

UNITED STATES MARINE CORPS
Logistics Operations School
Marine Corps Combat Service Support Schools
Training Command
PSC Box 20041
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MTMOC 2201

STUDENT OUTLINE

MAINTENANCE RESOURCES

LEARNING OBJECTIVES:

a. Terminal Learning Objectives:

(1) Given a table of Organization (T/O) and Table of Equipment (T/E) for selected Marine Corps Battalion, Table of Authorized Materiel (TAM), and requirement to ensure equipment readiness is adequate to meet unit requirements, per MCO P4790.2, MCO P4400.150, MCO 5311.1, and NAVMC 1017, identify equipment maintenance resources requirements: (3510.2.1)

(2) Given the reference material and a support mission, determine motor transport support requirements, per MCO P47902. (3510.2.2)

b. Enabling Learning Objective:

(1) Given a Table of Organization (T/O) and Table of Equipment (T/E) for the selected Marine Corps Battalion, Table of Authorized Materiel (TAM), and requirements to ensure equipment readiness is adequate and to meet units requirements, per MCO P4790.2, MCO P440.150, MCO 5311.1, and NAVMC 1017. (3510.2.1)

(a) Identify personnel resources authorized by the T/O.
(3510.2.1a)

(b) Identify allowance items required to complete an operation.
(3510.2.1b)

(c) Determine petroleum, oil, and lubricant (POL) requirements for an operation. (3510.2.1c)

(d) Identify class of supply. (3510.2.1d)

(2) Given the reference material and support mission, per MCO P4790.2, identify: (3510.2.2)

- (a) Time. (3510.2.2a)
- (b) Personnel. (3510.2.2b)
- (c) Repair Parts. (3510.2.2c)
- (d) Tools and Equipment. (3510.2.2d)
- (e) Facilities. (3510.2.2e)
- (f) Funds. (3510.2.2f)
- (g) Appropriate references. (3510.2.2g)

OUTLINE

1. PURPOSE AND CONTENT OF THE TABLE OF ORGANIZATION (T/O)

a. The T/O describes the organizational structure and manpower requirements of an activity in terms of grade, MOS, series, weapon, and billet title for military and civilian personnel. The T/O is a basic document that describes, in billet line detail, the composition of every Marine Corps command or activity.

b. The T/O should display the manpower resources required to fulfill a command or activity's mission as defined by the T/O mission statement.

c. The most important factors in the development of a unit's T/O are mission and the Table of Equipment (T/E). We will discuss the T/E later in this lesson.

(1) The mission, when accurately stated, is the foundation for the billets, the grades, and the skills reflected in the T/O. The T/O mission statement describes the mission and tasks, organization, concept of organization and employment, and administrative and logistics capabilities of a Marine Corps organization.

(2) The T/O further defines the grades and skills based on the equipment a unit needs to accomplish its mission.

d. The T/O provides the basic framework against which programmed manpower resources are allocated and Marine personnel are recruited and trained. However, the Commandant of the Marine Corps recognizes the

commander's need for flexibility in balancing the work force against fluctuating workload and in assigning personnel to meet unanticipated requirements. Therefore, he does not restrict the commander's prerogative of temporarily deviating from the staffing patterns established in the T/O.

e. The T/O should accurately reflect a command or activity's mission statement. The mission statement, therefore, should be reviewed for possible changes when substantial changes to T/O's are requested. As a minimum, mission statements should be updated every two years

f. Because some units/billets/military occupational fields (MOS)/grades are not required during peacetime, T/O's throughout the Marine Corps are only manned at a percentage of the total strength authorized. This reduction in personnel strength is referred to by the Marine Corps as the manning level.

(1) The unit's manning level is controlled by CMC and is subject to change periodically because of budgetary constraints placed on CMC by Congress or by priorities established by CMC to increase billet staffing in other areas.

(2) A unit can determine where it stands with respect to manning level percentage by dividing their on hand strength by their T/O and comparing that figure to the known manning level percentage.

g. The T/O is divided into the following sections

(1) The cover letter of the T/O identifies the organization's T/O number and designator. Within the cover letter of the T/O the following information is outlined:

(a) Promulgation statement. The promulgation statement should identify that the document is a T/O and what command the T/O is for.

(b) Organization. The contents in this area should identify the major command and subordinate units/sections.

(c) Mission and Tasks.

1 Mission. A T/O mission statement should describe what the organization must be capable of accomplishing.

2 Tasks. The tasks in the T/O should specifically describe what the organization must do to accomplish what is outlined in the mission statement.

(d) Concept of Organization. In this area the responsibilities of each element or major group within the organization is briefly defined.

(e) Concept of employment. The concept of employment will determine the type of support required and the manner in which the support must be provided.

