

UNITED STATES MARINE CORPS
MARINE CORPS DETACHMENT
686 MINNESOTA AVE.
FORT LEONARD WOOD, MISSOURI 65473-5850

LESSON PLAN

MAINTENANCE MANAGEMENT

NCOM-A02

NCO MECHANICS COURSE

A16ACU1

REVISED 02/18/2014

APPROVED BY: _____ **DATE:** _____

(ON SLIDE #1)

INTRODUCTION

(10 MIN)

1. **GAIN ATTENTION**. Show YouTube video of "Angry at computer". Guy in office cubical gets angry at his computer and smashes it. Then explain this is how you feel throughout the work day when you're trying to manage your maintenance shop dealing with GCSS-MC.

(ON SLIDE #2)

2. **OVERVIEW**. Good morning/afternoon class, my name is _____. The purpose for this period of instruction is to provide you with knowledge and skills required to properly manage your maintenance section utilizing the appropriate recourses available. To do this we'll cover the maintenance production, purpose and capabilities of GCSS-MC, Limited Technical Inspections, Service Requests, Parts Requisition, MOD's, Demand-supported Items /Layettes, Calibrations, and maintenance related reports.

INSTRUCTOR NOTE

Introduce the learning objectives to the class. Instruct the students to read the TLO'S and ELO's located in their student outline. Ensure that the students understand the TLO'S, the ELO'S, and what is expected of them.

(ON SLIDE #3)

3. **LEARNING OBJECTIVES**.

a. **TERMINAL LEARNING OBJECTIVES**.

(1) Provided engineer equipment, appropriate records/forms, and references, complete engineer equipment records and forms, to support mission requirements. (1341-ADMN-2003)

(2) Given a requirement, data, and the references, review service request and parts requirement, per the references. (1341-ADMN-2004)

(3) Provided an item of engineer equipment and the

references, complete commodity manager's modification control record, to record equipment modifications. (1341-ADMN-2005)

(4) Given a requirement and the references, maintain Pre-Expended Bins (PEB), to ensure bins are stocked and maintained for timely maintenance. (1341-ADMN-2007)

(5) Provide a service request, parts requirement, repair parts, and the references, maintain layettes, to ensure repair parts are kept in the appropriate layettes bin. (1341-ADMN-2008)

b. **ENABLING LEARNING OBJECTIVES.**

(1) Without the aid of references, complete the NAVMC 10560 (LTI) per the TM-4700-15/1_ (1341-ADMN-2003a)

(2) With the aid of references, create a service request per the GPN 3-12 and GPN 1-13. (1341-ADMN-2004a)

(3) With the aid of references, close a service request per the GPN 3-12 and GPN 1-13. (1341-ADMN-2004b)

(4) Without the aid of reference, identify the purpose of a Parts Request per the GPN 1-11, GPN 3-11, GPN 2-12, GPN 10-12, GPN 1-13, GPN 3-13 and MCO P4790.2_. (1341-ADMN-2008a)

(5) Without the aid of references, complete the SF 368 (PQDR) per the TM-4700-15/1_ (1341-ADMN-2003b)

(6) Provided a computer, Internet access, T/E and references, Validate Modification program per the GPN 4-12 and MCO P4790.2_. (1341-ADMN-2005a)

(7) Without the aid of reference, identify the requirements for the Demand-Supported items authorization letter per the MCO P4400.150_. 1341-ADMN-2007a

(8) Without the aid of reference, identify procedures for inventory of Demand-Supported Items per the MCO 4400.150_, GPN 1-11, GPN 3-12 and MCO P4790.2_. 1341-ADMN-2007b

(9) Without the aid of references, identify Sub-inventory Locator procedures per the MCO P4790.2_, GPN 1-11, GPN 3-11, GPN 2-12, GPN 10-12, GPN 1-13, GPN 3-13 and TM 4400-150_. (1341-ADMN-2008b)

4. **METHOD/MEDIA**. I'll be teaching this period of instruction utilizing the informal lecture, demonstration, practical application methods; I'll be aided by the powerpoint presentation, GCSS UPK player, student handouts, and practical application materials.

INSTRUCTOR NOTE

Explain Instructional Rating Forms to students.

5. **EVALUATION**. You'll be evaluated over this period of instruction with a written exam, followed by a performance exam in accordance with your training schedule.

6. **SAFETY/CEASE TRAINING (CT) BRIEF**. There are no safety concerns for the classroom portion, however when we transition to the Maintenance building for the performance exam, we'll obey all posted speed limits and use defensive driving techniques in order to arrive safely at our destination.

(ON SLIDE #4)

TRANSITION: Are there any questions on what's going to be taught, how it's going to be taught, or how you're going to be evaluated? If not let's talk about Maintenance Production.

BODY

(20 HRS)

(ON SLIDE #6)

1. **PRODUCTION**. (2 HRS)

a. **Maintenance Production**. is that area of equipment maintenance, which involves the physical performance of various maintenance functions. These maintenance functions are Preventive Maintenance (PM), Corrective Maintenance (CM), Modification, Calibration, Conversion, Modernization, Overhaul, and Rebuild.

(ON SLIDE #7)

b. **Maintenance Phases**.

(ON SLIDE #8)

(1) Acceptance Phase. It is the initial step of the maintenance process. It consists of Inspection, Scheduling, and Shop Assignment.

(ON SLIDE #9)

(a) Acceptance Inspection. The purpose of the acceptance inspection is to verify that the equipment is complete and prepared for the required maintenance services and is conducted upon initial receipt by the maintenance section. The procedures to be followed in the acceptance inspection are as follows:

1 First, determine that the equipment is complete and that appropriate operator maintenance, including cleaning, has been performed. Remove and store collateral equipment and annotate the LTI/SR unless collateral equipment is required during the maintenance action. The unit commander should be informed about equipment which is incomplete or has not been properly prepared by the unit requesting said maintenance.

2 Next, verify that the SR has been properly prepared IAW TM-4700-15/1_. This verification includes matching the data plate's serial number with the serial number on the SR.

3 After verification of the SR, acceptance of the equipment for the required services is accomplished by digitally signing the SR.

4 The last step is to assign the production priority for use within the maintenance activity. This priority will be based on the SR priority and other appropriate criteria established by the maintenance officer or chief.

(ON SLIDE #10-11)

(b) Acceptance Scheduling. The purpose of acceptance scheduling is to have equipment requiring maintenance arrive at the maintenance facility at or after the time that the required maintenance resources are available. This procedure allows the equipment owner maximum operational use of this equipment while avoiding needlessly large concentrations of equipment awaiting maintenance at the maintenance facility. Acceptance scheduling is normally applicable to all PM's, modifications, calibrations, and routine repairs. Scheduling of equipment for maintenance requires close coordination between the owner and the

maintenance facility if it is to be effective. Procedures for acceptance scheduling are as follows:

1 First, the owning unit must prepare a deferred or unit recall SR.

2 Next, the maintenance activity must accept the SR. Acceptance by the maintenance section includes establishment, when appropriate, of the date for delivery of the equipment for the required services.

3 After the SR is accepted, the equipment must be scheduled, if appropriate, to a specific shop within the maintenance activity.

(ON SLIDE #12)

(c) Shop Assignment. The assignment of equipment to a specific maintenance shop within the maintenance activity is made upon completion of the acceptance inspection and scheduling, when appropriate. In maintenance sections comprised of only one maintenance shop, shop assignment occurs at the time of acceptance of the equipment during the acceptance inspection. Procedures to be followed in the shop assignments are as follows:

1 First, identify the type of shop to perform the required services.

2 Next, review the workloads and available resources of individual shops within the maintenance activity to determine which shop should be assigned the SR.

3 Assign the SR to a specific maintenance shop. When assigning, always consider the priority assigned the SR to ensure that the equipment readiness of supported units is not impaired.

4 Assign the Demand-supported Item parts required for the service to the SR task parts requirement to ensure availability at the time of induction.

INSTRUCTOR NOTE

Debrief parts from Demand-supported Items to Task.

(ON SLIDE #14)

(2) Equipment Induction Phase.

(a) Induction of the equipment is the physical commitment of an SR and associated equipment requiring service to the assigned shop.

(b) Induction of equipment into a specified shop must be by the priority established in the equipment acceptance phase. The maintenance shop should request the equipment when the necessary maintenance resources are available to perform the required services.

(ON SLIDE #16-17)

(3) Active Maintenance Phase. This phase begins with the induction of the SR and its associated equipment into the maintenance shop. This phase is performed in a sequence of logical steps that are designed to ensure that the required services are conducted in an efficient and effective manner. During this phase, continual emphasis is placed on Quality Control of the actions and tasks performed. The steps to be followed in the conduct of active maintenance are described in the following:

(a) Inspection of the equipment. Maintenance personnel assigned to perform the service will perform a detailed inspection of the equipment upon induction into the shop. This inspection serves as a basis for the performance of the maintenance and includes:

1 Locating, identifying, and inventorying the equipment and its components.

2 Verify that all equipment records associated with the required services are prepared IAW GPN 4-12 and appropriate equipment publications.

(b) Preparation for the performance of maintenance actions includes the assembly of the appropriate technical manuals and other technical data, support equipment, and TMDE to perform required services. Adequate preparation reduces the actual time required to perform the maintenance and also ensures that maintenance actions are not initiated for which the required resources are not available.

(c) Performance of maintenance actions will be per the appropriate technical manuals. MCO P4790.2_, Appendix "F" contains the maintenance process and the relationship of maintenance production to information flow.

(d) PMCS.

1 Obtain required materials for PMCS. If the unit is not authorized Demand-supported Items, ensure that consumable supplies required for the PMCS is requested through the task in sufficient time for scheduled PMCS.

2 Performance of PMCS will be performed per the procedures established in the applicable technical publication. Upon completion, update Install Base per the TM-4700-15/1_ and GPN 4-12.

(e) Corrective Maintenance.

1 Isolate the cause of the equipment malfunction.

2 Obtain required repair parts and secondary reparables. Demands will be expeditiously submitted when parts requirements become known.

3 Correct the equipment fault. Fault correction is the goal of all corrective maintenance actions. Proper maintenance techniques must be employed to ensure that repair parts are installed correctly.

(f) Modification control.

1 Obtain required materials IAW appropriate technical publication, (Modification Instruction).

2 Application of the MI will be IAW the instructions set forth in the publication. Upon completion of the modification, update the ERO and appropriate equipment records per the TM-4700-15/1_.

(g) Calibration. Performance of calibration will be per the procedures established in MCO 4733.1_ and only at approved calibration laboratories. Upon completion of calibrations ensure that the records are updated per the GPN 4-12.

(h) Checking of completed maintenance tasks on a SR. Maintenance personnel will check their completed work by performing the necessary final adjustments on the repaired equipment. Adjustment procedures in the applicable technical publication must be followed in detail. Bringing the equipment performance to within tolerances specified in the technical publications is a positive indication that the action has been successfully completed. Adjustments will be performed by, or under supervision of qualified personnel, using standards and gauges, which meet or exceed minimum acceptable standards.

(i) Quality control requires a complete equipment checkout to determine that maintenance actions have been properly completed and that equipment and shop records are complete. Qualified supervisory personnel under actual or simulated operating conditions will conduct equipment checkout. Equipment that does not perform satisfactorily will be rejected and recommendations made for further maintenance actions. Acceptable performance results in the completion of the active maintenance phase and the movement of the equipment to the closeout phase.

(j) Time and resources must be allocated to clean up the maintenance area. Support and TMDE, including tools, must be cleaned, serviced, and inventoried allowing for future maintenance actions. TM's must be returned to the library. Defective parts and other residue must be removed from the maintenance area using proper disposal procedures.

(ON SLIDE #19)

(4) **Maintenance Closeout Phase.**

(a) The closeout phase of the maintenance process commences when equipment has been repaired and the serviceable item is to be returned to the owner, or when a decision has been made to evacuate or dispose of the equipment. Maintenance personnel will ensure that the closeout process is accurate, complete, and coordinated.

(b) The closeout phase requires close coordination with the owning unit personnel to ensure that they are notified as soon as the equipment is ready for pickup. Any special packaging, preservation, transportation, and shipping requirements must be taken care of at this time. The using unit must make every effort to pick up completed equipment promptly.

(c) In the closeout phase. Maintenance personnel must ensure that the SR and Install Base have been correctly completed IAW TM-4700-15/1_and GPN 4-12.

(ON SLIDE #20)

TRANSITION: Now that we know what the Maintenance Phases consist of, are there any questions? I have a question for you. Q: What is the acceptance phase? **A: It is the initial step of the maintenance process. It consists of Inspection, Scheduling, and Shop Assignment.** Q2: What is the Equipment Induction Phase? **A2: Induction of the equipment is the physical commitment of an SR and associated equipment requiring service to the assigned shop.** Q3: What is the Active Maintenance Phase? **A3: Induction of the SR and its associated equipment into the maintenance shop.**

(ON SLIDE #21)

BREAK: (10 MIN)

TRANSITION: Did anyone come up with any questions during the break? If not let's move onto maintenance functions.

(ON SLIDE #22)

c. **Maintenance Function - Preventive Maintenance/Corrective Maintenance.**

(ON SLIDE #23)

(1) PMCS includes the checking and servicing performed by personnel for maintaining equipment in a satisfactory operating condition. This is achieved by accomplishing systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects. A systematic PMCS program consists of inspecting, cleaning, servicing, lubricating, and adjusting; and is the key to equipment readiness. Effectively administered PMCS will help prevent early breakdown or failure of equipment, and prevent

costly, complex, and time-consuming repairs and allow the optimum use of maintenance resources.

(ON SLIDE #25)

(2) The establishment of a PM program and the performance of timely PM services on equipment are the responsibilities of the unit owning or using the equipment.

(a) Preventive maintenance will be scheduled per the commodity chapter (Ch. 3) of the TM-4700-15/1 and GPN 4-12, and when due the PMCS will be conducted per the applicable equipment technical publications.

(b) The unit using the equipment is responsible for PMCS of equipment and maintenance of equipment records for equipment on Temp. Loan.

(ON SLIDE #26)

(3) PMCS generally is cyclic in nature, one cycle being completed each year of the equipment's life. They are frequently referred to as scheduled maintenance and include PMCS performed by:

(a) The operator, user, or crew before, during, and after operation.

(b) The operator or crew on an hourly, daily, monthly, or special occurrence basis.

(c) Organizational maintenance personnel, assisted by the operator, on a calendar, mileage, or hours of operation.

(ON SLIDE #27)

(4) The operator or crew will perform a scheduled PMCS when it is within their authorized EOM. If the equipment must be evacuated to a maintenance section for scheduled PMCS, the operator or crew will accompany the equipment, if feasible, and assist in the performance of the specified PMCS.

(5) Equipment procured with a manufacturer's warranty will have PMCS scheduled and performed as indicated in the applicable TM's until expiration of the warranty period. Equipment procured under a warranty is identified by applicable material fielding plans.

(ON SLIDE #28)

(6) Deferred PMCS. PMCS may be deferred or intervals extended for the following reasons: equipment is placed in administrative storage program or equipment is placed on administrative deadline. The criteria for these types of programs are as follows:

(ON SLIDE #29)

(a) Not be stored less than 12 months or more than 30 months.

(b) Be in condition code "A".

(c) Be visually inspected quarterly.

(d) Be exercised every 6 months.

(e) Have a semiannual PMCS before induction.

(f) Have any due PMCS conducted and a new PMCS scheduled upon removal.

(g) Be in a level "B" (intermediate protection) preservation per MIL-V-62038. Level "B" packing provides protection for material under anticipated favorable conditions of worldwide shipment, handling, and storage.

(h) Only MSC commanders may approve.

INSTRUCTOR NOTE:

Equipment has no defects and 100% SL-3 complete.

(ON SLIDE #30)

(7) Commanding officers may authorize administrative deadline. When administrative deadline programs are authorized, the equipment may have batteries and pilferage items removed and stored and must:

(a) Not be stored less than 6 months or more than 12 months.

(b) Be in a mission capable status.

