is structured to support the Marine Corps' Ground Equipment Maintenance Program (GEMP), and it is rooted in a Total Productive Maintenance (TMP) strategy foundation designed to meet Key Performance Parameters (KPP) and sustainability objectives.

2. Mission. To implement a process that integrates the contributions of independent Marine Corps stakeholders across multiple planning horizons; enables effective and efficient depot level maintenance planning and execution for ground weapon systems and associated materiel; produces accurate, visible, and defensible depot maintenance requirements and budgets; accurately tracks mean time between overhaul (MTBO); and improves the overall equipment availability and readiness of the operating forces.

3. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Engagement from all ELMP stakeholders is critical to optimizing depot level maintenance planning and decisions. ELMP formalizes an integrated and collaborative operational strategy that aligns the enterprise stakeholders, maximizes mission readiness, and optimizes planning, programming, budgeting and execution (PPBE) for Marine Corps depot level maintenance. ELMP specifically addresses the Marine Corps' readiness and budgetary challenges by providing more precise, definitive and defensible depot maintenance requirements and budgets, improved repair efficiencies, and sustained readiness for essential weapon system assets supporting critical missions. ELMP provides the organizational, procedural and technological foundation to move the Marine Corps enterprise from weapon system-based planning to requirements-based planning for depot level maintenance. It will further ensure optimal maintenance planning by using an accredited Price and Performance Model (PPM). This Order will be the guiding authority in managing and executing the ELMP process.

(2) Concept of Operations

(a) The ELMP process ensures that depot requirements and capabilities are considered during acquisition, and that maintenance plans are continuously refined over a weapon system's life cycle, as directed in reference (a). It requires active collaboration within the enterprise. This integrated process enables the following key improvements in enterprise-wide planning:

1. Accurate calculation of unconstrained demand. This represents all depot level maintenance requirements for each ground weapon system in the Marine Corps, regardless of budget, depot capacity, operational forces' returns availability and commitment. This demand incorporates programs cited in reference (p), which include: Service Life Extension Programs (SLEP), Product Improvement Programs (PIP), Weapon Exchange Programs (WEP), and mid-life rebuilds.

2. An accredited PPM. This is an optimization tool that applies budgetary constraints to the demand, producing a "best case scenario" for repair and readiness of Marine Corps ground weapon systems. The PPM utilizes the results of an optimization model to provide an improved decision support tool.

(b) ELMP synchronizes the multiple levels of maintenance planning. The overlapping timing of PPBE can be viewed in enclosure (1). These planning levels consist of planning domains, each with corresponding plans, measures and meetings:

1. Demand Planning is the process for understanding the Marine Corps' complete requirement for depot level maintenance by PEI. It results in the forecast for required maintenance as expressed by MARCORSSYSCOM Program Managers (PMs) and the MARFORs for each of the planning levels:

a. POM Planning and Programming is the unconstrained demand for each Table of Authorized Materiel Control Number (TAMCN), regardless of operational forces' returns availability.

b. Budgeting Level Demand Planning focuses on ensuring requirements expressed in the POM Planning and Programming phase accurately reflect current Marine Corps requirements, budget constraints, and operational forces' returns availability.

c. Execution Level Demand Planning refines monthly demand forecasts to ensure that sources of repair adjust their maintenance schedules to accurately reflect Marine Corps requirements, authorized budget, and operational forces' returns availability.

2. Returns Planning is the process for determining the operational forces' returns schedule. Returns Planning ensures all stakeholders have common expectations about return quantities. This domain is primarily used at the execution level and results in the production of the Returns Plan. Returns Planning also monitors returns and ensures that deviations from the Returns Plan are appropriately incorporated into source of repair maintenance schedules.

3. Maintenance Planning is the process for translating the Demand Plan into Maintenance Plans during the budget process. These maintenance plans, developed from the Budgeting Level Demand Plan, are provided to the various organic sources of repair for use in budget development. During execution, the Maintenance Plan is a monthly activity that ensures the Master Work Schedule (MWS) accurately reflects the current demand, returns, budget and capacity constraints.