(f) Administrative capabilities. In this area it must be defined whether the organization can take care of its own administrative needs or needs another source.

(g) Logistics capabilities. This section of the T/O will specify the exact maintenance capabilities which are authorized for the organization and the command's supply, transportation, medical, and dining capabilities.

(h) Supersession. This section will, if not a new T/O, identify what T/O is being superseded.

(2) The establishment of publications requirements are dependent on the maintenance capabilities authorized in the "Logistics Capabilities Statement" of the T/O.

h. Columnar Description of the T/O

(1) The T/O heading will contain the T/O number of the organization, the organizational name to which the T/O pertains, and the date of the T/O.

(2) Line No. The line number is a numeric/numeric alpha code assigned to identify a specific billet within the T/O.

(3) English Description. The English description section is used to identify the following:

(a) A section subordinate to the major organization of a T/O; e.g., Truck Company for 8th Motor Transport Battalion.

(b) A subsection within a section within a major organization of a T/O; e.g., 1st Platoon, Truck Company, 8th Motor Transport Battalion.

(c) An English description of a billet line, such as, platoon leader.

(4) Billet Sponsor (BILL SPON). This area may contain a code assigned to a sponsor at Headquarters, Marine Corps.

(5) Alpha Grade. This column contains the grade requirement for each line number/billet.

(6) Military Occupational Specialty (MOS). The MOS is the skill designation for military or civilians applicable to the billet line.

(7) Branch (BRN). The BRN code in this area will represent one of the service branches within DOD, civil service employees, or indigenous civilians.

(8) Type (TYP). A code identifying a Naval aviator (N), Naval flight officer (F), aviation ground officer (A), other officers (O) (including warrant officers), enlisted (E), or civilians (Gov U), graded or ungraded).

(9) Status (STA). Billet/mobilization status.

(a) An indicator (code) in this column will designate a type of nonchargeable status for the billet description. If the area is blank this will indicate that the billet is a chargeable billet.

(b) If the organization is in a mobilization status an indicator (code) will be placed in the column to designate a time phase requirement for filling of a mobilization T/O.

(10) Marines, Officer/Enlisted (OFF/ENL). A numeric indicator will be placed under either officer or enlisted for each line number to indicate the number of Marines required to fill the billet.

(11) Other Services, Officer/Enlisted (OFF/ENL). If a code in the branch (BRN) column indicates any service other than the Marine Corps, the quantity of officer/enlisted will be entered in one of these columns.

(12) Contingency Fleet Assistance Program (CONTD F/A Officer/Enlisted/ Civilian (OFF/ENL/CIV). This area applies only to base or station units and will identify the number of personnel assigned to them for any contingency.

(13) Special Category Code (SCC). An indicator may be placed in this column to designate if the billet is of a special type.

(14) Weapon (WPN). A code identifying the type of weapon the individual(s) assigned to the billet line will carry is indicated in this column.

(15) Education (EDU). If the individual(s) assigned to this billet line require additional education to fill the billet, a code identifying the additional education requirement will be placed in this column.

(16) Special Education Program (SEP). If the billet requires the individual who fills it to attend a special education program, this area will be flagged with a code to indicate whether it is necessary or desirable that they attend such a program.

(17) Security Clearance (SC). If the line number/billet requires that the individual(s) filling it require a security clearance, a code will be entered in this column to designate the type of clearance.

(18) Foreign Language Code (LNG). If the billet requires that the individual(s) filling it must speak a foreign language, a code identifying the language(s) will be placed in this column.

(19) Service School (SERV SCH). A code identifying a service school requirement for the individual(s) filling a billet will be entered in this column.

(20) Footnote - Footnotes are printed in T/O line number sequence at the end of the T/O immediately following organizational totals. The footnote records provide the ability to further define the requirements of a billet not expressed by other codes. More than one type of footnote may be used to qualify a T/O line.

i. Recapitulation by MOS Section of the T/O. This section of the T/O provides, by MOS, a summary/recapitulation of personnel (officer, enlisted, and civilian) authorized by the organization and a grade average for the authorized personnel.

3. PURPOSE AND CONTENT OF THE TABLE OF AUTHORIZED MATERIAL (TAM)

a. The TAM is an allowance list of authorized material for use by organizations, activities, and detachments of the Marine Corps, both the regular and organized reserves.

b. The TAM contains a list of Class I, II, III, IV, VII, and VIII items of materiel authorized for use by Marine Corps units. Classes I and III are listed to provide a ready reference for logistics planning.

Classes II, IV, VII, and VIII are reflected in the TAM by type and commodity grouping.

(1) The Type 1 items in the TAM are all of the items of material which are found in the Type 1 section of the Table of Equipment (T/E) for each unit that are mandatory and are required to be on hand or on valid requisition.