(c) Be visually inspected monthly.

(d) Have a daily or equivalent PMCS performed in conjunction with the quarterly exercise.

(e) Have a semiannual or annual PMCS performed within 30 days before induction.

(f) Have any due PMCS conducted and a new PMCS scheduled upon removal.

(ON SLIDE #31)

(8) Special Preventive Maintenance Checks and Services.

(a) An operating force unit or Marine Corps Reserve unit alerted for combat or training operation will perform a limited technical inspection (LTI) of all equipment before deployment. This LTI is an inspection performed by the unit maintenance personnel to ensure that the equipment is complete, safe to operate, and capable of performing its designated primary combat function.

(b) Upon receipt of all equipment, an appropriate acceptance LTI and such service required by the equipment's TM must be performed. This LTI will include the correction of defects and the inspection of the equipment to determine if required modifications have been applied. Upon completion of the LTI and PMCS, equipment records will be updated.

(c) Special PMCS procedures are necessary if equipment has been exposed to salt or fresh water, or has been operated in loose sand or mud. The equipment will be washed thoroughly with fresh water and appropriate servicing performed as soon as possible to include checking all areas for contamination. Servicing will be performed IAW the applicable TM.

(ON SLIDE #32)

(9) Relationship of PMCS to CM. The objective of PMCS is to reduce CM. This is evident in the following areas:

(a) Common facilities are utilized for both CM and PM. This requires close scheduling of facilities so that PM services may be performed while not preventing the timely completion of CM.

(b) Common servicing. Sometimes a scheduled PMCS is required during CM; for example, an engine repair could require oil and filter change. When this occurs, the decision must be made whether to perform the full PMCS or to appropriately modify the PMCS. This decision must be made on a case-by-case basis, dependent upon the extent of tasks common to both PMCS and CM requirements and the proximity of the next scheduled PMCS. Ensure SR and Install Base are updated.

(ON SLIDE #33)

(c) Defects discovered during PMCS. Preventive maintenance actions frequently detect broken or worn parts before major damage occurs. When this occurs, the decision must be made whether to perform the necessary CM independently or in conjunction with the PMCS. Second echelon or higher PMCS will be completed as far as practical, and the PMCS SR will be closed. All remaining CM will be accomplished on a separate CM SR.

(ON SLIDE #34)

(d) Evacuation of equipment to a higher echelon for CM. All PMCS that are due will be performed on equipment before evacuation of the equipment to a higher echelon of maintenance for CM. An exception to this policy would be the case where the PM services would have to be repeated during the CM, such as not changing the oil when the engine is to be replaced.

1 Equipment waiting or undergoing CM must still receive its scheduled PMCS.

2 Equipment undergoing repairs at an intermediate maintenance activity, PMCS's must be coordinated between the owner and the IMA.

(ON SLIDE #35)

(10) Corrective Maintenance.

(a) Corrective maintenance consists of all maintenance actions performed, as a result of failure, to restore equipment to a specific condition.

(b) The owning unit is responsible for the timely performance of all CM actions within its authorized EOM. CM requirements that exceed the EOM authorized by the owning unit

are the responsibility of the designated support maintenance activity.

(ON SLIDE #36)

(c) Use of Established Corrective Maintenance Procedures. CM actions will be performed IAW the procedures established in the appropriate technical manuals. Deviation from these procedures should be minimized and consistent with the effective performance of the specific maintenance action.

(ON SLIDE #37)

(11) Maintenance Production Process.

(a) MCO P4790.2_, Appendix "F" contains a series of 12 steps depicting the maintenance production processes. These steps are presented as guidance and they are intended to show the logical sequence of steps necessary to complete the various types of maintenance functions.

(ON SLIDE #39)

(12) Maintenance Cycle Time.

(a) By definition maintenance cycle time is the period of time equipment is inoperative and requires repairs.

(b) Maximum Maintenance Cycle Time. Relates to the Intermediate Maintenance Activity (IMA). The maintenance cycle time commences on the date an item is received into the IMA (date received in shop (DRIS)). For those items evacuated for lack of supply support (not mission capable supply (NMCS)) the IMA will use the second echelon DRIS for determining the maximum maintenance cycle time. The following maximum maintenance cycle times are published for equipment inducted in the IMA:

INSTRUCTOR NOTE:

Items evacuated for lack of supply support, can't order parts not stocked in supply system.

(ON SLIDE #40)

1 END ITEMS.

a One hundred and eighty days (180) for West/Mid-Pac units.

b One hundred and twenty days (120) for continental United States (CONUS) units.

2 SECONDARY REPARABLE (CODE "O", "F", "H", "D").

a Ninety days (90) for West/Mid-Pac units.

b Sixty days (60) for CONUS units.

(ON SLIDE #41)

(c) Maximum maintenance effort is required to repair equipment before reaching the maximum maintenance cycle time. The following are some actions the IMA must take to complete repairs before the maximum maintenance cycle time is exceeded.

1 Detailed inspection of inducted equipment and requisition of known faulty components (SecReps/piece parts) will be accomplished within five (5) working days from the DRIS.

2 All supply sources must be used, to obtain the required components as authorized by UM 4400-15 or UM 4400-124, as appropriate. This includes the requisitioning of not-in-stock parts from other sources including commercial procurement, fabrication, salvage, and contract maintenance.

3 Repeated supply follow-up actions as outlined in UM 4400-15 and UM 4400-124 are a must.

(ON SLIDE #42)

(d) When the maximum maintenance cycle time expires or documentation shows that repairs cannot be completed within the maximum maintenance cycle time, the following actions will be followed:

(e) Third echelon shops will report items exceeding the maximum maintenance cycle time to their supporting fourth echelon shop for disposition instructions or action. Documentation of the steps taken to obtain needed parts is extremely important to show that maximum maintenance effort has been exerted.

(f) Fourth echelon maintenance shops will:

1 Submit Recoverable Item Reports (WIR) per MCO P4400.82_ on controlled items. Include in the remarks paragraph all actions taken to obtain required parts, including follow-up message traffic to the MCLB. Albany.

2 Other-than-controlled items will be disposed of per UM 4400-15 or UM 4400-124.

(g) Exceptions. The maintenance officer of the IMA may extend the limits of the maximum maintenance cycle time, subject to approval of the equipment's unit commander, when economically justified and advantageous to mission accomplishment. Documentation for required repair parts must support this decision.

INSTRUCTOR NOTE :

Exception is EDA for the part will arrive in a few days. Owning CO of equipment has to approve to extend the maintenance cycle time.

(ON SLIDE #43)

(13) Maintenance by Cannibalization and Selective Interchange.

(a) MCO P4790.2_, pg. 1-12, provides guidance and clarification concerning cannibalization and selective interchange.

(b) Cannibalization is the removal of serviceable parts from one item of equipment to install them on another item of equipment.

(c) Selective Interchange is the exchange of selected serviceable repair parts or components from a deadlined item of equipment for unserviceable repair parts or components from a like item. The exchange must be complete to qualify as selective interchange. The exchange, however, may take the form of a requisition for the replacement repair part or component in lieu of the actual unserviceable repair part or component.

(ON SLIDE #44)

(d) The difference between the two definitions is that selective interchange addresses the replacement of the removed

serviceable repair part or component, whereas cannibalization does not.

1 This fact has led maintenance personnel to erroneously believe that selective interchange is not cannibalization. By definition (removal of serviceable parts/components from one item for use in repairing another item) selective interchange is, in fact, a lesser degree of cannibalization. As such, the conduct of selective interchange will require the same authorization as cannibalization.

(ON SLIDE #45)

(e) Maintenance by cannibalization or selective interchange will not be employed except:

1 To ensure that a minimum number of equipment is deadlined at any one time for lack of a critical repair part. Maintenance by cannibalization or selective interchange is considered to be an exceptional procedure and is authorized only for equipment when an operational commitment is imminent, and only when it appears that the required part cannot be obtained on a timely basis. At the time of interchange, strict managerial control practices must be implemented at the command and maintenance facility to ensure that the commander of the unit that owns the equipment the serviceable part/components are to be removed from has concurred with the interchange. As a general rule, such procedures will be done at the lowest echelon having the maintenance capability to accomplish the same.

INSTRUCTOR NOTE :

IMA has to have permission from owning unit be doing selective interchange.

2 The equipment that serviceable parts/components are to be removed from will not, as result of such removal, become a candidate for the Recoverable Items Program by exceeding the one-time cost-of-repair authorization or by exceeding the maximum maintenance cycle time for repair. The conduct of the secondary reparable interchange must be in the best interest of the Marine Corps; that is, it must be cost-effective and result in the removal of one item of equipment from deadline without degrading another item of equipment beyond economical repair.

3 The unserviceable parts/components and associated supply requisitions become identified with the item of equipment from which the serviceable items were removed. Unserviceable parts/components that are not reparable will be disposed of per current instructions and replacement items placed on requisition. When considering secondary reparable interchange action, sufficient time must remain within the maximum allowable maintenance cycle time for supply to properly respond to the requisition. Commanders must use caution to ensure that this process does not create items to become permanently deadlined.

(ON SLIDE #47)

a Maintenance by selective interchange must be on a case-by-case basis and authorized by:

1 CMC (LP).

2 Major subordinate command (MSC) commander.

b The commander of any unit authorized by the T/O cover page to perform at least intermediate third EOM and/or be an authorized maintenance float holder. The commander must ensure that:

c The equipment or secondary reparable is in the intermediate category of the maintenance phase.

d The commander of the unit that owns the equipment from which the serviceable part or secondary reparable is to be removed from has concurred with the interchange.

(ON SLIDE #48)

(12) Overflow Maintenance. Is that maintenance within the unit's authorization EOM but beyond its capability because of restrictive and/or unusual circumstances and is consequently performed by another unit, usually a support activity. The following conditions may cause a unit to use overflow maintenance:

(ON SLIDE #49)

(a) The unit has insufficient maintenance resources, such as shortage of mechanics/technicians, shop space or facilities, maintenance equipment or inadequate supply support.

Evacuation for lack of supply support is an exceptional case and is employed only when:

1 Proper reconciliation procedures are followed.

2 Follow-up of supply documents is documented.

3 Requisitioning of not in stock parts from other sources will not provide relief within the maximum maintenance cycle time.

(b) The unit may have a surge in workload. For example, requirements to meet pre-deployment schedule or post-deployment requirements, urgent modifications required on high density equipment, and so forth.

(c) Another reason for requesting overflow maintenance is cost effectiveness, such as there may be instances when it would be more cost effective for the support maintenance activity to perform organizational maintenance on support equipment in conjunction with or independent of the IMA. Such overflow maintenance will be contingent on the availability of maintenance resources at the supporting activity and agreement between the support activity and the supported organization.

(ON SLIDE #50)

INTERIM TRANSITION: Now that we know what Overflow Maintenance consists of, are there any questions? If not, let's take a break and then you will take a Quiz.

(BREAK 10 MIN)

INTERIM TRANSITION: Are there any questions? If not, let's take the Quiz.

INSTRUCTOR NOTE

Introduce maintenance quiz.

Quiz: (1 HOUR) Handout out maintains production Quiz "A". Allow the student 20 minutes to complete. Each student will complete this quiz on their own. Instructor will review with the students the correct answers.

Quiz: Students will complete quiz on their own. Students will not talk, except to ask the instructor a question.

PROVIDE-HELP: Instructor will be available to answer student questions throughout the entire Quiz time period.

1. Safety Brief: N/A

2. Supervision and Guidance: Instructor will be available to answer student questions throughout the entire Quiz time period.

3. Debrief: Instructor will review each question on the Quiz. Show the quiz answer key on tv screens.

INTERIM TRANSITION: Are there any questions over the maintenance quiz? If not let's take a break and then we will discuss Budgeting.

(BREAK 10 MIN)

INTERIM TRANSITION: Are there any questions? If not, let's discuss Budgeting.

(ON SLIDE #51)

(13) Budgeting.

(a) Budgeting is planning for future expenditures. A budget is an itemized list of these expenses. Every year each unit in the Marine Corps prepares and submits a budget.

(b) When budgeting, the budget officer estimates the amount of money needed for repair parts, replacement of T/E (Table of Equipment) materiel, POL (Petroleum, Oil, and Lubricants), DSSC (Direct Support Stock Control - Self-Service)

purchases, open purchases, operational commitments, and other expenses.

(ON SLIDE #52)

(c) Yearly, funds are authorized and distributed by fiscal quarters (Oct, Jan, Apr, Jul) to the using unit by the Major Command (FSSG, Wing, or Division) Comptroller based upon the budget submitted the previous year and the amount of funds available.

(d) If during the monthly review of requirements, it is noted that more funds are required, a request for additional funds should be forwarded as dictated by local standard operating procedures (SOP).

(e) Even though the impact of funding is indirect, the role of an MMO is vital. An MMO coordinates and ensures the input of maintenance requirements for all commodity areas.

(ON SLIDE #53)

(14) Planning/Forecasting.

(a) Even though the impact of funding is indirect, the role of an MMO is vital. An MMO coordinates and ensures that the input of maintenance requirements for all commodity areas are accurate.

An MMO's first task in the budgeting process is to ensure that the historical information is correct and accurate as well. The cost of parts which were "scrounged" will not appear in any list of expenditures even though the "scrounged" parts were reported.

(b) Past expenditures are historical. Field budget guidance (MCBul 7100 series) and staff coordination G-3/S-3 and G-4/S-4 will provide the important facts regarding the tempo of future operation, logistical commitments, and new equipment receipts. With this data the MMO can assist commodity maintenance section in expressing requirements while fulfilling staff responsibility for input to the budget process.

(ON SLIDE #54)

(15) Control. Once allocated, funds must be controlled. There are numerous regulations concerning obligation authority, over obligation, and the like. An MMO's responsibility includes providing staff advice on internal reallocation of money,

ensuring that funds obligated for maintenance resources are applied in the best manner, and ensuring that periodic fiscal reviews are conducted. Below are two (2) examples that best illustrate the control function of an MMO:

(a) Example 1. On the unit's Maintenance Progress Report (MPR), a status change indicates a readiness-reportable item is deadlined in a short funds status. A quick check of the MPR shows noncritical repair parts (Priority 13) on order in all commodity areas for both readiness-reportable and non-reportable items. An MMO fulfills the control function and meets staff responsibility by coordinating with supply and fiscal officers and presenting the commander with the necessary information to decide on the reallocation of funds, cancellation of requisition, or request for additional funds.

(ON SLIDE #55)

(b) Example 2. An MMO in conjunction with the unit's supply and fiscal officers and in coordination with the comptroller, should develop a unit job order number (JON) structure which not only provides for data collection but must also be kept current. This permits sound command decisions based on readily available information in a usable form.

(ON SLIDE #56)

(16) Fiscal Record. Fiscal ledgers are required to be maintained by using units, primarily to ensure that funds are not over obligated. The fiscal ledger is a record of all financial transaction and subsequent adjustments to those transactions, plus the current status of funds remaining. The ledger will be kept current at all times in accordance with local SOP.

(a) Document reconciliation will be in accordance with local command procedures furnished by the fiscal officer. Using units will utilize the current Additional Demand Listing (ADL) as an aid in this reconciliation.

TRANSITION: We have just covered maintenance production. Are there any questions up to this point? If not, I have a several for you. Q1: What is the MMCT for End Items for CONUS and OCONUS? **A1: 120 CONUS and 180 OCONUS** Q2: What is the difference between Cannibalization and Selective Interchange? **A2: Selective interchange addresses the replacement of the removed serviceable repair part or component, whereas cannibalization does not..** Q3:

Who is the main individual in a unit responsible for controlling the budget? **A3: The MMO**

(BREAK - 10 Min)

TRANSITION: Did anyone think of any questions during the break? If not, let's look at the Legacy to GCSS terms and then discuss the Purpose of GCSS-MC.

(ON SLIDE #64)

INSTRUCTOR NOTE

Have students refer to Appendix A. Legacy to GCSS terms

(ON SLIDE #65)

2. **PURPOSE OF GCSS-MC.** (1.5 Hrs) The purpose of Global Combat Support System (GCSS-MC) is a portfolio of near-real time systems that support logistics elements of command and control, joint logistics interoperability, and secure access to, and visibility of logistics data.