(c) The ELMP process is measured using a Performance Measurement Framework (PMF) for both the planning of depot level repair as well as its

execution. The current PMF is comprised of metrics that support the ELMP process and align with other DOD performance measurement initiatives, per reference (d). Together, the metrics are focused on the accuracy of forecasting the need for maintenance, compliance with the budget, returns, and maintenance plans.

b. Tasks

(1) Deputy Commandant, Installations and Logistics (DC, I&L). DC, I&L serves as the senior ground logistician of the Marine Corps, ensuring optimal equipment readiness through the total life cycle management of weapon systems. DC, I&L serves as the ELMP advocate and is responsible to:

(a) Develop and oversee ELMP initiatives that will positively impact materiel asset availability, reliability, and economic performance (i.e., Total Ownership Cost (TOC)) of Marine Corps ground systems, equipment, and materiel.

(b) Identify maintenance planning best practices and performance measures to eliminate inefficient and ineffective processes and policies.

(c) Represent the LCE, including its equipment needs, in all matters related to the Enterprise Lifecycle Maintenance Planning of ground systems and equipment, to include participation in PPBE conferences.

(d) Support PPBE for Operations and Maintenance (O&M) funding to ensure alignment between O&M and depot maintenance budget requirements.

(e) Provide strategic guidance on life cycle issues related to specific ground weapon systems in preparation for ELMP planning conferences.

(f) Chair a cross-organizational, senior-level board that assists in providing strategic governance, guidance and direction in support of the ELMP process.

(2) Deputy Commandant, Combat Development and Integration (DC, CD&I). As the Marine Corps Command Element (CE) advocate, DC, CD&I shall ensure that the Marine Corps warfighting priorities are reflected transparently in depot level budgets and requirements. DC, CD&I will also ensure synchronization between ELMP and the Marine Corps Capabilities Based Planning process by aligning its maintenance funding recommendations with the products borne out of the Capability Based Assessment Process. DC, CD&I is primarily involved in the Demand Planning and Maintenance Planning stages of ELMP and is also responsible to:

(a) Serve as the CE advocate for ELMP matters related to the identification, development, and integration of Marine Corps warfighting capabilities into life cycle maintenance planning.

(b) Ensure ELMP sustainment planning is incorporated into Expeditionary Force Development System (EFDS) documents for such enablers as Depot Maintenance Core Capabilities, Depot Level Source of Repair (DLSOR), Depot Maintenance Core Determination, Condition Based Maintenance (CBM), Reliability Centered Maintenance (RCM), and Performance Based Logistics (PBL), per references (d), (f), (h), (j), and (k). This will be done through the

review of established support/sustainment strategies determined by the acquisition process.

(c) Provide program determination of CORE or NON-CORE prior to the transition of the Acquisition Program requirement documents to MARCORSYSCOM.

(d) Review Universal Needs Statements (UNS) and Urgent Universal Needs Statements (UUNS) and coordinate with MARCORSYSCOM and MARCORLOGCOM to ensure a valid approach to sustainment and maintenance planning is documented and implemented in a timely manner to support the ELMP PPBE process.

(e) Ensure that accurate Authorized Acquisition Objective (AAO) information is entered into the Total Force Structure Management System (TFSMS).

(f) Review the results of the PPM and associated funding decisions to ensure the constrained maintenance plan reflects HQMC priorities.

(g) Update, publish and communicate warfighting capability priorities via the Marine Air Ground Task Force (MAGTF) Integrated Plan (MIP).

(h) Provide a Marine Requirements Oversight Council (MROC) approved Annual Strategic Equipment Plan in preparation for the ELMP Planning, Programming and Budgeting conferences.

(i) In accordance with reference (s), assess impact of disposals on MAGTF capabilities.

(3) Deputy Commandant, Plans, Policies and Operations (DC, PP&O). DC, PP&O is responsible for coordinating the development and execution of Service plans and policies related to the structure, deployment, and employment of Marine Corps forces. The ELMP process ensures appropriate asset availability and posture for Service plans and policies. DC, PP&O is primarily involved in the Demand Planning stage of ELMP and is also responsible to:

(a) Ensure that Service plans and policies affecting the deployment and maintenance of Marine Corps weapon systems are communicated to ELMP stakeholders.

(b) Inform MARCORLOGCOM of fielding priorities for newly acquired or recently repaired equipment.

(4) Deputy Commandant, Programs & Resources (DC, P&R). DC, P&R is responsible for all PPBE matters in order to provide a clear, single authority for all Marine Corps resource management efforts. ELMP supports DC, P&R by driving maintenance planning improvements that will ultimately result in greater financial efficiency. DC, P&R is responsible to:

(a) Provide fiscal guidance and support to ELMP requirements for use in developing the required POM and budgets.