(2) The Type 2 items in the TAM are all of the items of materiel which are found in the Type 2 section of the T/E for each unit on an "as-required" basis.

(3) The Type 3 items in the TAM are those items in the T/E for a unit that require special measures of control, since they are used for particular conditions or situations; e.g., items which are uniquely required in cold weather or desert operations.

c. Material is grouped within the TAM by commodity; i.e., communications-electronics, engineer, general supply, motor transport, and ordnance, and each commodity is assigned a commodity designator (Alpha) number.

(1) The columnar data for the Types and Classes of TAM and an explanation of the TAM items and the columnar data in the TAM can be found in MCO P4400.150.

(2) The Table of Authorized Material sections contain the following information about each item:

(a) TAM Control Number (TAMCN). The TAM is published in TAM control number sequence.

(b) Weapons System Code (WSC). The WSC provides a means to obtain data and review potential deficiencies relative to specific equipment/systems.

(c) National Stock Number (NSN). The NSN listed is for reference only. It is not intended to make the TAM a document used in requisitioning.

(d) Item Designator Number (ID). The ID number is for reference to the appropriate Marine Corps stocklist (SL).

(e) Type Standardization (Type STD). The standardization category of each item is listed.

1 Standard (STD). This identifies the most advanced and satisfactory item adopted and that which is preferred for procurement.

2 Substitute Standard (SSTD). This identifies an item which does not have military characteristics as satisfactory as a standard item but may be procured and issued to supplement the supply of the standard item if necessary.

3 Limited Standard (LSTD). This identifies an item which does not have military characteristics as satisfactory as a standard item but which is a usable substitute for a standard item and is either in use or available for issue to meet supply demands.

(f) Nomenclature. The nomenclature assist in positively identifying the item and provides ease of reference. A straight alphabetical index of all authorized items of material, less Class I and III, appears in the last page of the TAM.

(g) Unit of Issue (U/I). Self-explanatory and is not used for requisitioning the item. Abbreviations are found in the Introduction to Federal Supply Catalog (C-1-MC-15C).

(h) Unit Standard Package (UNIT STD PKG). Identifies how many of the items are in the standard package.

(i) Unit Standard Package Square, Cube, and Weight. These columns give the square feet, cubic feet, and weight in pounds of the item. They relate to the item uncrated and assembled with normal attachments.

(j) Square Stowage Requirement (SQ ST RQ). Identifies whether or not an item requires square stowage; i.e., one which requires a fixed amount of floor space and cannot support the overhead stowage of other cargo.

(k) Stores Account Code (SAC). This code is used to differentiate between appropriation - financed principal items, appropriation - financed secondary item, and stock fund items. UM 4400-124 refers.

1 SAC 1. Minor end items, repair parts, and individual clothing which are normally low-cost, high-demand items which are financed through O&MMC or the stock fund account which are charged to the customer.

2 SAC 2. Appropriation Stores Account (ASA) secondary items which are financed through appropriations other than the Marine Corps

Stock Fund or O&MMC. Included in this category are "D" coded secondary reparables, modification kits, and end items having a unit cost of \$1,000.00 or greater.

3 SAC 3. Appropriation Stores Account (ASA) principal end items of major importance and major components which require detailed analysis and examination, at the level established for control, or at the military service level, of all factors affecting supply and demand. SAC 3 items are financed through appropriations other than Stock Fund or O&MMC.

(3) Replacement factors. A replacement factor is defined as "The estimated percentage of equipment or repair parts in use that will require replacement during a given period due to wearing out beyond repair, enemy action, abandonment, pilferage, and other causes except those of a catastrophic nature." Replacement factors are expressed for a thirty day period and are defined as follows:

(a) Combat Active (CA) replacement factors will be applied to determine requirements for units during those periods when they are actually in active combat operations. The factors are based on anticipated intensity of combat by geographic areas. Separate factors have been developed as follows:

1 Europe Intense (EI). For forces committed in the European theater during which intense combat is anticipated.

2 Europe Sustained (ES). For the remaining period of support planned for forces committed in the European theater.

3 Worldwide Intense (WI). For forces committed to any geographic area other than Europe and during which intense combat is anticipated.

4 Worldwide Sustained (WS). For the remaining period of support planned for forces committed to any geographic area other than Europe.

(b) Mobilization Training (MT). This factor is for units while they are undergoing intensified training following mobilization but prior to commitment to combat.

(c) Training (PT). This factor is for organizations training under normal peacetime conditions and represents the losses through life expectancy of the item expressed in thirty day increments.

c. Class III Requirements, Petroleum, Oil, and Lubricants (POL). The data contained in the TAM pertaining to Class III items may be used as a guide in planning actual operational requirements when more accurate usage factors are not available.