(ON SLIDE #66)

a. **Benefits of GCSS-MC.**

(1) Visibility. Know the status and availability of equipment, repair parts, maintenance personnel, and other classes of supply.

(2) Readiness. Higher Headquarters, Unit leaders and Maintenance Managers will have visibility of equipment availability and condition by individual unit up to Major Subordinate Command (MSC) levels.

(3) Distribution. Allows the maintenance manager to task supplies, services, and parts in support of the 8 functional areas of maintenance.

(ON SLIDE #67)

b. **Immediate Benefits.**

(1) Paper reduction/system will be automated for approvals and/or requests. Replaces written order forms for maintenance. Maintains online history for three years, after three years history is archived in a data repository.

(2) Integrated tracking of supplies and requests for Maintenance and services.

(3) Near real time results of statuses and readiness.

(4) Interfaces with multiple systems such as Total Force Structure Management System (TFSMS), Standard Accounting Budget and Reporting System (SABRS), Marine Air Ground Task Force (MAGTF) Deployment Support System (MDSS II), Storage Retrieval Automated Tracking Integrated System (STRATIS), and the Material Returns Program (MRP).

(5) Demand-supported Items Management and automatic re-ordering of reorder points.

(ON SLIDE #68)

(6) Reliable information about operational status of equipment availability and readiness.

(7) Improved accountability and traceability.

(8) Maintains life cycle history of equipment.

(9) Increases speed and productivity.

(10) Single system whether deployed or in garrison, able to access via any web browser.

(11) Enables you to monitor funding for maintenance programs and resources, Secondary Repairables (SECREPs), Corrosion Restoration, and repair parts.

(ON SLIDE #69)

(12) Operationally effective by being able to move more rapidly and make well informed decisions about equipment.

(13) Plan equipment sustainment resource requirements and maximize the effectiveness of the units funding.

(14) Run standard reports, builds custom reports and pull data for analysis.

(15) Any Marine that has user capabilities can make a request for supplies or services.

(16) Improves logistical response time on delivery of goods and services through an automated process for requesting and tracking any materials needed.

(ON SLIDE #70)

c. **Approval and Authorizations.**

(1) Based on the authorization assigned to the user by the Using Unit Account Manager (UUAM) and Urgency of Needs Designator (UND) Letter.

(2) All GCSS-MC account holders will have the ability to open Service Request (SR) to the highest priority.

(3) In order to have an Authorized approval of priority the user who is approved in writing must log into the SR and change the SR status and save in order to place digital signature on SR.

(ON SLIDE #71)

d. **Basic Approval Flow.**

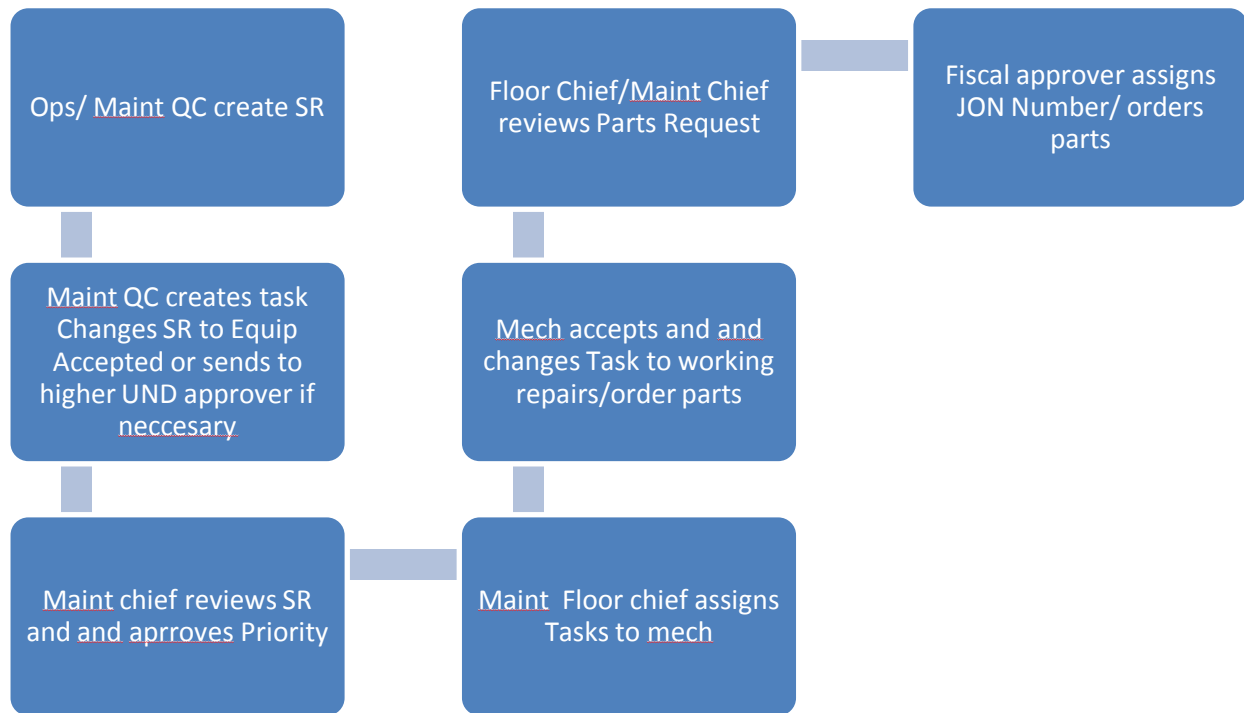


Figure 1

(ON SLIDE #72)

e. **Capabilities of GCSS-MC.** The following capabilities are listed:

- (1) Highlights.
 - (a) Readiness (personnel and equipment).
 - (b) Task Organization.
 - (c) Administrative Functions (Assign User Permissions, etc).
 - (d) Common Access Card (CAC) required.
 - (e) Management of Reports
 - (f) Service Request Management.
 - (g) Customer Product Data (catalogs, FEDLOG, etc).

(ON SLIDE #73)

(2) Supply Logistics.

(a) Inventory Management (T/E assets, Operating Stocks and Demand-supported Items).

(b) Inventory Planning (Quarterly and Annual Inventories).

(c) Order Management (ensuring the supported units receive what they need, when they need it).

(ON SLIDE #74)

(3) Maintenance Operations.

(a) Maintenance capacity and fulfillment planning.

(b) Maintenance Operations Scheduling.

(ON SLIDE #75)

(4) Warehouse Management. Inbound items, receipts.

(5) Demand Planning. Demand planning is referred to as General Package Plus for setting up the ordering of preventive maintenance kits. Deployment Blocks are commonly referred to as a class IX block for setting up the ordering of repair parts for deployment.

(6) Procurement. Procurement to purchase items needed for supported units.

(ON SLIDE #76)

INTERIM TRANSITION: We have just covered the capabilities of GCSS-MC, are there any questions? If there are no questions take a 10 minute break.

(BREAK - 10 Min)

INTERIM TRANSITION: Before the break we discussed the capabilities of GCSS-MC, now let's talk about the Universal Work Que?

(ON SLIDE #77)

f. Purpose of the Universal Work Queue (UWQ). This topic provides you an overview of the Universal Work Queue (UWQ). The purpose of the Universal Work Queue is to access, organize, and act upon different types of work generated in GCSS-MC system. Work items such as service requests can be accessed by using the UWQ. You can check all of your assigned service requests and the status of those service requests.

(ON SLIDE #78)

- (1) What is the Universal Work Queue?
 - (a) The UWQ will contain all your work items.
 - (b) The content of the UWQ includes the following:
 - 1 View work from several source applications.
 - 2 See counts of workload.
 - 3 Access work assignments directly.

(ON SLIDE #79)

(c) **It is important that you "Refresh" your queue to see the most current work products.** From the UWQ screen click > Tools > Refresh.

(ON SLIDE #80)

(2) Work Type Selector. The Work Type Selector allows you to navigate to work organized into Queues. It also displays Counts of work for each queue, allowing you to quickly access workload.

(ON SLIDE #81)

- (a) Node types.

1 Service Request. Total number of service request in the UWQ.

2 Task. Total created Tasks from the services request.

3 My Tasks. Total assigned tasks to you.

(b) Work Selector Queues contain nodes and sub-nodes, which allow you to navigate to specific types of work quickly.

(c) If your name is in the "Owner" field on a Task from a given Service Request, then the task would show in "My Owned".

(d) If your name is the "Assignee" field from a given Service Request, then the task would be in the "My Assigned" section.

(ON SLIDE #82)

(3) Work Summary Panel.

(a) The Work Summary Panel lists work items in standard row format.

(b) You can view, access, and select an individual item to work on.

(c) When you select a work item, the appropriate source form launches for you to act on the work item.

(ON SLIDE #83)

(4) UWQ Tools Menu Options. The following Tools Menu options are available for the UWQ:

(a) Refresh All Work. Refreshes all data.

(b) Refresh Current Counts. Refreshes counts data.

(c) Switch display to Cascade. Allows you to alternate between two UWQ display formats (Hybrid & Cascade).

(5) UWQ Tool Bar Icons. The following Tool Bar Icons are available for the UWQ:

(a) Refresh Current Counts. Allows you to refresh all counts and work item in the UWQ.

1 At the start of your session.

2 When you return from a break.

3 After a rush of work.

4 After an hour or two of continuous work.

(b) Switch to Cascade. Switch alternate view.

(c) Get Work. Allows you to open the work item you have selected in the Work Summary Panel.

(ON SLIDE #84)

(ON SLIDE #85)

g. Purpose of Install Base. Install Base facilitates item lifecycle management and tracking. Install Base records routine and detailed information about a particular item instance.

(1) Item Instance. Term used to refer to a single item and all history associated/ tracked with the item.

(a) Serialized and non-serialized items, PEI

(ON SLIDE #86-87)

(2) Information Available. All parent child relationships, additional attributes, party relationships, counters, notes and service requests.

(ON SLIDE #88-89)

(a) Parent/child relationships. For example the common 24 is a parent of 3 torque wrenches and 1 multimeter.

(ON SLIDE #90-91)

(b) Additional Attributes. This area records all calibrations information, modification remarks, Preventive Maintenance scheduling and type and counters.

(ON SLIDE #92-93)

(c) Counters. Lists the type of counters for PMCS

(ON SLIDE #94-95)

(d) Notes. All information that was recorded in the 696 is annotated there along with acceptance LTI's.

(ON SLIDE #96-97)

(e) Service Requests/History. Lists all SR's opened or closed on that item.

(ON SLIDE #98)

g. **Purpose of the User Productivity Kit (UPK)**. The purpose of the User Productivity Kit is a collaborative development environment that provides real simulation of the GCSS-MC application according to responsibility and functions. Reinforces training before, during and after GCSS-MC has been implemented. Practical Applications Activities can utilize UPK for given system tasks and/or events.

(ON SLIDE #99)

(1) UPK Five Playback Modes.

(a) The 5 available Playback Modes.

1 See It! Mode. This mode enables you to learn about the selected topic by displaying an animated demonstration of a task being completed.

2 Try It! Mode. This mode allows you to perform the selected task in a simulated environment.

3 Know It! Mode. This mode tests your ability to perform the selected task in the simulated environment.

4 Do It! Mode. This mode guides you as you perform the selected task in the live application.

5 Print It! Mode. This mode allows you to print a topic in Microsoft Word or Adobe PDF format.

INTERIM TRANSITION: Up to this point we've discussed the purpose of GCSS, the UWQ, and the Install Base/Item Instance. Do you have any questions? If not, let's move onto the demonstration of how to access the Universal Productivity Kit (UPK).

INSTRUCTOR NOTE

Perform the following demonstration.

(ON SLIDE #100-101)

DEMONSTRATION. (30 min) Demonstrate how to access and use GCSS-MC Online Training UPK. The purpose of this demonstration is to show students how to access GCSS-MC and look at various functions in GCSS-MC.

STUDENT ROLE: Students will record the mapping instructions to gain access to GCSS-MC. Students are to observe the demonstration only. They are to ask questions or make comments for clarification. **Students will not attempt to perform the steps along with the instructor.**

INSTRUCTOR ROLE: Demonstrate how to gain access to GCSS-MC using Google.

1. Safety Brief: N/A

2. Supervision and Guidance: Utilize the instructor computer to display demonstration on the screens. Demonstrate how to access GCSS-MC Online Training UPK. Demonstrate the application of each UPK for Universal Work Que and Install Base.

3. Debrief: Allow students the opportunity to ask questions and comment on the demonstration. Answer student questions and provide feedback on student comments. Review mapping instructions for access to GCSS-MC Online Training UPK.

INTERIM TRANSITION: You have just observed a demonstration covering the UPK, are there any questions? If not, you will perform a Practical Application.

INSTRUCTOR NOTE

Introduce the following Practical Application.

PRACTICAL APPLICATION. (1 hr) Each student will accomplish the assignment on their own. There is one instructor required Each student will access and use GCSS-MC Online Training UPK and perform the "Try it" and "Know it" modes for the following modules:

CS 101.06.02.02

Maintenance 201.04.02.01 - 201.04.02.03

Maintenance 201.05.02.01 - 201.05.02.04

STUDENT ROLE: Students will log on and perform prac app at their own pace. When finished they should sit quietly until all the other students are finished.

INSTRUCTOR ROLE: Instructor should click on Softlink icon in order to view the student's progress. This also allows the instructor to ensure students aren't viewing other websites and staying on task.

1. Safety Brief: N/A

2. Supervision and Guidance: Instructor should also walk around the room and answer questions as they come up.

3. Debrief: Allow students the opportunity to ask questions and comment on the demonstration. Answer student questions and provide feedback on student comments.

(ON SLIDE #102-103)

TRANSITION: Are there any questions over the Practical Application? If not, I have a couple for you. Q1: What is the purpose of Global Combat Support System (GCSS-MC)? **A1: a portfolio of near-real time systems that support logistics elements of command and control, joint logistics interoperability, and secure access to, and visibility of**

logistics data. Q2: What does UPK stand for? **A2: User Productivity Kit.** Q3: What is the electronic inbox where request of services are collected, acted upon, or reassigned to other users? **A3: Universal Work Que** Q4: What is the first step when opening the UWQ? **A4: Tools refresh all work.** Q5: Why is it important to refresh your work within the UWQ? **A5: So that you can see the most up to date information.** At this time take a ten minute break.

(BREAK - 10 Min)

TRANSITION: Did anyone think of any questions during the break? If not, let's talk about the NAVMC 10560, Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment?

(ON SLIDE #104)

3. NAVMC 10560, Worksheet for Preventive Maintenance and Technical Inspection for Engineer Equipment. (30 MIN)

INSTRUCTOR NOTE

FOUND IN TM 4700-15/1_, pg. 2-22-1

(ON SLIDE #106)

a. **Purpose.** The purpose of the NAVMC 10560 is to provide a check list for performing and recording preventive maintenance checks and services (PMCS) and LTI's (Limited Technical Inspections), to include acceptance LTI's, LTI's prior to major repair, and LTI's at the discretion of the Engineer Equipment officer/chief on Tactical Engineer Equipment and GME Fleet Managers on Garrison Mobile Engineer Equipment. The NAVMC 10560 is also used as a guide when performing an annual safety/condition check (ASCC).

Equipment Forms and Records for Equipment on Temporary Loan.

NOTE: TM 4700-15/1_, Chapter 1, pg. 1-5, Para. 1-9.