(b) Review input to the Marine Corps depot maintenance budget, identifying directed adjustments.

(c) Determine funding levels and sources in support of ELMP.

(5) Commander, Marine Corps Systems Command (COMMARCORSYSCOM)

(a) COMMARCORSYSCOM acquires ground systems, equipment and materiel, along with ground conventional munitions and information technology, for the Marine Corps. As part of the Marine Corps acquisition strategy, MARCORSYSCOM Program Managers (PMS) develop a sustainment plan for each platform to sustain it throughout its lifecycle.

(b) Program Executive Officer, Land Systems (PEO-LS) provides resources and definition to the PMS to acquire major (Acquisition Category I and IIA) ground systems, equipment and materiel for the Marine Corps. PEO-LS, as the principal advisor to the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA)) on major program acquisition, coordinates with ELMP stakeholders to ensure alignment of program acquisitions with life cycle maintenance planning requirements. PEO-LS and the Program Offices are also integrally involved in the planning of the long-term condition of equipment and represent the equipment's lifetime perspective in the ELMP process to ensure preventive depot level maintenance requirements are understood and reflected in equipment's unconstrained demands.

(c) MARCORSYSCOM is heavily involved in the Demand Planning and Maintenance Planning stages of ELMP. MARCORSYSCOM is also responsible to:

1. Provide TLCM Strategy at the TAMCN level to CG, MARCORLOGCOM and the MARFORS. This strategy will include SLEPs, PIPs, mid-life rebuilds, WEPS, and/or established rotation plans based on evacuation criteria. Ensure fielding, sustainment, maintenance, and distribution planning and execution are coordinated with all ELMP stakeholders, as part of the overall TLCM Strategy.

2. Ensure that reliable technical, contract, and delivery information specific to maintenance planning is entered into appropriate Automated Information Systems (AIS) to facilitate equipment accountability and improved distribution visibility for ground equipment life cycle maintenance planning.

3. In support of the ELMP demand planning level, calculate the unconstrained demand.

4. In coordination with equipment manufacturers and the operating forces, determine evacuation criteria and rotation schedule.

5. Ensure required data is provided for TAMCN-specific quad planning charts utilized in life cycle maintenance planning.

6. Develop an acquisition strategy that supports demand for maintenance planning.

7. Develop Statements of Work in support of ELMP Maintenance Plan requirements. Review repair costs when those costs exceed pre-agreed thresholds.

8. Refer to reference (f), the Depot Level Source of Repair (DLSOR) policy, when recommending the maintenance strategy during acquisition Milestone B.

9. On an annual basis, validate and update, as applicable, all pertinent data elements in TFSMS.

10. Identify new acquisition, sustainment and maintenance plans in the PPBE system.

(6) Marine Operational Forces (MARFORs). The MARFORs are responsible for communicating equipment availability in order to balance long-term maintenance needs with short-term operational requirements. The MARFORs are primarily involved in the Demand Planning and Returns Planning stages and are also responsible to:

(a) Ensure on-hand equipment accountability is accurate, posted and maintained in the appropriate systems of record.

(b) Review Returns Plan and requirements quad charts for the current year and budget years period.

(c) Provide asset availability for the Returns Plan, including all ground equipment from all elements of the MAGTF.

(d) Identify/resolve exceptions at the appropriate conferences for POM and budget planning years.

(e) On a quarterly basis, review the Returns Plan for asset availability. Report non-supportability of Returns Plan via Naval Message to MARCORLOGCOM no later than 60 days prior to assigned quarter.

(7) Commanding General, Marine Corps Logistics Command (CG, MARCORLOGCOM). CG, MARCORLOGCOM's primary contributions to ELMP are in the areas of equipment sourcing, acquisition support, logistics services, maintenance sustainment, and prepositioning support. MARCORLOGCOM manages the day-to-day operations of the ELMP process and is the primary planner for Marine Corps depot level maintenance. MARCORLOGCOM is heavily involved in all three stages of the ELMP process, and has the specific responsibilities to:

(a) Execute responsibilities for the performance of Marine Corps depot maintenance, per all applicable directives.

(b) Maintain and manage depot level maintenance capabilities for ground weapon systems and ground combat support equipment as needed for optimal lifecycle support in accordance with system sustainment plans.