(1) Factors used for computation of fuel requirements are as follows:

(a) Type of fuel consumed. The following codes are used:

1 G - Gasoline.

2 D - Diesel Oil.

3 K - Kerosene.

4 MD - Multifuel (Diesel Preferred).

(b) Gallons per hour consumed.

(c) Hours per day to be operated.

(d) Number of days to be operated.

(e) Number of like items to be operated.

(f) Formula. Gallons per hour (GPH) (X) hours per day (X) number days (X) number like items = gallons of fuel required.

(2) The following planning factors may be used to determine the requirements for lube oil, gear lube, kerosene, and grease once the fuel requirements have been determined:

(a) Lubricating oil, internal combustion engines:

1 Three percent of the total gallons of gasoline.

2 Three and one half percent of the total gallons of diesel.

(b) Lubricating oil, gear type. One half percent of the total gallons of gasoline and diesel.

(c) Kerosene. One half percent of the total gallons for gasoline and diesel.

(d) Greases.

1 One percent of the total gallons for gasoline.

2 Three percent of the total gallons for diesel.

(e) Formula. Gallons of fuel required (X) percentage factor (=) quantity of lubricants required in either gallons or pounds.

1. Demonstrate to the student how to compute the fuel requirement for one vehicle for a four day operation where the vehicle is required to be in operation for eight hours a day. Use the chalkboard to demonstrate how the computation is completed.

2. Demonstrate to the students how to compute the lubrication requirements for the vehicle previously mentioned for the fuel requirement demonstration. Use the chalkboard to compute the requirements.

3. Inform the students that TM 11240-15/4 also contains information on equipment fuel usage and can be used as a reference to determine fuel requirements for an operation.

4. PURPOSE AND CONTENT OF THE TABLE OF EQUIPMENT (T/E)

a. The T/E lists the maximum allowances of authorized equipment for units of the FMF. The allowance list in the T/E is the amount of each item deemed necessary to provide for employment of each unit under anticipated combat conditions.

b. The T/E is a list of mandatory allowances which a unit is required to possess or have on order and maintain in order to accomplish its mission. The T/E when used with the T/O serves as the basis for determining what publications and additional equipment may be required by the unit.

c. The T/E consists of a cover letter to identify who the T/E is for and the allowance sections. The cover letter of the T/E contains the following information.

(1) The T/E numbers with the corresponding organizations covered in the T/E.

(2) The cover letter also identifies the types of allowances that are contained in the T/E.

(a) Type 1 allowances listed in the T/E prescribe the amount of each item necessary to support the unit under all anticipated combat conditions other than arctic or desert. Type 1 allowances are mandatory combat allowances and must always be on hand or on valid requisition.

(b) Type 2 allowances listed in the T/E are referred to as as-required allowances. Type 2 allowance information will enable the supply system to:

- 1 Respond more readily to wartime activation requirements.
- 2 Establish a materiel base from which to expand.
- 3 Provide the commander with guidance based on experience factors relative to required quantities of Type 2 items.

(c) The Type 3 items in the T/E are those items of material which require special measures of control since they are used for particular conditions or situations; e.g., items which are uniquely required in cold weather or desert operations. Type 3 allowances are not normally listed in a T/E for FMF organizations because these items are only required on a temporary basis and are returned to supply at the completion of the operation.

(3) Also listed on the T/E cover letter is the application of the columns within the T/E.

(a) Column 1, Table of Authorized Material Control Number. (TAMCN).

(b) Column 2, Nomenclature. This column provides the noun name and model number of the item.

(c) Column 3, Unit. This column indicates the unit of issue per item authorized. This unit of issue is for accounting within the T/E only and is not used for supply requisitioning.

(d) The remaining columns list the quantity of authorized allowance of each item for the unit whose T/E number appears at the head of the column.

(4) Responsibilities of the Commanding Officer

(a) The Commanding Officer will have on hand or on valid requisition all authorized Type 1 allowances unless other guidance is furnished by the Commandant of the Marine Corps which would delay requisitioning.

(b) Commanding Officers should also have on hand those Type 2 items as authorized by the force commander.

(c) Commanding Officers should submit recommendations for modification of allowances when authorized allowances are either insufficient or in excess of the unit's requirements.

d. The source of a unit's allowance is the T/E, but because the T/E is only updated/modified once a year it may not reflect the true allowance required of the unit. Managers will use the Equipment Allowance File (EAF) along with the T/E.

(1) The EAF is authorized for use as a reconciliation management tool within major commands for their subordinate units.

(2) The EAF is distributed quarterly by Headquarters Marine Corps (LPP-4) and contains the most current T/E allowance changes. Differences in items and allowances between the CMC paper format T/E and the EAF should be reconciled.

(3) Complete copies of the paper format T/E together with all approval modification should be maintained by each consumer level supply section.