The owning unit will provide a skeleton equipment record for the temporary loan of equipment. Temp. Loan in this instance is considered any short term transfer of equipment from equipment owner to a temporary holder of the equipment that does not

involve a formal transfer of equipment custody: for example, a command adjustment of allowances. Tag each skeleton equipment record with the type and due date of the next scheduled preventive maintenance check and service. The unit borrowing the equipment will maintain equipment records/skeleton records up-to-date including entries on all maintenance actions performed. The borrower will update the Field Maintenance Subsystem (FMSS) when loaded to the FMSS, or provide the information necessary to the owning unit to update the FMSS. Upon return of equipment, the borrowers will return the up-to-date equipment forms and records containing maintenance actions performed. The lender will up-date all original records and file the copies of maintenance actions performed per the instructions contained in the TM 4700-15/1_. At a minimum, skeleton equipment records will consist of the joint Limited Technical Inspection performed at the time of issue to the borrowing unit, and the SL-3 extract for all SL-3 components temp loaned with the end item.

(ON SLIDE #107-112)

b. **Preparation Instructions**. The preparing activity may be the equipment owner, the equipment user; for example, the equipment is on temporary loan, or the equipment custodian as in the case of the maintenance section evacuating to the next higher EOM. The preparing activity is responsible for initial preparation of the NAVMC 10560. Those items marked with a pound sign (#) will be completed by the preparing activity.

(1) Section A

(a) Use "SERVICING SYMBOLS" (SS) to list requirements for PMCS noted in the (SS) column of sections "D" through "M".

(b) Use "LEGEND FOR MARKING" (SS) to list requirements for CM noted in the (SS) column of sections "D" through "M".

(c) In the "NOMENCLATURE" block, enter the nomenclature listed on the DATA PLATE.

(d) In the "MAKE" block, enter the make listed on the DATA PLATE.

(e) In the "MODEL" block, enter the model listed on the DATA PLATE.

(f) In the "ORGANIZATION" block, enter the full name of the activity and AC of the unit that owns the item of equipment.

(g) In the "DATE" block, enter the date the NAVMC 10560 is being prepared.

(h) In the "HOURS" block, enter the hour meter reading for items that are equipped with an hour meter, otherwise leave blank.

(i) In the "MILES" block, enter the odometer reading for items that are equipped with an odometer, otherwise leave blank.

(j) In the "REGISTRATION NO." block, enter the MC registration no. listed on the NAVMC 696D.

(k) In the "ENGINE MAKE/MODEL" block, enter item of equipment engine/model (if applicable list both engines) as listed on the item of equipment's engine.

(l) In the "ENGINE SERIAL NO." block, enter the item of equipment engine serial no. (if applicable list both engines) as listed on the item of equipment's engine.

(m) In the "ATTACHMENTS" block, enter the item of equipment's attachments nomenclature, make and model, and serial no.

(n) In the "INDICATE PURPOSE" block, use an "X" to indicate if the NAVMC 10560 is for technical inspection (TI), Limited Technical Inspection (LTI), Hourly PM, or Other (state). When the purpose is hourly PM enter the hours. When the purpose is other, list a description.

(o) Use the "LEGEND FOR MARKING" to mark the "squares" for Equipment Record Folder, Publications Available, Appearance, Operator's Daily PM, Fire Extinguisher, Tools, and Equipment.

(2) Section B. This section is optional when the comments are written directly to the SR.

(a) List all items that are not satisfactory in the (SS) column of sections "D" through "M" in section B.

(b) List all Modification and Technical Instructions that need to be accomplished.

(c) List all items listed in section B to the SR.

(3) Section C. Is only required when a condition code is requested.

(a) In the "Item Cost (Current)" block, enter the cost listed in the MHIF or the FED LOG.

(b) In the "Equipment Age" block, enter the item of equipment's age. This is subtracting the current year and month from the year and month listed on the item of equipment's data plate.

(c) In the "Repair Limit" block, enter the percent (%) one time and the cost limit of repair allowed for the item being inspected. Repair limit is 65%. (**NOTE**: FOUND IN MCO 4790.19, pg. 3, para. 2.g.)

(d) In the "Est. Cost This Repair" block, enter the estimated cost to repair the items listed in section B.

(e) In the "Condition Code" block, enter the end item of equipment condition code. (**NOTE**: FOUND IN UM-4400-124, pg. 4-4-22).

(4) Section "D" through "M" (SS) columns.

(a) Use section A blocks "Servicing Symbols" (SS), for PMCS and "Legend for Marking" (SS) for all other purposes.

(b) List all columns other than satisfactory in section B of the ERO/SRO.

(5) Section "N".

(a) In the "MI/TI NO." block, enter all applicable modification and technical instruction numbers and title of the instructions listed in the SL-1-2 for the item of equipment.

(b) In the "PERFORMED" block, use a checkmark in the yes block to indicate that the modification or technical instruction has been performed.

(c) In the "PERFORMED" block, use a check mark in the no block to indicate that the modification or technical instruction has not been performed.

(6) Section "O" is self explanatory.

(7) Section "P".

(a) In the "Mechanic/Operator (Name, Grade, Organization)" block, enter the name, grade, and organization of the person preparing sections "B" through "M".

(b) In the "Maintenance/Operations Chief (Name, Grade, Organization)" block, enter the name, grade, and organization of the maintenance/operations chief of the mechanic/operator listed in the "Mechanic/Operator (Name, Grade, Organization)" block of section P.

1 In the "ERO No." block, enter the SR number.

2 In the "Date" block, enter the date the SR was assigned.

3 In the "Maintenance/Operations Officer As Required (Name, Grade, Organization)" block, enter the name, grade, and organization of the maintenance/operations officer.

4 In the "Responsible Officer As Required (Name, Grade, Organization)" block, enter the name, grade, and organization of the responsible officer.

5 Tactical Engineer Equipment. For Tactical Engineer Equipment, use the Service Request in conjunction with NAVMC 10560 to record all PMCS and CM performed and the Parts Requirements to request parts.

(ON SLIDE #113)

(8) Filing and Disposition. When the maintenance officer/chief has verified that all requirements listed in section B of the worksheet have been transferred to a Service Request, the NAVMC 10560 will be destroyed. Retain any NAVMC 10560 used in conjunction with an investigation until released from investigation. Treat a NAVMC 10560 released from investigation as CM.

(9) Responsibilities for Tactical Engineer Equipment. The equipment chief is responsible for preparing the worksheet for the PMCS. Prepare a template indicating the required PMCS for each item of equipment to facilitate the preparation. When preparing the template, refer to the appropriate services listed in the TM's, Army Technical Bulletins, and other publications applicable to the equipment. Comparing the template for the specific item of equipment with the blank form NAVMC 10560, non-applicable portions of the form may be blanked out. The worksheet which indicates the required services is then turned over to the maintenance unit. The maintenance unit, with the assistance of the operator, performs the required services and signs the worksheet indicating that the service has been completed. The equipment chief will also ensure that equipment requiring repairs is inspected and the results of the inspection are recorded on the form NAVMC 10560 worksheet before the equipment is repaired.

ITERIM TRANSITION: We've just covered the preparation instructions and filing/disposition of the NAVMC 10560, are there any questions? If not, let's move into the practical application of performing an LTI.

INSTRUCTOR NOTE

Introduce the following Practical Application. Have students take breaks as required.

(ON SLIDE #114)

PRACTICAL APPLICATION. (1 HR) Pass out NAVMC 10560. Split the class into four equal groups and assign each a specific item of equipment. The purpose of this Practical Application is to properly conduct a Limited Technical Inspection. Normal class size is 25. There is one instructor required for this evolution.

PRACTICE: Students will use their NAVMC 10560 and perform an LTI on equipment that is located at the rear of Brown Hall.

Safety Brief: Three points of contact while climbing in/around equipment.

Supervision and Guidance: Instructor is moving around the lot, assisting students, and answering questions as they arise.

Debrief: PEI major discrepancies will be briefed.

TRANSITION: We've just completed the LTI practical application, are there any questions? If not, I have several for you. Q1: What is the purpose of the NAVMC 10560? **A1: To provide a check list for performing and recording preventive maintenance checks and services (PMCS) and LTI's (Limited Technical Inspections)** Q2: Is the NAVMC 10560 used for ASCC's? **A2: Yes** Q3: Who is responsible for ensuring Mods has been performed during the LTI? **A3: QC.** At this time take a ten minute break.

(BREAK - 10 Min)

TRANSITION: Did anyone think of any questions during the break? If not, let's talk about the Corrective Maintenance Service Request.

(ON SLIDE #117)

4. CORRECTIVE MAINTENANCE SERVICE REQUEST. (1 Hr 30 MIN)

a. Preparation, Filing, and Disposition of a Service Request (SR).

(ON SLIDE #118)

(1) Purpose of a Service Request (SR). A service request is the foundation of all activities within GCSS-MC. The GCSS-MC maintenance SR will be used in place of NAVMC 10245 in all instances of maintenance that require Modification, Calibration, Corrective Maintenance, Preventive Maintenance Checks and Services (PMCS), Collateral Equipment (sl-3) replenishment, and Limited Technical Inspections on ground equipment managed within GCSS-MC.

(ON SLIDE #119)

(a) A task will be created for each defect identified during the acceptance LTI and during the conduct of maintenance.

(ON SLIDE #120)

(b) GCSS-MC functionality requires a SR to be opened in any instance where parts are applied. A SR is not required in instances where labor is less than .3 hours and no parts are applied. Separate service requests are required for Calibration, Corrective Maintenance, PMCS, Modification or Limited Technical Inspections.

(ON SLIDE #121)

(c) A SR may have different priority tasks. If a task is created or upgraded to a higher priority than the SR, GCSS-MC will provide a warning that the SR will also be upgraded and may require a work re-approval.

(ON SLIDE #122-123)

(d) Inter-shop repairs for the child of a PEI (ex. HMMWV component for MRC) will be accomplished by opening a parent SR (ex. SR for TAMCN A0067) and a child SR for the HMMWV. Parent and child SR must be linked. The child SR owning group will be changed to reflect the group performing repairs (ex. MXXXXX_MT) and the status will reflect "INTER-SHOP RPR". The group performing the repair on the child will change the status of the SR to equip accepted. If it becomes necessary for the child to be evacuated to a supporting maintenance activity, the child SR will be copied.

(ON SLIDE #124)

(2) Responsibilities.

(a) Preparing Activity. The preparing activity may be the equipment owner, equipment user (temp loan) or equipment custodian (maintenance section) as in the case of the maintenance section evacuating equipment to a supporting organization with the appropriate maintenance capability.

(ON SLIDE #125-129)

(b) At a minimum the following data elements will be captured on the SR:

1 Contact Information. Input the individual to be contacted upon completion of repairs.

2 Serial/Item Instance Number. Input the serial or item instance number, which requires repair, and 'tab'

from that field. This action will auto-populate the customer, TAMCN/ID/MODEL, NIIN, and description fields.

3 Service Request Type. Select the appropriate maintenance request type from the drop down menu. Ensure only one SR of each maintenance request type is open on a specific item of equipment at each maintenance activity.

4 Status. Select the appropriate status of the SR i.e. SHT PRT, SHT FND, Equip Accept.

(ON SLIDE #130)

5 Priority. Select the appropriate priority per MCO 4450.7E. Urgency of Need Designator (UND) work approval rules still apply to priority selection. Priority designators 01 through 03 will be processed on a 7-day workweek, 24-hour workday basis. Priority designators 04 through 15 will be processed, at a minimum, during the normal work week. This will be based on production work load, appropriate criteria established by the Maintenance Officer/Chief, and local MMSOPs.

(ON SLIDE #131-134)

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

I- Reserved for those units that are most important in the opinion of the Chairman of the Joint Chiefs of Staff.

II- OCONUS or deployed or planning to deploy within 30 days.

III- CONUS

IV- Marine Forces Reserve units.

V- The Marine Corps Exchange (MCX)

Urgency of Need Designator A - Item must be dead lined combat essential equipment.

Urgency of Need Designator B - Item is degraded

Urgency of Need Designator C - Routine or on schedule repairs, maintenance, and replacement.

(ON SLIDE #136-137)

6 Echelon of Maintenance. Select the appropriate echelon of maintenance conducting repairs.

(ON SLIDE #138-139)

7 Group. Input the resource group conducting repairs.

8 Problem Summary. This is a free text field. Keep the problem summary clear and concise.

9 Problem Codes. These are synonymous with legacy defect codes and appear on the maintenance production report.

10 Operational Status. Assign the appropriate operational status. Note that 'deadlined' status will auto-populate the deadline control date (DCD) field in the header of the SR upon this assignment.

11 Notes. Use the notes to add any relevant/additional information.

(ON SLIDE #140)

(3) Maintenance Activity.

(a) Upon receipt of a SR, the maintenance activity will validate the information contained on the SR compared to the actual equipment inducted into maintenance. The maintenance activity will utilize the SR notes to record information validated during induction (also referred to as an "acceptance inspection"). Examples of information to be validated will include, but are not limited to, the following:

(ON SLIDE #141)

(b) Each SL-3 component accepted will be listed. If all SL-3 items are accepted, a statement of 'accepted SL-3 complete' will be entered.

(c) Visual defects will be listed on the SR. If there are no visual defects, a statement of "no visual defects" will be entered.

(d) The operator/crew PMCS condition of the equipment will be annotated.

(ON SLIDE #142)

(e) If the SR has not been properly completed per the GPN 1-13, reassign the SR to the preparing activity and notify them to take corrective action as necessary. Coordination shall be made between the preparing activity and the supporting maintenance activity to ensure required services are provided.

(ON SLIDE #143)

(f) The maintenance activity will change the status of the SR to 'Equip Accepted,' save the SR and print a copy of the equipment's transfer of custody report and provide it to the preparing activity. Accomplishment of this step will auto-populate the date received in shop (DRIS). This action will be completed prior to the maintenance activity performing further steps in the maintenance cycle.

(ON SLIDE #144-147)

(g) The maintenance section will accomplish all repairs within its authorized maintenance capability and record that information in the SR for each task created.

(h) Labor debrief. Record actual time expended in the performance of maintenance for the assigned task on the 'labor' tab of the task debrief.

(i) Materiel debrief. Record all materiel, including Demand-supported Items, scrounge, broken unit of issues (BUI), and parts ordered, for the assigned task on the 'materiel' tab of the task debrief.

(ON SLIDE #148)

(j) Ensure job status codes are applied to the SR and properly reflect the actual status of the equipment throughout the maintenance cycle.

INTERIM TRANSITION: Are there any questions on what we just covered? If not lets take a break.

(BREAK 10 MIN)

INTERIM TRANSITION: Did anyone think of any questions during the break? If not, let's move on.

(k) Removing equipment from a deadlined status and closing the service request. The following steps apply when equipment has been repaired to the extent that it is no longer deadlined or all repairs have been completed.

(4) Debrief all deadlining parts.

(a) Debrief all labor hours within each completed task to record actual labor hours incurred then set the status of the task to closed, click save.

(b) If additional repairs are outstanding but the item is no longer deadlined, the operational status of the SR will update automatically based on the assigned operational status of remaining task(s). The maintenance activity will ensure each maintenance action required is captured in a task and assigned the appropriate operational status. Legacy category codes have been replaced by the operational status.

(ON SLIDE #149)

(c) The maintenance activity will perform quality control measures to ensure the equipment is operational, modifications are verified, and all parts requirements are debriefed within each respective task. A statement of "repairs inspected, MODS verified, QC complete" will be entered in a task for final insp. At that time, the maintenance activity will create an owner notified task and submit to the preparing activity. If the preparing activity is not satisfied that all requested services have been properly performed and all maintenance tasks have been "closed", the maintenance activity will resolve any issues to ensure the customer receives the requested support.

(d) Equipment counters will be updated with the current counter reading at the time the SR is being closed. Prior to closure of a SR, the Maintenance Officer/Chief will verify entries for work performed.

(ON SLIDE #150)

(e) Once satisfied that all requested support has been properly provided, the preparing activity will recover all equipment submitted for service. The preparing activity will set the SR to "closed", a dialog box will appear indicating the item's operational status will be set to 'OPERATIONAL-NO SR' if all service requests are closed or cancelled. Click 'ok' to accept. A copied/courtesy SR will be closed by the maintenance activity conducting repairs.