(c) Conduct Planning, Programming, Budgeting and Execution for depot maintenance funding in support of logistics/sustainment and maintenance.

(d) Provide MARCORLOGCOM with analysis and advice to determine strategies and plans for weapon system integrated logistics, sustainment, supply, maintenance, and distribution.

(e) Utilize the PEI Stratification process to develop an unconstrained demand for the POM planning years.

(f) Publish the unconstrained demand and requirements planning quad charts.

(g) Identify and resolve all discrepancies between the MARFORs asset availability and the Returns Plan.

(h) Resolve all maintenance planning changes at the annual ELMP planning conference.

(i) Negotiate induction and production dates with the sources of repair for the execution year.

(j) Submit validated quarterly funding documents to the sources of repair.

(k) Receive, build, and update the Comptroller of the Navy (NAVCOMPT), Office of the Secretary of Defense (OSD), and Presidential Budget (PRESEBUD) submission for the depot maintenance budget.

(l) Manage Returns in Progress. This will include:

(WIRs).

1. Notifying MARFORs to submit Recoverable Items Reports

2. Verifying WIRs are submitted.

3. Checking WIR Due-ins versus Returns Plan.

4. Resolving unsubmitted WIRs.

5. Updating the Returns Plan to reflect the adjusted need based on actual MARFOR returns.

(m) As outlined in enclosure (2), compute the Depot Maintenance Float Allowance (DMFA) for all ground equipment (both fielded items and new acquisition items under procurement). Provide the DMFA data to the ELMP stakeholders.

(n) Lead the ELMP execution process.

(o) Update the ELMP Handbook as needed to incorporate changes to the process.

4. Administration and Logistics

a. Directives issued by the Commandant of the Marine Corps are published electronically and can be accessed online via the Marine Corps homepage at: <http://www.marines.mil>. For commands without access to the Internet, hard copy and CD-ROM versions of Marine Corps directives can be obtained through the Marine Corps Publications Distribution System.

b. Records Management. Records created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per reference (v) to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium.

5. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

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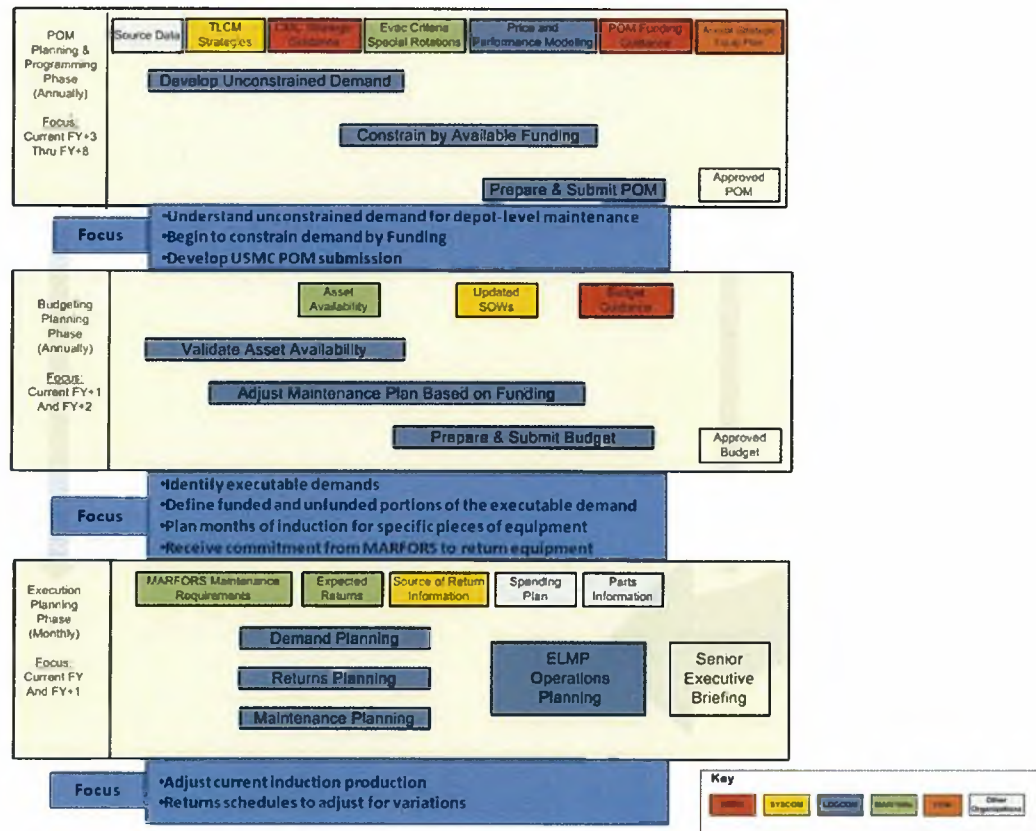
b. Signal. This Order is effective the date signed.



F. PANTER
Deputy Commandant for
Installations and Logistics

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Overview of the Enterprise Lifecycle Maintenance Program (ELMP) Planning Levels



ELMP focuses on three time horizons consistent with the Department of Defense (DOD) Planning, Programming, Budgeting, and Execution (PPBE) process. Specifically, ELMP focuses on the following:

- **POM (Planning & Programming Phase):** The POM Planning Years are the five-year timeframe that begins two years from the year of execution (e.g., during FY 2010, the Planning Years are 2012 - 2016). With respect to this timeframe, ELMP focuses on understanding the Marine Corps' unconstrained demand for depot level maintenance and developing a Program Objective Memorandum (POM) submission that reflects the unconstrained demand for Marine Corps maintenance in synchronization with Total Life Cycle Management (TLCM) strategy. The POM Planning portion of the ELMP process occurs over a period of two years and ends with the approval of MARCORLOGCOM's POM submission.
- **Budgeting Planning:** The Budgeting Planning Years are the two years that immediately follow the current year. With respect to this timeframe, ELMP focuses on identifying the executable portion of each weapon system's POM unconstrained demand plan. At this juncture the funded executable requirements are identified and passed to the organic

depots to begin their maintenance planning and the MARFORs supporting returns plan receiving commitment from the MARFORs to return equipment on specific dates. The Budgeting Planning portion of the ELMP process occurs annually and ends with the approval of MARCORLOGCOM's Presidential Budget (PRESBUD).

- Execution Planning: The Execution Year is the current year in which maintenance is being performed. With respect to this timeframe, the ELMP process focuses on adjusting the current induction, production, and returns schedules to adjust for variations because of unforeseen constraints such as unrealized returns, delayed funding, or delayed repairs. Adjustments are conducted to ensure decisions are made with the best information possible including the affects of one decision on another. The Execution portion of the ELMP process occurs monthly.

To accomplish this, the ELMP process consists of the three planning domains (Demand Planning, Returns Planning, and Maintenance Planning) detailed in the main body of the order that occur simultaneously for each planning time horizon within the bounds of DOD requirements. Each domain requires information from multiple stakeholders, consistent with these organizations' roles and responsibilities in the equipment life cycle. To maintain flexibility and foster accuracy, the process occurs continually and provides updates to all stakeholders to maximize the operational readiness of Marine Corps equipment.

Depot Maintenance Float Allowance (DMFA)

1. The mission of DMFA is to provide a quantity of mission essential, maintenance significant equipment to permit the withdrawal of equipment from organizations for scheduled repair (performed at the depot level) without detracting from a unit's readiness condition. The allowance for these assets is based on the expected life of the equipment, evolving technology, and the anticipated washouts over the equipment's lifecycle. The stores system is responsible for the timely rotation of equipment for depot level scheduled maintenance (overhaul, repair and evacuation (R and E), repair and return (R and R), inspect and repair only as necessary (IROAN), etc.).

2. For all equipment, to include "new," in production, and fielded equipment, MARCORLOGCOM will use the DMFA formula provided below to compute DMFA numbers. After the DMFA is computed, DC CD&I validates that the DMFA supports the warfighting capabilities and approves the allowance.

DMFA Determination Model

The formula for computing the DMFA is depicted below:

$$DMF \text{ ALLOWANCE} = (ITEM \text{ DENSITY} \times DMF \text{ FACTOR}) + WQ$$

a. The three main elements from the equation above are:

- (1) Item Density: density of the item throughout the Marine Corps,
- (2) DMF Factor: the expected percentage of time the item will not be available to the unit, and
- (3) WQ: the expected wash-out quantity of the item over its life cycle.