(ON SLIDE #151)

(5) Filing and Disposition. Maintenance history captured on the SR will remain associated to the item instance/serial number for the life of the item's instance under service history. As a result, activities are no longer required to print paper copies of service requests to file in the equipment record jacket or NAVMC 696D. MCO 4400.16H mandates the use of GCSS-MC for various form's that are functionally incorporated and also allows for non-system maintenance documentation to be uploaded to the equipment item instance. These documents can be either scanned copies or electronically formatted forms.

(a) The intent is to capture required maintenance documentation in GCSS-MC. In the event that required maintenance documentation cannot be uploaded, units are required to retain hardcopy maintenance documentation until it can be successfully

loaded into GCSS-MC or until such time as the required document retention period has elapsed.

(b) Commanders may utilize a 696D, or commodity equivalent, for document retention in those instances where loading non-system documentation is not presently feasible.

(ON SLIDE #152)

b. **Types of Service Requests.**

- (1) Service. This involves the request for support
- (2) Maintenance. This involves the repair of an end item and request replacement parts.
- (3) Supply. This involves the ordering of parts or end items.

(ON SLIDE #153-154)

c. **Flow of a Service Request.** The process flow of a SR varies with the type of SR and MMSOP. In general the flow is as follows:

- (1) Requestor. The one requesting a service to be accomplished
- (2) Capacity Manager. This individual evaluates the SR and approves the service
- (3) Production Manager. This individual tasks out the work to the executor
- (4) Executor. This is the individual performing the work.

(ON SLIDE #155-156)

d. **Creation of a SR .** Once a new service request is opened, the fields highlighted in yellow indicate required information to be inputted.

- (1) Contact Type.
- (2) Customer Type.

- (3) Name.
- (4) Type.
- (5) Status.
- (6) Priority.
- (7) Problem Summary.
- (8) Operational Status.

(ON SLIDE #158-159)

e. **Request Work In The Service Request.**

(1) Tasks. The task tab is used by the production manager to setup and assign tasks for workers to perform. After a task is opened, the fields highlighted in yellow indicate required information to be inputted.

- (a) Type.
- (b) Status.
- (c) Priority.
- (d) Owner Type.
- (e) Owner.
- (f) Start Planned Date.
- (g) End Planned Date.
- (h) Planned Effort.
- (i) Subject

(ON SLIDE #160-179)

- (2) Close Service Request.

(a) Task Debrief. The task debrief form allows the labor and material to be recorded.

1 Service Activity Code.

2 Duration.

3 Service Start Date.

4 UOM.

5 NIIN.

6 Qty.

7 Org.

8 Locator.

9 Serial Number

10 Lot

11 Service Date

12 WRS

(b) Close Out Service Request. A service request can only be closed once all of the tasks have been completed.

(ON SLIDE #180-184)

(c) Evac Higher Echlon. Copying a SR is required for inter-shop repairs and evacuation requirements. The preparing activity is responsible for creating the copied SR and for linking the copied SR to the original SR by use of the 'RELATED OBJECTS' tab.

TRANSITION: We've just covered the Corrective Maintenance SR, are there any questions? If not, I have several for you. Q1: What is the purpose of a Service Request? **A1: Maintenance SR will be used in all instances of maintenance that require Modification, Calibration, Corrective Maintenance, Preventive Maintenance Checks and Services (PMCS), Collateral Equipment (sl-3) replenishment, and Limited Technical Inspections on ground equipment** Q2: What will be created for each defect

identified during the acceptance LTI? **A2: A task** Q3: If a task is created or upgraded to a higher priority than the SR, and priority goes beyond the users UND authority what must happen? **A3: SR must be forwarded to an individual with proper UND authority for approval and digital signature.** Q4: If a piece of equipment is running Priority 02, what F/AD and UND is it in? **A4: FADII and UND A.** At this time take a ten minute break.

(BREAK - 10 Min)

TRANSITION: Did anyone think of any questions during the break? If not, let's talk about Parts Requirement.

(ON SLIDE #188)

5. Parts Requirement (20 MIN)

(ON SLIDE #189)

a. Purpose. The GCSS-MC parts requirement form on a task eliminated the EROSL as a MIMMS data entry form and item/parts requisitioning document. Maintenance management information is entered directly into GCSS-MC. Associated item/parts requisitioning are achieved within GCSS-MC by identifying required materials in a parts requirement form.

(1) Functionality. The parts requirement form is an element of a service request task. **Priorities from a service request task** are auto populated onto the parts requirement form. If a service request task is upgraded to a higher priority, GCSS-MC will provide a warning that the service request will also be upgraded and will require a work re-approval.

INSTRUCTOR NOTE

A priority upgrade/downgrade of a task does not automatically upgrade/downgrade the associated open requisitions previously

submitted on the parts requirement form. The maintenance commodity must request that the units supply section access document management in order to modify the priorities of the requisitions.

(ON SLIDE #190-197)

(2) Preparation Instructions. The individual steps and procedures for properly creating a service request parts requirement task are available through the User Productivity Kit (UPK), GCSS-MC scheduled training, and the training provided on the GCSS-MC web site titled "on line training".

INSTRUCTOR NOTE

The UPK training module incorrectly directs' the user to open a separate supply task for submission of a parts requirement. Parts requirements must be made under the associated maintenance task in order to properly populate an operational status to the maintenance task. It is not possible to populate an operational status to a supply task.

(ON SLIDE #198-209)

(3) Advice Codes/Job Order Numbers (JON)/Required Delivery Dates (RDD)/Signal Codes and NMCS indicators. These date elements are still used within GCSS-MC. Users will refer to references A through E, and local SOPs for application of these data points.

INSTRUCTOR NOTE

NMCS indicators do not currently have a data entry field in GCSS-MC. However, NMCS indicators of n or e may be entered in the RDD field per REFs B and E. In no instance will the RDD field be left blank.

(a) When the equipment undergoing repairs is, in the opinion of the CO, mission essential impacting unit readiness, and the part being ordered is required to remove the equipment from an NMCS status or ANMCS status, use the NMCS indicators as follows:

1 Use a "9" for each NMCS requirement when the priority designator is a 01, 02, or 03 for an overseas customer or stateside customer deploying overseas within 30 days.

2 Use a "N" for each NMCS requirement when the priority designator is 02, 03, 04, 05, 06, 07, or 08 for a stateside customer.

3 Use an "E" for each ANMCS requirement when the priority designator is 02, 03, 04, 05, 06, 07, or 08.

4 This field will be left blank when the part does not place the equipment into a NMCS or ANMCS status.

(ON SLIDE #210-215)

(4) Special Instructions.

(a) Funding Approvals. Once the parts requirement has been verified as funds available by the fiscal approver; the fiscal approver will submit the requisitions via the "create order" button on the parts requirement form. Only those individuals with authority to commit funds have access to the create order button. If the fiscal approver rejects the parts requirement, they must notify the requestor. An explanation will be entered into the notes field of the service request citing reason for disapproval. If the disapproval is based on short funds, the service request owner will change the status of the service request to SHT FUNDS and save.

(ON SLIDE #216-225)

(b) Material Debrief. Items in the maintenance commodity stage sub inventory will be electronically transferred into the layette sub inventory/locator. The **maintenance commodity section** will debrief parts from the layette sub inventory/locator as they are applied in support of the maintenance task. All parts must be **properly debriefed** prior to the closure of a service request.

(c) Filing. Parts requirement history captured by GCSS-MC will remain attached to the PEI instance data for the life of the equipment. This eliminates the requirement to file paper copies in the equipment records.

ITERIM TRANSITION: We've just covered the procedures for requesting parts, are there any questions? If not, let's move into the practical application of requesting parts utilizing the UPK.

INSTRUCTOR NOTE

Introduce the following Practical Application. Students will take breaks as required.

(ON SLIDE #226)

PRACTICAL APPLICATION: (2 HRS)

The purpose of this practical application is to allow the students to familiarize themselves with the UPK, open a SR, close a SR and requisition parts in the "Try it" and "Do it" modes. Student instructor ratio is 25:1. The following UPK modules will be covered:

Ser 101.02.02.01 - 101.02.02.05

Maint 101.04.02.01 - 101.04.02.08

STUDENT ROLE: Students will log on and perform prac app at their own pace. When finished they should sit quietly until all the other students are finished.

INSTRUCTOR ROLE: Instructor should click on Softlink icon in order to view the student's progress. Instructor should patrol the classroom to ensure students are on the correct web page and staying on task. Answer any questions or concerns that arise IRT GCSS-MC and the UPK.

1.Safety Brief: N/A.

2.Supervision and Guidance: Instructor will patrol the classroom to answer any questions and ensure students are not moving onto other Practical Application UPK.

3.Debrief: After the practical application ask the students if there are any questions and probe the class to ensure understanding before moving on.

TRANSITION: We've just covered the Parts Request, are there any questions? If not, I have several for you.Q1: When will parts be debriefed in GCSS-MC? **A1: Debrief parts from the layette sub**

inventory/locator as they are applied in support of the maintenance task. Q2: Who approves the requisition once funds have been verified? **A2:Fiscal Approver** At this time take a 10 minute break.

(BREAK - 10 Min)

TRANSITION: Did anyone think of any questions during the break? If not, let's talk about the SF 368, Product Quality Deficiency Report and Modifications.

(ON SLIDE #253)

7. SF 368, Product Quality Deficiency Report and MODS. (50MIN)

(ON SLIDE #254)

a. **Purpose.** The SF 368, (Product Quality Deficiency Report (PQDR)) provides information to activities responsible for development, procurement, or management of equipment concerning deficiencies in material, design, or procurement.

b. **Objective.** The primary goals of the PQDR program are to maximize mission and operational effectiveness, prevent recurring deficiencies, and improve user satisfaction with Marine Corps material.

(1) Provide a user product quality deficiency reporting and a data feedback system that provides for appropriate documentation, action/resolution, and specific points of contact for all phases of the PQDR processing.

(2) Provide for analysis and investigation of PQDR's in a timely manner for expedient corrective and preventive actions.

(3) Provide for control and disposition of deficient material.

(4) Maintain a system that affords management with visibility of PQDR summary data, identification of problems, recurring deficiencies, and resolution/corrective actions.

c. **Policy**. Equipment having deficiencies that meet the reporting criteria for a PQDR will be reported and processed using the MCO 4855.10_. Additionally, investigation into and resolution of these reporting deficiencies will be expedient and field activities will be notified of the corrective actions.

(ON SLIDE #255)

d. **Action**. Qualifications and procedures for the processing of PQDR's are as follows:

(1) The PQDR process begins with the user/originator reporting the material deficiency to the originating point.

(a) User/Originator is the person who becomes aware of a defect or deficiency and reports it to the originating point.

(b) Originating Point is the unit that finds a product quality deficiency and reports it to the screening point.

(c) The term "Screening Point" is defined as Commander, Marine Corps Logistics Command, Albany, GA.

(2) A PQDR shall be submitted as a result of any of the circumstances listed below:

(a) A physical or operational condition considered to constitute a hazard to personnel or material.

(b) A design of items or components, which impedes the proper operation, maintenance, or handling of the material or item.

(c) Faulty material or poor workmanship.

(d) Excessive wear or deterioration for the period of time and for the conditions under which the item was in use or on hand.

(e) Operation or performance of equipment in the course of normal operations that fail to meet stated operational limits.

(f) Circumstances other than those indicated, but considered to be related to deficiencies in material quality and not meeting the reporting criteria for other programs that are listed in MCO 4855.10_ Encl. 2.

(g) As a result of tactical systems computer software/firmware and documentation deficiencies.

(h) On items known to be under warranty as specified by the special instructions contained in the Users Logistics Support Summary (ULSS) or Supply Instruction (SI).

(3) Reporting Responsibility Procedures.

(a) The individual who discovers the product quality deficiency shall submit a PQDR (SF 368) and report it to the Battalion, Squadron, or Company (Originating Point).

(b) The originating point shall check to ensure the PQDR is valid with the criteria set forth in the MCO 4855.10_, and assign one of the levels of severity categories, Category I or II.

(c) Category I Deficiency. Is a product quality deficiency that may cause death, injury, or severe occupational illness; would cause loss of or major damage to a weapon system; directly restricts the combat readiness capabilities of a using organization; or which would result in a production line stoppage.

1 Suspend the use of deficient material to include any of the material in stock. Maintain exhibits until the screening point calls for the material or for 60 days from receipt of the control number from the screening point.

2 When the urgency exists, Cat. I PQDR's may first be transmitted by oral communication. The phone number for this is DSN 567-5291 or Comm. (912) 439-5631. This must be followed up electronically by priority message, E-Mail using the SF 368 message, E-Mail format, or electronic fax to the Commander (Code 808-1), MCLB, Albany, GA within 48 hours of the message only when supporting documents will aid the investigation. The SF 368 shall be prepared in triplicate and

shall contain the DTG (Date, Time, Group), and the same report number used in the message.

(d) Category II Deficiency. Is a product quality deficiency that does not meet the criteria set forth for Category I.

1 Suspend the use of the item or material as necessary.

(e) For all PQDR Categories.

1 Maintain exhibits until the screening point calls for the material or for 60 days from receipt of the control number from the screening point.

2 Submit exhibits for individual clothing on an "as required" basis as required by the screening point.

3 Forward one information copy of each PQDR involving tactical digital systems computer software, firmware, and/or documentation deficiencies to the Commanding Officer, Marine Corps Tactical System Support Activity, Camp Pendleton, CA 92055-5130.

4 The supporting maintenance activity will assist in the analysis and failure documentation prior to submission of the PQDR, when material deficiencies cannot be appropriately analyzed at a given user/maintenance level.

a Report any deficient PQDR responses to Commander (Code 808-1), MCLB Albany, GA 31704-5000 (screening point), for corrective action.

b Maintain a status log on all PQDR's submitted through final action, noting final action taken, and maintain a copy of the finalized PQDR for a period of 1 year following final action per SECNAVINST P5212.5_.

c Report items known to be under warranty on the SF 368 per the implementing warranty clauses of the Users Logistics Support Summary (ULSS) or Supply Instruction (SI).

(ON SLIDE #256-257)

(6) The originator shall complete the SF 368 and will provide an original and two copies to the screening point via the originating point. It is essential that the originator report as completely and clearly as possible all available information applicable to the defective material.

(a) The originating point shall submit separate PQDR's for each deficiency identified which meets the criteria preceding. Identical deficiencies of the same item may be consolidated in one report. In those cases where one deficiency is either the cause or the result of another deficiency, the originating point shall report each deficiency separately and shall reference the other in each respective report for the purpose of facilitating trend analysis by the screening point or action point.

NOTE: Action Point. A focal point(s), identified within each service/agency, command/component, or contractor, which is responsible for resolution of a reported product quality deficiency including necessary collaboration with support points. Only an action point is authorized to transmit a deficiency report to a support point.

NOTE: Support Point is any functional area that assists the action point, as requested, by conducting and providing results of a special analysis or investigation pertinent to the correction and prevention of a reported product quality deficiency.

NOTE: Product Quality Deficiency is a defect or nonconforming condition that limits or prohibits the item from fulfilling its intended purpose. Included are deficiencies in design, specifications, material, manufacturing, operation, and workmanship.

(b) The originating point shall furnish, as enclosures to the PQDR, any photographs, negatives, drawings, sketches, and/or illustrations of the defective item, if easily transportable or mailed.

(c) The unit/activity which submits the report shall retain the defective part(s)/sample(s) as an exhibit, pending receipt of disposition instructions from the screening point.

(d) PQDR's will be prepared and all deficient material shall be secured, segregated, and tagged with a

properly completed DD Form 1575, Suspended Tag-Material and DD Form 2332, Product Quality Deficiency Report Exhibit, per the current edition of MCO 4855.10_.

(7) Completion of DD Form 1575 and DD Form 2332 are self-explanatory. Tagging of the exhibit with DD Forms 1575 and 2332 identifies the deficient material as a PQDR exhibit. If properly tagged, when the Marine Corps PQDR Screening Point provides disposition instructions, or Recoverability Items Report (WIR) is submitted, the deficient material can be located and used in the investigation of failure.