b. Item Density

(1) The density of each item is the driving factor in determining an appropriate DMF allowance. Therefore, the item densities will be continually reviewed to ensure that allowances are being computed correctly. The total end-item density (total density) is the total requirement for items in the entire Marine Corps inventory. For computation of DMFA, the "item density" will exclude levels maintained as WRMR (less MPF allowance), Reserve "in-stores," and those prepositioned in Norway (NALMEB). The formula used for item density is:

$$Item \text{ Density} = Initial \text{ Issue} + MPF - Reserve \text{ "in-stores"}$$

(2) Since most of WRMR, Reserve in-stores, and NALMEB items remain in storage for extended periods of time, they experience minimal usage and are not inducted into the depots for repairs in the same manner as items in the active and Reserve forces. Although these items eventually rotate into MARFOR units, including them in the density level tends to overstate the DMFA requirement.

c. DMF Factor. This factor represents the percentage of time an end item is not available to an operational unit due to required depot level

maintenance. The DMF factor is a percentage of the total time required to complete the repair cycle which includes: transportation time, administrative time, actual repair time, and time between scheduled overhaul. The DMF factor equation is depicted as:

$$\text{DMF FACTOR} = \text{MRCT} / (\text{MTBO} + \text{MRCT})$$

where:

MRCT = mean repair cycle time to complete 5th echelon repair and return to condition code "A"

MTBO = mean time between scheduled overhaul

(1) Mean Repair Cycle Time (MRCT). The MRCT is the time to complete 5th echelon repair at our depot, another service depot or commercial facility, to include the administrative time (tracked from disposition to receipt at the appropriate regional support activity (RSA) less the actual transportation time), the transportation time (differentiated by CONUS/ OCONUS), and the actual repair times as depicted in the following equation.

$$\text{MRCT} = \text{Admin} + \text{Trans} + \text{Repair}$$

(a) Administrative. The admin time is tracked for equipment based on when the originating message for disposition instructions are issued from COMMARCORLOGBASES until the item is received for at the RSA, discounting actual transportation time.

Note: Although not used for determining DMFA, "awaiting induction time" is tracked and is defined as the time from receipt of the equipment at the RSA until inducted into the depot repair cycle as condition code "M". The tracking provides visibility over shifting priorities and/or unfunded requirements.

(b) Transportation. The transportation times are computed using a weighted average of the transportation time for end items located within CONUS and to/from OCONUS. The transportation time equation is:

$$\text{Trans} = (\text{Trans}_{\text{OCONUS}} \times \frac{\text{III MEF Density}}{\text{ITEM Density}}) + (\text{Trans}_{\text{CONUS}} \times \frac{\text{ITEM Density} - \text{III MEF Density}}{\text{ITEM Density}})$$

where:

TRANSCONUS: average CONUS transportation time

TRANSOCONUS: average to/from OCONUS transportation time

(c) Repair Time. The repair time is the time to return an item from a condition code "M" status (inducted into the master work schedule) to a condition code "A" status (ready for issue).

(2) Mean Time Between Schedule Overhaul (MTBO). The MTBO is the mean time between scheduled maintenance at the depot (i.e., overhaul, R&R, IROAN, etc.). For new equipment the time factor is determined based on the

engineering studies, the anticipated life cycle, and historical usage data for similar equipment.

d. Wash-Out Quantity (WQ). During an item's life cycle, they are sometimes damaged beyond repair. If additional items cannot be procured, items from the DMF are issued to using units to fill T/E deficiencies. However, as this occurs the available pool of assets in the DMF is continually reduced, degrading the DMF's ability to support the MARFOR's and supporting establishments. The WQ is based from historical information to estimate the number of peacetime losses over the projected life cycle of item.

e. Special Considerations. CG MCCDC with the concurrence of COMMARCORSYSCOM and MARCORLOGCOM, may suspend the afore-mentioned formula due to unique conditions. Examples that are included in this category are low density (LD), short life cycle (SLC), commercial off-the-shelf (COTS), nondevelopmental items (NDI), and new items without historical information.

a. Low Density (LD) Items. LD items are a set of items requiring special management attention due to extremely low density, potential complexity or high operational availability requirements. Due to the low densities of these important items, the DMF allowance formula may produce inordinately low allowance levels (i.e., 1 or 2) which may not be sufficient to support the FMF. Therefore, for items specifically identified as LD, CG MCCDC with the assistance of MARCORLOGCOM is authorized to suspend the use of the preceding DMFA formula and determine the DMFA based on usage data and valid external support requirements.

b. Short Life Cycle (SLC). This addresses those items that have a 5-year or less obsolescence from initial fielding, in which acquisition lead times and delivery schedules may make the procurement of all or some of the requirement uneconomical. The use of COTS and NDI, in conjunction with smart business practices will reduce inventories, and normally eliminates the DMFA requirement.

c. Items for Which No Scheduled Maintenance Cycle Exists. In instances where items are repaired as required and no specific maintenance cycle exists, available historical data can be utilized to determine the appropriate DMFA. The required elements of information are the MRCT for the item, the average number of repairs performed each year, and the estimated maximum number that can reasonably be expected in a given year. Given this information, statistical queuing techniques can be utilized to determine the proper allowance.

d. New Items. Since historical information will not be available for new items, the MTBO and the MRCT must be estimated. During the logistics support analysis (LSA) for new items, estimates for both of these factors may be available. In the absence of a complete LSA, an estimate should be derived from the reliability, availability, and maintainability factors obtained from the requirements documentation and, if available, the equipment specification, government or commercial. These initial estimates should be revised after the item has been fielded and historical information becomes available.

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e. Consistent Units of Measure. Various Marine Corps equipment operating time codes (EOTC's) exist for different items of equipment, such as: miles traveled, rounds fired, days and hours of operation. The establishment of depot level work time is based on the type of equipment and time between service. Prior to calculating an MTBO for any item, a conversion process is necessary to provide a standard overhaul period (i.e., days, months or years) based on the lifecycle of the equipment.

f. Excessive Equipment Repair Cycle Times. Historically, items have often experienced extremely long repair cycle times due to a variety of reasons. In order to avoid artificially inflating the DMFA, both the administrative and transportation time portion of the MRCT variable will account for the actual times, but are limited for DMFA calculations to a maximum of 30 days each.

List of Acronyms and Abbreviations

AAO	Authorized Acquisition Objective
ACAT	Acquisition Category
AIS	Automated Information System
AIT	Automatic Identification Technology
ASN (RDA)	Assistant Secretary of the Navy for Research, Development and Acquisition
CBM	Condition Based Maintenance
CD&I	Combat Development and Integration
CE	Command Element
CFT	Cross-Functional Team
CG	Commanding General
CMC	Commandant of the Marine Corps
DC	Deputy Commandant
DLMP	Depot Level Maintenance Program
DLSOR	Depot Level Source of Repair
DMFA	Depot Maintenance Float Allowance
DOD	Department of Defense
DON	Department of the Navy
EFDS	Expeditionary Force Development System
ELMP	Enterprise Lifecycle Maintenance Planning
GEMP	Ground Equipment Maintenance Program
HQMC	Headquarters Marine Corps
I&L	Installations and Logistics
IPT	Integrated Product Team
JPO	Joint Program Office
KPP	Key Performance Parameters
LCE	Logistics Combat Element
MAGTF	Marine Air-Ground Task Force
MARCORLOGCOM	Marine Corps Logistics Command
MARCORSYSCOM	Marine Corps Systems Command
MARFOR	Marine Force
MIP	MAGTF Integration Plan
MROC	Marine Requirements Oversight Council
MTBO	Mean Time Between Overhaul
MWS	Master Work Schedule
NAVCOMPT	Comptroller of the Navy
O&M	Operations and Maintenance
OMMC	Operations and Maintenance Marine Corps
OSD	Office of the Secretary of Defense
PBD	Program Budget Decision
PBL	Performance Based Logistics
PEI	Principal End Item
PEO LS	Program Executive Officer, Land Systems
PIP	Product Improvement Program
PPBE	Planning, Programming, Budgeting and Execution
PM	Program Manager
PMF	Performance Measurement Framework
PPM	Price and Performance Model
P&R	Programs and Resources
PP&O	Plans, Policies and Operations
POM	Program Objective Memorandum
PRESBUD	Presidential Budget

RCM	Reliability Centered Maintenance
SIM	Serialized Item Management
SLEP	Service Life Extension Program
TAMCN	Table of Authorized Materiel Control Number
TFSMS	Total Force Structure Management System
TFSP	Total Force Structure Process
TLCM	Total Life Cycle Management
TMP	Total Productive Maintenance
TOC	Total Ownership Cost
USC	United States Code
UNS	Universal Needs Statement
UUNS	Urgent Universal Needs Statement
WEP	Weapon Exchange Program
WIR	Recoverable Items Report