(8) Preparation Instructions. The originating point shall certify the PQDR for completeness, validity, and accuracy before it is submitted to the screening point. It is important to provide as much information as possible. Based on the nature of the deficiency and source of items, complete research may not be possible if all blocks are not completed. The originating point must complete Block number 3 before the report can be processed. The screening point will obtain correct or missing information from the originator, using the telephone or electronic message, whenever possible.

(a) In the top left hand corner, place an "X" for either **CATEGORY I** or **CATEGORY II**, whichever applies according to the preceding mentioned criteria.

(b) In block, 1a FROM (Originator), enter the complete name of the activity (no acronyms), Activity Address Code (AAC), and the address including the Zip Code of the addressee.

(c) In block, 1b NAME, TELEPHONE NO., AND SIGNATURE, enter the name, telephone no. (including available telephone numbers; DSN and commercial), and signature of an individual who can serve as a point of contact for questions regarding the report and/or request exhibits or samples.

(d) In block, 2a TO (Screening Point), the originating point will complete the address with: Commander MCLB (Code 808-1), Albany, GA 31704-5000.

(e) In block, 2b NAME, TELEPHONE NO., AND SIGNATURE, the screening point will fill out this block.

(f) In block, 3 DESCRIPTION OF DEFICIENCY. A comprehensive description of the deficiency to include

circumstances prior to the failure. Explain, to the best of your ability, what is wrong with the item. Explain how the item does not function with relating parts or assemblies. Include specific drawings, specifications, regulations, instructions, or contracts. If an item is dimensionally incorrect, list the actual dimensions as well as the source of the correct dimensions (tech manual/drawing or comparative measurement of the old item). As best as you can, also include the following:
Condition of packaging when received.

1 Condition of part when removed from packaging.

2 Was defect discovered prior to or after installation?

3 How was deficiency discovered?

4 How was deficiency confirmed?

5 Were there any ID markings or stamps on deficient item?

6 Were serviceable tags attached or available when item was received?

7 Are pictures of the defective item available?

8 Describe or identify any tests or procedures used during installation and/or testing.

9 Identify (by RCN) any previous related (by NSN or defect) PQDRs that you know of or have submitted.

(9) In block, 4 DATE DEFICIENCY DISCOVERED, enter the calendar date on which the deficiency was discovered.

(10) In block, 5 NATIONAL STOCK NUMBER (NSN), enter the NSN of the deficient material. No NSN enter the Part Number.

(11) In block, 6 NOMENCLATURE, enter the noun name of the material to be found deficient.

(12) In block, 7 OPERATING TIME AT FAILURE. Time item had been in operation since new, overhauled, or repaired when the deficiency was discovered citing the appropriate performance element (miles, cycles, hours etc.). Enter "Initial" if the

deficiency occurred with no operation time since new, overhauled, or repaired.

(13) In block **8** DEFICIENT ITEM PART NUMBER - The manufacturer's part number of the deficient item. This number may be found on the item or package markings.

(14) In block **9a** MANUFACTURER'S CAGE CODE A five digit Contract and Government Entity (CAGE) Code of the manufacturer (of the deficient item) as listed in the DLA Cataloging Handbook H4.1 (Name to code), Federal Supply Code for manufacturer (United States and Canada). The CAGE Code may be taken from the markings on the deficient item. NOTE: If the deficient item was repaired or overhauled, the CAGE or DODAAC of the last repair/ overhaul facility shall be entered in Block 12c.

(a) In block **9b** MANUFACTURER / CITY / STATE - Name and address of the manufacturer which manufactured, repaired or overhauled the deficient item. For motor vehicles or components thereof, enter name of manufacturer of the vehicle or component, as appropriate.

(15) In block **10**, QUANTITY

(a) RECEIVED - Enter the total number of items or parts received.

(b) INSPECTED - Enter the total number of items inspected.

(c) DEFICIENT - Enter the quantity found deficient of those inspected.

(d) IN STOCK - Enter the quantity of additional material from the same manufacturer and contract remaining in stock.

(16) In blocks **11** SERIAL / LOT / BATCH NUMBER - Enter the manufacturer's serial, lot, or batch number of the deficient items as applicable. If any of these are unknown or don't apply, check the respective boxes for Unknown or N/A. If multiple numbers are reported, provide additional numbers in Description of Deficiency, Block 3.

(17) In block **12a** ITEM - Check the appropriate block to indicate whether the deficient item is New, Repaired, or

Overhauled. Provide the dates manufactured, repaired, or overhauled in Block 12b, if available.

(a) In block **12b** DATE MANUFACTURED, REPAIRED, OR OVERHAULED - Enter the date the deficient item was manufactured if New item was selected in 12a, and the date repaired or overhauled if so selected in 12a.

(b) In block **12c** LAST REPAIR FACILITY - If the deficient item was repaired or overhauled, enter the CAGE or DODAAC, name, and address of the Repair Facility which last repaired or overhauled the deficient item.

(18) In block **13a** CONTRACT NUMBER - This is the identification number of the contract under which the deficient item/commodity was purchased or reworked. The number is comprised of Contract activity's Department of Defense Activity Address Code 6 position (DODAAC) example (N00024), seven position Contract Serial example (99C0001) Number, and 4 digit Contract Order Number example (0001). The contract number can often be found on the attached paperwork (DD250 or 1348 form), the product packaging, and in some cases on the item itself (example on manufacturer label or name plate). Examples (SP070098C0009), (N0010498C0008).

(a) Block **13b** REQUISITION / DOCUMENT NUMBER - The original MILSTRIP document number used to order the item. It is a unique reference number assigned to a requisition /release /receipt document in order to identify the transaction throughout the logistics system. It consists of a 14 digit code that most often can be found with the deficient material paperwork or product packaging (e.g. 1348 form). It is most often made up of a 6 digit DODAAC, a single digit year, 3 digit Julian calendar date and a 4 digit serial number (e.g. N4511202334567). This information is key to getting the activity refunds/credits.

(c) In block **13c** PURCHASE ORDER NUMBER - The Purchase Order Number associated with the defective part. This can usually be found on the attached shipping document.

(19) Block **15a** ITEM UNDER WARRANTY - Choose either YES, NO, or UNKNOWN to indicate whether the deficient item is covered by an established or formal warranty. If yes, provide the warranty expiration date in Block 15b.

(a) In block 15b WARRANTY EXPIRATION DATE - Provide the date the warranty is set to expire.

(20) In block 16 END ITEM EIC / WUC / TAMCN - Enter the applicable Equipment Item Code (EIC), Work Unit Code (WUC), or Table of Authorized Material Control Number (TAMCN) for the deficient material.

(21) In block 17 NEXT HIGHER ASSEMBLY (NHA) - If the deficient item is a part of another assembly before it is used or installed on the end item, enter all available information for that NHA.

(a) NSN - National Stock Number associated with the next higher assembly.

(b) NOMENCLATURE - Item name of the next higher assembly.

(c) PART NUMBER - Part number assigned to the next higher assembly.

(d) SERIAL NUMBER - Serial number of the next higher assembly.

(22) In block 18 END ITEM - Enter all available information for the principal end item, major weapon system, or commodity that the deficient item is used with or on (i.e. weapon system, vehicle, radio set, etc.).

(a) NSN - National Stock Number associated with the end item.

(b) NOMENCLATURE - Name of the end item.

(c) TYPE/MODEL - Type or model assigned to the end item configuration.

(d) SERIAL NUMBER - Serial number from the end item equipment or system. Multiple serial numbers may be listed in Description of Deficiency, Block 3.

(23) In block 19 CURRENT DISPOSITION OF DEFICIENT ITEM (the Exhibit) (Select only one value) - Check the appropriate block to indicate the status of the deficient material (the exhibit(s)) at the time the PQDR is submitted. Reporting activities are reminded that exhibits will be held by the

Originating Point until disposition instructions are received from an appropriate Screening or Action Point. If shipping or disposition instructions have not been received by 30 days, a follow-up must be initiated with the appropriate Screening or Action Point. Any packaging, packing and shipping containers are to be held along with the exhibits to facilitate investigation. When disposition is other than the listed items, check "OTHER" and identify the nature of the disposition in the Description of Deficiency, Block 3.

(24) In block **20** LOCATION OF DEFICIENT MATERIAL (e.g. Base, Camp, Station, Supply Activity) - Enter the name and location or supply activity that is currently holding the exhibit/deficient material.

(25) In block **21** ACTION REQUESTED (Select only one value) - Check the appropriate block to indicate the action you, the Originator, have already taken or are requesting. If none of the items indicate the actions taken or requested, check "OTHER" and identify the nature of the action taken or requested in the Description of Deficiency, Block 3.

(26) PQDR PROCESS AND ACTIONS OUTLINE:

<u>User/Originator</u>	<ul style="list-style-type: none">- Prepare PQDR- Determine the level of severity<ul style="list-style-type: none">-- Compare with severity categories - Forward report to the originating point
<u>Originating Point</u>	<ul style="list-style-type: none">- Check for validity, completeness, and accuracy of report - Validate the level of severity<ul style="list-style-type: none">-- Assign report control number-- Compare with severity categories- Forward the report to the screening point
<u>Screening Point</u> completeness, and accuracy of report	<ul style="list-style-type: none">- Certify validity, - Certify level of severity category- Acknowledge receipt to sender<ul style="list-style-type: none">-- Apply timeframe criteria

- Advise sender of any non-concurrence or change of category
- Determine appropriate action point
 - By contracting agency, action point, type commodity, etc.
- Forward PQDR to action point

Action Point

- Acknowledge receipt of PQDR to screening point
 - Apply timeframe criteria
- Determine cause of deficiency
- If invalid, inform screening point
- Use support point, if necessary
 - Provide technical evaluation when required
- Determine if credit applies

Support Point

- Acknowledge receipt to action point
 - Apply timeframe criteria
- Determine cause of deficiency
- Provide technical evaluation when required
- If invalid, inform action point
- Determine whether credit applies
- Respond to action point

Screening Point
point

- Review recommendation of action
- Respond to originator and all appropriate commands and customers

NOTE: All the above actions should be accomplished within required timeframes listed below.

PQDR TIMEFRAME RESPONSE MATRIX

<u>Reporting/Processing Component</u>	<u>Severity Category</u>	<u>Action and Timeframe for Response</u>
(1) Originator	Cat I	<u>Forward report to originating point within 24 hours after discovery</u>

Submit SF 368 within:

- Cat I 48 hours after forwarding to originating point if supporting documents will aid the investigation
- Cat II 3 days after discovery

(2) Originating Point

- Cat I Notify Commander, MCLB Albany, by message, electronic mail (E-Mail), or electronic fax within 24 hours after receipt from originator

Submit SF 368 within:

- Cat I 48 hours after sending message if supporting documents will aid the investigation
- Cat II 3 days after discovery

(3) Screening Point

Acknowledge receipt to originator within:

- Cat I 24 hours after receiving message

Reporting/Processing Component

Severity Category

Action and Timeframe for Response

- Cat II 10 days after receiving SF 368

Forward to action point within:

Cat I 24 hours after receiving message

Cat II 10 days after receiving SF 368

Final response to originator within:

Cat I 3 days after receiving response from action point

Cat II 3 days after receiving response from action point

(4) Action Point

Acknowledge receipt to screening point within:

Cat I 24 hours after receiving PQDR for action

Cat II 10 days after receiving SF 368

Suspend/screen stock within:

Cat I 24 hours after receiving PQDR or electronic fax

Cat II 20 days after receiving SF 368

Forward to support point when assistance is required within:

Cat I 24 hours after receiving message, E-Mail, or electronic fax

Cat II 10 days after receiving SF 368

<u>Reporting/Processing Component</u>	<u>Severity Category</u>	<u>Action and Timeframe for Response</u>
		<u>Provide an interim or final reply to screening point within:</u>
	Cat I	20 days w/o exhibit or 20 days after receipt of requested exhibit
	Cat II	30 days w/o exhibit or 30 days after receipt of requested exhibit
		<u>Forward replies from support point to screening point within:</u>
	Cat I	3 days after receiving message, E-Mail, or electronic fax
	Cat II	10 days after receiving SF 368
(5) Support Point		<u>Acknowledge receipt to action point within:</u>
	Cat I	24 hours after receiving message, E-Mail, or electronic fax
	Cat II	10 days after receiving SF 368
		<u>Provide an interim or final reply to action point within:</u>

Cat I	20 days w/o exhibit or 20 days after receipt of requested exhibit
Cat II	30 days w/o exhibit or 30 days after receipt of requested exhibit

(ON SLIDE #259)

e. Marine Corps Modification Program.

(ON SLIDE #260)

(1) Purpose. The purpose of the Commodity Managers Modification Control Program is to provide the unit commodity manager with a readily available means of accurately determining the modification status of assigned equipment.

(2) Modification Program Responsibility. The owning unit must ensure that all the unit's equipment-requiring modifications have been completed and are recorded in the equipment records per the MCO-P4790.2C

(a) Equipment modification consist of those maintenance actions performed to change the design or assembly characteristics of equipment systems, end items, components, assemblies, subassemblies, or parts in order to improve equipment functioning, maintainability, reliability, and/or safety characteristics. Modification come from ideas sent in a PQDR.

(ON SLIDE #261-263)

(3) PQDR's. Field recommendations for equipment improvement (PQDR's, beneficial suggestions) frequently establish the requirement for equipment modification.

(a) Modifications required to prevent death or serious injury to personnel, prevent major damages to equipment, or make changes considered so essential to equipment that their application must be accomplished at the earliest possible time are designated "URGENT."

(b) Marine Corps equipment will be modified only as directed by the Commandant of the Marine Corps.

(c) Equipment modification requirements will include the detailed step-by-step procedures for accomplishment, and are published as Modification Instructions (MI).

(d) They identify specific types and items of equipment to be modified as well as the maintenance resources, skills, and time necessary for their accomplishment.

(e) MI's specify the EOM authorized to perform the modification. Equipment to be modified is identified by nomenclature, ID Number, NSNS, and the manufacturer's serial number for individual equipment, when appropriate.

(f) Unit commodity managers will maintain the Modification Control based on information obtained from other records and physical observation of the equipment.

(g) The SL-6-1 and SL-6-2 may be used to identify "Consist Of" ID numbers for end items. "Part Of" is an item that is a component or repair part to another item. "Consist Of" refers to one item that consists of different components or different repair parts having individual ID numbers.

(h) Enter the serial number for each T/E and special allowance item with a modification instruction published. (The quantity of equipment may require preparation of multiple sheets for a given type of equipment.) In cases where a serial number has not been assigned, a local serial number must be assigned to the item per the UM-4400-124.

(i) Enter all MI's listed in the SL-1-2 and TI-5600 for the item's ID number. Changes to the basic MI that are administrative in nature, (i.e., part number/NSN change) will be recorded under the basic MI, for example, MI-012345A-24/25A w/ch1. When the change alters the configuration of the modification or adds/deletes applicable serial numbers, control, or manufacturers number a separate entry for that change is required for verification purposes.

(4) Upon Initial Receipt

(a) Upon initial receipt of equipment items, they will be inspected to determine if all required modifications have been properly completed.

1 When the nature of the required modification is such that the owning unit cannot determine if it has been completed, the equipment will be evacuated to the IMA for such determination.

2 When inspection is completed, initiate a Service Request for missing modifications to be applied.

3 Commodity manager will then update the required item instances per TM-4700-15/1C, GPN 4-12.

(b) Each Item Instance on T/E that has had an MI issued will be accounted for in GCSS-MC.

(5) Preparation instructions. All modifications will be pushed through install base by LOGCOM. All records of modifications will be added as a child to the item instance.

(6) Category and Required Completion Date. Enter a "U" for Urgent MI's, "N" for Normal MI's, and required completion date.

(ON SLIDE #264)

(a) Urgent MI's will be identified in the SL-1-2 by the letters "URG" following the MI number. The required completion date can be found in the "Time Compliance Period" paragraph of the MI. If the urgent MI indicates upon receipt or does not have a completion date, enter "N/A" for the required completion date.

NOTE: "URGENT" modifications that require the equipment be deadlined or its use sharply curtailed until modification is applied. Under such conditions, acceptance scheduling normally will not be feasible. Other "URGENT" modifications, though requiring timely application, may lend themselves to acceptance scheduling. In both instances, the urgency of the required modification must be considered to establish its priority.

(b) MI's not designated as urgent in the SL-1-2 fall into the "NORMAL" category. The required completion date of "NORMAL" MI's is 1 year from the date of the MI, unless the MI indicates otherwise.

1 Equipment in level "A" Pack need not be opened to perform "NORMAL" MI's. The required modification kits will be requisitioned, and placed into an Layette bin or other

secured storage area. The application of the modification is accomplished as soon as the equipment is removed from Level "A" Pack.

NOTE: "NORMAL" modifications usually lend themselves to acceptance scheduling. Their scheduling should be planned, when possible, to coincide with the performance of other required maintenance actions.

NOTE: Operational requirements of the using unit are a major factor in determining the time for application of modifications. Whenever possible, application of modifications should be planned so that they do not interfere with such requirements. Units should plan for application of required modifications before deploying or going on extended operations.

(7) Category Codes

(a) Determine the applicability of each MI to each individual item of equipment listed. This information can be found in the "major item affected" paragraph of the MI.

(b) Determine the current status of applicable MI's by either inspection of the equipment or from the records for the individual equipment.

(ON SLIDE #266)

(c) Enter the appropriate action code, as follows:

1 MI-N/A (Not Applicable). Since some MI's only apply to specific serial numbers, Action Code "NA" identifies those items to which the MI does not apply. This action code requires a Julian date entry.

2 MI-Publications Required. This code is used to identify those MI's for which the unit requires the publication in order to verify/complete the modification. Indicate the date (Document Number) the publication was ordered through the Marine Corps Publication Distribution System in the "Remarks" block.

3 MI-As Required. This code is used to identify those MI's that apply to an item when the equipment requires a specific repair action, such as fifth echelon MI's

for rebuild, contact team application, or when a specific component is repaired/replaced. This code would also apply to items of equipment that would require the modification, however; based on the unit's mission and Table of Equipment (T/E), only a percentage of the end items are modified. Enter an "AR" for those item not currently modified.

NOTE: The action code, "AR", should be used for end items that may not require the modification to be applied (e.g., radio mounts; not all unit's vehicles would require these mounts, so modification is optional yet required to be identified for that particular end item). The "AR" entry allows the flexibility of changing the modification record in the event the modification is applied to that end item at a later date. AR action code entries are made in pencil and do not require a Julian date.

4 MI-Completed. This code identifies equipment modified while in custody (on the property records) of the unit. This includes items modified for the unit by the intermediate maintenance activity. This action code requires a Julian date entry.

5 MI-Verified. This code identifies equipment modification has been verified (normally used upon initial receipt). This action code requires a Julian date entry.

(6) Marine Corps Publication Website.

http://www.logcom.usmc.mil/sp_logon/

INTERIM TRANSITION: We've just covered the PQDR form SF-368 and Modification program, are there any questions? If not we will take a ten minute break then you will have two practical applications .

(BREAK - 10 Min)

INTERIM TRANSITION: Did anyone think of any questions during the break? If not, let's go into the practical applications.

PRACTICAL APPLICATION. (30 MIN) Each student will accomplish the assignment on their own. There is one instructor required Each student will access and use GCSS-MC Online Training UPK and perform the "Try it" and "know it" modes for the following modules:

201.05.02.03 - Managing Modification Instruction (MI) Updates

STUDENT ROLE: Students will log on and perform prac app at their own pace. When finished they should sit quietly until all the other students are finished.

INSTRUCTOR ROLE: Instructor should click on Softlink icon in order to view the student's progress. This also allows the instructor to ensure students aren't viewing other websites and staying on task.

1. Safety Brief: N/A

2. Supervision and Guidance: Instructor should also walk around the room and answer questions as they come up.

3. Debrief: Allow students the opportunity to ask questions and comment on the demonstration. Answer student questions and provide feedback on student comments.

INTERIM TRANSITION: You have just completed your first prac-ap covering Mods in the UPK, are there any questions? If not, you will perform a Practical Application.

INSTRUCTOR NOTE

Introduce the following Practical Application.

PRACTICAL APPLICATION. (30 MIN) Each student will be given a hand out at the beginning of this prac ap. Hand out will be kept inside the filing cabinet located in the classroom. The purpose of this prac ap is to enhance the knowledge of the Modification program. Student to instructor ratio is 25:1. Students will work questions 1-5 individually, for question 6, the first group of students finished with questions 1-5 will take the Mods binder to verify the modifications on the Buffalo. One group will go at a time and will be grouped in no more than five students.

STUDENT ROLE: Students will utilize the handout in conjunction with the Pubs website in order to perform this prac ap. Student will answer first five questions in class room. Once complete Students will receive Modification binder with all MI's and proceed to the Buffalo in the training area parking lot to answer question 6.

INSTRUCTOR ROLE: Distribute student handout, explain to the students they will answer first five questions in class room. Once complete they will receive Modification binder with all MI's and proceed to the Buffalo in the training area parking lot to answer question 6. Students will be grouped in no more than five students.

1. Safety Brief: N/A

2. Supervision and Guidance: Instructor should also walk around the room and answer questions as they come up.

3. Debrief: Allow students the opportunity to ask questions and comment on the demonstration. Answer student questions and provide feedback on student comments.

TRANSITION: We've just covered the PQDR form SF-368 and Modification program, are there any questions? If not, I have several for you. Q1: what is the purpose of the PQDR? **A1: Provides information to activities responsible for development, procurement, or management of equipment concerning deficiencies in material, design, or procurement.** 2. Q2: Urgent modifications are for? **A2: Prevent death or serious injury to personnel, prevent major damages to equipment, or make changes considered so essential to equipment that their application must be accomplished at the earliest possible time.** Q3: When is the option MI- Verified utilized? **A3: When modifications are checked upon receipt of equipment.** Take a ten minute break.

(BREAK - 10 Min)

INTERIM TRANSITION: Did anyone think of any questions during the break? If not, let's talk about Demand Supported Items.

(ON SLIDE #)

8. Demand Supported Items (Formally PEB). (50 MIN)

a. **Criteria Requirements for Demand Supported Items.**

(1) Definition. Demand-supported stocks are those quantities of expendable and nonexpendable items which are on hand based on supported or limited stockage criteria and are authorized to support mission requirements. Demand-supported items typically but not exclusively, consist of class IX, repair parts such as:

- (a) Commonly used hardware items, such as nuts, bolts and battery terminals.
- (b) Items used during PM such as filters, belts, hoses.
- (c) High usage items that affect readiness of a unit such as voltage regulators, weapons parts and radio hand sets.

(2) Purpose. The primary purpose for maintaining demand supported items is to place fast moving, low-cost items at the same location as the customer who requires them. Stocking these items at the maintenance commodity allows an expedited return of critical assets to an operational status.

b. **Requirements for Demand Supported Items.**

(1) When it is determined that demand supported items will enhance the maintenance effort, the unit commander will publish a letter authorizing specific items to be included. The letter will contain, as a minimum, the following information concerning the items authorized for storage:

- (a) Nomenclature.
- (b) NSN/Part Number.
- (c) Minimum/Maximum Quantity Authorized.
- (e) Unit of Issue/Measure.

(d) Unit Price.

(e) Extended Price (Quantity Authorized Multiplied by Unit Price).

(2) Commanders will review and approve (in writing) items for demand supported items at least annually. Prior to routing request to CO for approval all requests will be reviewed by the appropriate supporting Supply Management Unit (SMU) for endorsement (MSC G-4 if not supported by SMU). **SMU will not dictate** stock levels **but will recommend** based on current stock and demand history. The SMU input will be an endorsement to the annual formal request. Once approved the Supply Officer and MMO will review the demand-supported stockage listing quarterly to ensure the expenditure of funds is consistent with the needs of the unit and maintained at appropriate levels of range and depth. Commanders may approve changes to this listing based on the quarterly reviews without SMU endorsement however the endorsement is still required annually. If an enclosure is used to list the demand supported items, the commander must initial each page of the enclosure.

(a) Demand supported item criteria are as follows:

1 Annual approval by the CO in writing.

2 The usage history (issues) is sufficient to justify maintaining available stocks on hand. Usage history is as follows:

a For those items applied/consumed as a full U/I, the usage criteria is six U/I's applied/consumed in 12 months based on maintenance usage.

b For those items applied/consumed as less than a full U/I (e.g. roll, hundred, or box, etc.) the usage criteria is one U/I applied/consumed in 12 months.

c Capture usage data by debriefing the demand supported items via parts debrief utilizing the WRS code of PB.

3 Stocks are consistent with a units funding and embarkation capability, and the units maintenance requirements.

(3) Demand-supported items stocked using the above criteria must be reviewed and if required adjusted quarterly. Once an item is eligible stock levels will consist of the following:

(a) Operating Level (OL). The OL determines the frequency at which supplies are ordered. Typically, the OL is the 30-day usage requirement for each individual item.

(b) Safety Level (SL). The quantity of material to be on hand to permit continued operation in the event of a minor interruption of normal replenishment or a fluctuation in demand. Typically the SL is set at 30 days.

(c) Customer Wait Time (CWT). CWT is the total elapsed time between issuance of a customer order and satisfaction of the order. CWT is the portion of the total OL quantity which covers the CWT replenishment requisition.

(d) Min/Max. Established to support the requirements for maintaining Demand-supported items. Min represents the minimum on hand to sustain operations, the max is the maximum quantity authorized by the CO to be maintained.

(4) Broken Units of Issue of common hardware (i.e., bolts, nuts, screws, washers, etc.) that has a unit of issue other than each i.e. hundred, box, dozen etc. which are ordered against a corrective SR that do not meet demand-supported stockage criteria, do not require any further control or accounting once the U/I is applied to the equipment. The left over portion will be displayed in a parts bin, in plain view of the shop's maintenance personnel and used until exhausted. Strict control and accountability is not required, but maintenance supervisors must ensure maintainers know how to use the on hand supply before ordering more.

(a) BUI's not considered common hardware or costing more than \$5 per U/I will be added to the authorized demand-supported stockage listing. They must be identified on the list as BUI's and reflect the date that they were added to the list. They may be retained as demand-supported stockage items until exhausted.

e. GCSS-MC Min/Max Planning Report.

(1) The Min/Max Planning Report is used to maintain inventory levels for all of your Demand-supported Items by specifying minimum and maximum inventory levels.

(2) When the inventory level for an item (on-hand quantities plus quantities on order) drops below the minimum GCSS-MC Inventory suggests a new purchase requisition, internal requisition, move order, or job to bring the balance back up to the maximum inventory level.

f. **The Columns of the Report are as Follows:**

(1) Item. By National Item Identification Number (NIIN).

(2) Category Quantity. Defaults to zero.

(3) Minimum Quantity. Minimum quantity per the Demand-supported Items authorization letter

(4) Maximum Quantity. Maximum quantity per the Demand-supported Items authorization letter

(5) On Hand. Quantity you have in your Demand-supported Items.

(6) Supply Quantity. Ordered by Supply pending replenishment

(7) Demand Quantity. Quantity being requested by Maintenance through a Service Request

(8) Available Quantity. The on hand plus the supply minus the demand quantities ($AV = OH + SUP - DEM$)

g. **Extract a Min/Max Planning Report.**

(1) Parameters Of The Min/Max PLANNING Report

(a) The "Review of Parameters on a Min/Max Planning Report" document explains the details of the report parameters and the fields of value required to run the report such as organization, from and to and sort by.

(b) Maintenance management and maintenance personnel will manage two major parameters for the min/max planning report.

(2) Organization. Select using unit organization.

(a) Restock. This field is indicated by a "No" or "Yes" value. **IMPORTANT!** If you choose "Yes" in the following field, you will generate an automatic order for ALL parts which are below the Minimum Stocking Level.

h. **Generate a Move Order**. After reviewing the Min-max planning report and determining the quantities should be executed, set the Restock parameter to "Yes" to generate the Move Order. Quantities generated for the Move Order are the quantities displayed in the "Reorder Quantity" column of the Min-max planning report.

i. **Action Required for a Broken Unit of Issue/Measure**. The Maintenance Management Chief/Maintenance Chief will inform Supply when there is a Broken Unit of Issue/Measure has been received and identified. Supply will then change the unit of issue of item(s) to "EA" (each), and place the remaining quantities in the Demand-supported Items.

j. **Stock locator**.

(1) Purpose. The purpose of the stock locator is ensure all Demand-supported Items have properly been assigned an area, space, or compartment for temporary storage until consumed; and to allow personnel to quickly and accurately locate parts as needed.

(2) Locator. A locator is part of a nine digit numbering system used for locating requisitioned items such as repair parts. Each requisitioned item will be assigned a stock locator number that corresponds to it's physical location within an area. This area could be part of a maintenance shop's Layettes or Demand-supported Items. To set up stock locator numbers you must coordinated with Unit Supply and IAW MCO P4450.7_ (Please read the reference for a complete explanation) The stock locator number will then be loaded electronically into Global Combat Support System - Marine Corps (GCSS-MC) to electronically track the physical location of requisitioned items. Presently there are two stock location numbering systems used within the Marine Corps Deployable and Non-Deployable.

INSTRUCTOR NOTE

Refer students to MCO P4450.7_ pg 2-7 and Appendixes B & C.

(a) Deployable. Used by activities that deploy as a complete entity. The deployable unit location system was designed to provide the unit with as much flexibility as possible to maintain accountability of Demand-supported Items due to ongoing operations. The stock location number consists of nine alpha and numeric digits. The below listed alpha numeric number bolded below is an example of deployable location code

D113205AA

1 First Four Positions. These characters may be alpha or numeric, depending on the unit's needs. These characters should be used primarily for embarkation numbers, serial numbers, and tactical markings.

2 Fifth Position (Numeric) represents the Type of Storage. The fifth character is numeric and is used to identify the type of storage, this position can be used in conjunction with positions six and seven to expand the range of box numbers from 99-297. The codes for particular types of storage are listed below:

3 1 - Bin Storage Unit. designated primarily to accommodate small size repair parts and hardware items.

4 2 - Medium Storage Unit. designed to accommodate items which are too large for bin storage but not large enough in themselves to warrant being placed into individual box pallets or crates.

5 3 - Bulk Storage. consists of those items which, in themselves, warrant being placed into an individual storage container.

6 4 - Vehicles.

7 5 through 9 as required locally.

8 Sixth and Seventh Positions. These characters are numeric and refer to the box or container.

9 Eighth Position. This alpha character refers to the level within the container.

10 Ninth Position. This alpha character refers to the compartment within the level.

(b) Non-deployable. This location system is used by non-deploying units and units that normally do not deploy as a complete entity. The non-deployable location code represents a garrison location that is static do not movetherefore, each row, isle, or area can be affixed with a permanent number giving personnel the ability to locate Demand-supported Items with ease. This system would be difficult to use in a deployed environment because boxes (locations) are being moved around to provide critical support to the mission and forces. For this reason, it may be better to assign these locations a box number. The below listed alpha numeric number bolded is an example of a non-deployable location code.

M120303AA

1 First Position (Area). This character is an alpha character that represents a group of buildings within a complex, an open storage area, a single building or warehouse, a shed, or a part of a structure such as a floor. Sometimes section like MT, Engineers, or Comm can occupy an entire build so that is something to keep in mind.

2 Second and Third Positions (Station). These characters are numeric and are used to identify a station within an area. These digits may be used to identify stock picking stations, stations for receipt of material for stowing, packing stations, floors of a building, sections of a warehouse or maintenance building within an area.

3 Fourth and Fifth Positions (Aisle or Row). These characters are numeric and are used to identify aisles or rows within a station. An individual numbering system is used within the station.

4 Sixth and Seventh Positions (Segment). These characters are numeric and are used to identify segments of an aisle or row. A segment may be a short lot, stack, rack, or bin within an aisle with the odd numbers on the left and the even numbers on the right.

5 Eighth Position (Level). This character is an alpha character and represents the level within segments.

6 Ninth Position (Compartment). This is an alpha character and identifies a subdivision of the level within the segment, such as a drawer or compartment or bin.

k. **Receipting Process in GCSS-MC.**

(1) Per GPN 1-11 paragraphs 4.B.4.H & 4.B.5, 4.B.5.A covers Confirmation of Receipt (COR)

(2) Per GPN 3-11 paragraph 8.B which outlines Layette Subinventory /Locator Management.

"Unit Supply will receipt for requisitioned items and place them into the maintenance commodity stage subinventory. Once the items are signed for and physically moved from the unit supply issue point to the commodity section, it is the RESPONSIBILITY of the MAINTENANCE COMMODITY SECTION to subinventory transfer the item from the stage subinventory to the appropriate layette subinventory/locator. At a minimum, every two weeks, these subinventories will be reconciled against the service request to ensure strict accountability of parts".

1. **Layette Sub Inventory/Locator Management.** Unit supply will receipt for requisitioned items and place them into the maintenance commodities stage sub-inventory. Once the items are signed for and physically moved from the units supply issue point to the commodity section, it is the responsibility of the **maintenance commodity section** to sub-inventory transfer the items from the stage sub inventory to the appropriate layette sub inventory/locator. The GCSS-MC sub-inventory/locator numbering system will be in accordance with para 2005.3 (for non-deployable) and 2005.4 (for deployable locators) of MCO 4450-7E. **At a minimum, every two weeks**, these sub-inventory layettes will be reconciled against the service request to ensure strict accountability of parts.

INTERIM TRANSITION: We've just covered Demand Supported Items, are there any questions? If not we will take a ten minute break then you will have a practical application.

(BREAK - 10 Min)

INTERIM TRANSITION: Did anyone think of any questions during the break? If not, let's go into the practical application.

INSTRUCTOR NOTE

Introduce the following Practical Application.

PRACTICAL APPLICATION. (2 HRS) Each student will accomplish the assignment on their own. There is one instructor required Each student will access and use GCSS-MC Online Training UPK and perform the "Try it" and "Know it" modes for the following modules:

Inv 101.07.05.02.01-101.07.05.02.06

Plnr 101.02.02.01-101.02.02.07

Plnr 101.02.03.01-101.02.03.05

STUDENT ROLE: Students will log on and perform prac app at their own pace. When finished they should sit quietly until all the other students are finished.

INSTRUCTOR ROLE: Instructor should click on Softlink icon in order to view the student's progress. This also allows the instructor to ensure students aren't viewing other websites and staying on task.

1. Safety Brief: N/A

2. Supervision and Guidance: Instructor should also walk around the room and answer questions as they come up.

3. Debrief: Allow students the opportunity to ask questions and comment on the demonstration. Answer student questions and provide feedback on student comments.

TRANSITION: Are there any questions concerning Demand-supported Items or the practical application? If not, I have several for you. Q1: What is the purpose of Demand-supported Items? **A2: Provides maintenance with ready access to a source of common, low-cost, high-usage hardware items.** Q2: At a minimum, the letter authorizing maintenance to maintain Demand-supported Items will have? **A2: 1.Nomenclature 2. NSN/Part Number 3. Minimum/Maximum Quantity Authorized 4. Unit of Issue/Measure 4. Unit Price 5. Extended Price (Quantity Authorized Multiplied by**

Unit Price). Q3: How often does the Demand-supported Items need to be reviewed? **A3: Quarterly by MMO/Supply Officer, Annually by CO.** Q4:What is to be done with broken unit of issues? **A5: The leftover portion will still be accounted for in the Demand-supported Items, however it will not be given a min-max.** At this time,let's take a ten minute break.

(BREAK - 10 Min)

TRANSISITION: Did anyone think of any questions during the break? If not, let's look at the Maintenance Production Report (MPR).

10. MAINTENANCE PRODUCTION REPORT (MPR). (50 MIN)

a. **Purpose.** This report provides maintenance managers at all levels visibility of active SR's in their shops.

b. **Use.** The information on this report provides the complete history of an item in the maintenance cycle.

(1) Distribution of this report should be to the shop section level and the unit MMO.

(2) Information for each open SR is presented in numerical sequence.

(3) The first two lines of each SR present basic identification data and current maintenance status of the equipment.

(4) The third line for each SR is a listing of repair parts requirements and the supply action to date on these requirements. The MMO can quickly see the outstanding requirements and their current status. This information can also be used to verify that priorities of maintenance are in agreement with repair parts requirements.

(5) Situations can also be spotted where maintenance activities have added on parts, which may indicate poor initial inspection. Repeat parts can be identified which may indicate that parts previously received have been applied elsewhere, the initial inspection was faulty, parts previously received were faulty or damaged, or that the mechanic lost the part during installation.

(6) Additionally, the misuse of operational statuses, priorities, and NMCS/ANMCS indicators is recognizable. The MMO can identify parts which have long lead-times based on current status and take action to expedite.

(7) This report is a tool, which maintenance management personnel can use to conduct the SASSY additional demand reconciliation.

(8) For specific information on reconciliation, refer to the current editions of MCO P4790.2_, UM 4400-124 and local MMSOP.

(9) The MMO can identify the parts on requisition at a different echelon of maintenance for an item of equipment.

(10) Finally, upon closeout, the MMO, maintenance management personnel can see the labor and material resources expended for a given SR.

c. **Legend.**

(1) First Line.

(a) SR. This column displays the Service Request number.

(b) SR OWNER. This column displays the units AAC, RUC, and Section.

(c) TAMCN. This column displays the table of authorized material control number of the equipment undergoing maintenance. It consists of an Alpha character and followed by four numbers (B0391). The Identification Number automatically generates this entry from what is loaded in the ID Standards File.

(d) Serial #. This column displays the USMC/manufacturer's serial number of the equipment undergoing maintenance.

(e) NIIN. This column displays the NIIN of the equipment undergoing maintenance.

(f) MODEL. This column displays the Model type of the equipment undergoing maintenance.

(h) ASR#. This column displays the IMA SR# in the event the equipment undergoing maintenance and was evaced to higher echelon. There are two ASR#'s to show up to 2 higher evacs.

(2) Second Line.

(a) CONDITION. This column indicates the operational status of the equipment.

(b) MI. MARES INDICATOR, this column displays whether or not the equipment undergoing maintenance is Marine Corps Automated Readiness Evaluation System (MARES) or NON-MARES reportable.

(c) PRI. This column displays the priority of need of the equipment having maintenance performed. Priorities can be located in MCO 4400.16_.

(d) DCD. This column displays the deadline control date. This date should reflect when the item of equipment actually went deadlined.

(e) DDL. This column displays days deadlined. The total number of days the equipment has been deadlined. This is the sum of the current processing date minus the DCD for the accumulated Operational Staus Deadlined.

(f) Job-Status. This column reflects the actions, which have occurred on the equipment and the date each action was initiated. Job Status Codes that initiate these codes are located in the UM-4790-5, Ch. 24, pg. 24-5.

(g) DAYS IN STATUS. This column displays how many days that the current JOB STATUS has been effect.

(h) Defect. This column displays the interpretation of the defect code used in the input transaction. The first part of the interpretation relates to the first character of the defect code, and the second part of the interpretation relates to the second and third characters of the defect code. The defect interpretation shall be the major defect for item of equipment undergoing maintenance. Defect Codes that initiate these interpretations are located in the UM-4790-5, Ch. 24, pg. 24-3.

(i) DRIS. This column displays the date received in shop. The equipment was received in the shop performing the maintenance on this date.

(j) DIS. This column displays days in shop. The total number of days the equipment has been in the maintenance shop. This is the sum of the current processing date minus the DRIS.

(3) Third Line.

(a) Document #. This column displays the unit document number used for repair parts requisitioned or the applicable modification instruction number. When a secondary repairable is issued over the counter to the customer by the maintenance float or placed in a backorder status, the document number of the maintenance float will be reflected.

(b) UOI. This column displays the unit of issue of the item requested.

(c) Qty. This column displays the quantity of material requisitioned.

(d) RECV. When an item has been received and the receipt processed, the total amount received will be posted. If the column has a 0 amount, it indicates the parts record is open (still valid).

(e) Pri. This column displays the priority of the requisition. The priority of the requisition may not exceed the priority of the SR; however, parts may be requisitioned on a lower priority. In other words, if the priority of the SR is 06 and parts are on order, there should be at least one priority 06 part on requisition. This does not preclude the requisitioning of lower priority parts (13) on a priority 06 ERO.

(f) NSN. This column displays the national stock number (NSN) or local stock number (LSN) of the part being requisitioned.

(g) Part. This column displays the nomenclature of the part requisitioned.

(h) STAT. This column displays the current status on the requisition. The status code is a two-digit code, which indicates the status of the requisition at the supply source. When shipping status has been provided to the unit, the mode of shipment code will be reflected. The mode of shipment code is a one-digit code that identifies the means by which the item is being shipped to the unit. These are generated by the source of supply. Supply Status Codes can be found in the UM-4400-124, or the Defense Logistics Agency Handbook.

(i) Date. This column displays the date the part went into its current status.

(j) ESD. This column displays the Estimated Shipping Date of the part being requisitioned.

(k) DIC. This column displays the type of status being provided. The type of status is identified by a document identifier code (DIC). DICs in the "AE" series identify the status as automatic supply status. DICs in the "AS" series identify the status as automatic shipment status. Codes in the B series will also appear. These are SASSY exception codes. An exception is generated when a transaction processes against the units loaded unit balance file (LUBF) and conditions were present, which caused the exception to be created. When a transaction fails to pass the master edit process in SASSY and is rejected from processing, the letters REJ are entered. DICs and exception codes are contained in UM-4400-124.

(l) LKH. This column identifies the last known holder of the transaction. The routing identifier codes for last known holders are contained in the current edition of UM 4400-71. When the LKH is identified as FLT, it indicates that the maintenance float is the supply source for the item. LKH can be found in the Defense Logistics Agency Handbook.

(m) SHIP DATE. This column displays the date the part being requisitioned was shipped.

(n) TCN. Tracking Control number

d. Equipment Status Report.

(1) Description. This is a report listing each readiness-reportable TAMCN and the quantity authorized, possessed, and excess.

(2) Use. This report is a tool for the Commander, S-4, and MMO to quickly review the Command's readiness status and to identify problem areas.

(a) Legend. Data is portrayed on the report as follows:

1 TAMCN. This column displays the Table of Authorized Materiel Control Number (TAMCN) of the equipment belonging to the unit.

2 ITEM DESCRIPTION. This column displays the noun name of the equipment belonging to the unit.

3 MARES. This column displays whether or not the equipment belonging to the unit is MARES REPORTABLE or not.

(b) Unit T/E RQMT. This column displays the reported quantity of equipment for each TAMCN authorized the unit by Table of Equipment (T/E) and/or special allowances.

(c) CMD Adjust. This column reflects the number of equipment that the owning unit gained or dropped from their account.

(d) Total RQMT. This column reflects the total requirement for both Unit Requirement and Command ADJ.

(e) Excess Qty. This column displays the quantity of equipment for each TAMCN that the unit has on hand over the quantity authorized. If the quantity of equipment is equal to or less than the quantity authorized, then this column will be blank.

(f) Deficiency. This column reflects the total items deficient.

(g) Deadlined Equip. This column displays the serial number and ID number of the deadlined equipment.

(h) Original Date-DL. This column displays the date in calendar year/Julian date format (97/002) on which the item was deadlined.

(i) Supply Readiness. This column displays the overall supply readiness.

(h) Readiness. This column displays the present readiness posture.

(i) Maintenance Readiness. This column displays the present Maintenance Readiness.

INTERIM TRANSITION: We've just covered the MPR, are there any questions? If not we will take a ten minute break then you will have a two practical application.

(BREAK - 10 Min)

INTERIM TRANSITION: Did anyone think of any questions during the break? If not, let's go into the demonstration.

INSTRUCTOR NOTE

Introduce the following Practical Application.

PRACTICAL APPLICATION. (1 hr) The S:I ratio is 25:1. The purpose of this practical application is to create familiarize the students on how to run both Equipment Status and Maintenance Production Reports, The UPK player will be utilized for the practical application. Students will perform prac app individually. Students will have xx minutes for the practical application.

PRACTICE: With minimal help of the instructor the students will log onto GCSS online training and perform the following UPK modules, in the "Try it" and "Know it" modes, at their own pace:

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When finished they should sit quietly until all the other students are finished.

PROVIDE HELP: The primary instructor will identify required procedures that the student must follow to complete the practical application. Instructor should click on the Softlink icon in order to view the student's progress. Instructor should patrol the classroom to ensure students are on the correct web page and staying on task. Answer any questions or concerns that arise IRT GCSS-MC and the UPK. The primary instructor will be aided by the class lesson plan and the UPK at the podium.

1.Safety Brief: N/A

2.Supervision and Guidance: The primary instructor will move about the classroom and provide additional guidance if needed.

3.Debrief: Primary instructor will have 15 minutes to review the main ideas and allow students to comment on what they experienced or observed. The instructor will provide overall feedback and guidance on any misconceptions. Secondary instructor will assist student in closing out the UPK player and answering questions.

INTERIM TRANSITION: Do you have any questions on the practical application? If not, you will perform the next Practical Application.

INSTRUCTOR NOTE

Introduce the following Practical Application.

PRACTICAL APPLICATION. (1 hr) Each student will accomplish the assignment on their own. Allow 30 minutes for completion and review of this practical application exercise. There is one instructor required. Distribute one copy of Corrective Maintenance Practical Application "A" to each student. Read each question to the students to ensure they understand the requirements of the assignment. Handouts are located in the classroom filing cabinet. Provide assistance as required to each student. The purpose of this practical application is to build the students knowledge of validating a MPR. This skill will be evaluated by performance evaluation.

PRACTICE: Each student will analyze the same MPR and answer each question. Students will work alone and raise their hand to gain the attention of the instructor if they need assistance. When finished they should sit quietly until all the other students are finished.

PRACTICAL APPLICATION. Each student will analyze the same MPR and answer each question. Students will work alone and raise their hand to gain the attention of the instructor if they need assistance.

PROVIDE HELP: The primary instructor will identify required procedures that the student must follow to complete the practical application. Instructor should click on the Softlink icon in order to view the student's progress. Instructor should patrol the classroom to ensure students are on the correct web page and staying on task. Answer any questions or concerns that arise IRT GCSS-MC and the UPK. The primary instructor will be aided by the class lesson plan and the UPK at the podium.

1.Safety Brief: N/A

2.Supervision and Guidance: The primary instructor will move about the classroom and provide additional guidance if needed.

3.Debrief: Primary instructor will have 15 minutes to review the main ideas and allow students to comment on what they experienced or observed.

TRANSITION: We've just covered the MPR, are there any questions? If not, I have several for you. Q1: What is the purpose of the MPR? **A1: Provides maintenance managers at all levels visibility of active SR's in their shops.** Q2: What does the first two lines of the MPR represent? **A2: Basic identification data and current maintenance status of the equipment.** Q3: What does the third line of MPR represent? **A3: Listing of repair parts requirements and the supply action to date on these requirements.**

SUMMARY

(10 min)

During the past week and a half we've covered the MPR, Purpose of GCSS, NAVMC 10560, CM SR, Parts Requirement, SF 368, Mods, Demand-supported Items, and Maintenance reports. I'm confident that you'll be able to return to your units and become a more valuable asset with the knowledge you've gained from this class.

At this time the students with the Instructional Rating Forms go ahead and fill those out, the rest of you take a ten minute break.

(BREAK - 10 Min)

REFERENCE:

Ground Equipment Record Procedures	TM 4700-15/1_
Consumer Level Supply Policy Manual	MCO P4400.150_
MIMMS field procedures Manual	MCO P4790.2_.
GCCS-MC Procedural Notice 1-11	
GPN 3-11	
GPN 2-12	
GPN 3-12	
GPN 4-12	
GPN 10-12	
GPN 1-13	
GPN 3-13	