

COMNAVSURFORINST 4790.1
CODE N41
19 FEB 2002

COMNAVSURFOR INSTRUCTION 4790.1

Subj: FORCE MAINTENANCE AND MATERIAL MANAGEMENT (3M) ASSESSMENT
AND CERTIFICATION PROGRAM

Ref: (a) OPNAVINST 4790.4C Ships' Maintenance and Material
Management (3-M) Manual
(b) CINCLANTFLT/CINCPACFLTINST 4790.3 (w/ch 4) Joint Fleet
Maintenance Manual
(c) NAVEDTRA 43241 Personnel Qualification Standard for
Ship's Maintenance and Material Management (3M) System

Encl: (1) PMS Spot Check Evaluation Form
(2) Sample 3M Program Assessment and Certification
Schedule
(3) Assessment of PMS
(4) Assessment of MDS
(5) Format for Reporting 3M Assessments

1. **Purpose.** To promulgate 3M Program assessment and certification requirements within NAVSURFPAC and NAVSURFLANT. The 3M Program execution is in accordance with references (a) and (b) except where modified by this instruction. The goal is to attain a rejuvenated shipboard preventive maintenance program that will ensure a high state of shipboard material readiness.

2. **Cancellation.** COMNAVSURFPACINST 4790.12.

3. **Scope.** This instruction is applicable to all NAVSURFPAC/NAVSURFLANT Ships.

4. **Background.** The Surface Force Type Commanders are responsible for providing properly manned, trained, and maintained ships to the numbered fleet commanders to proceed to the intermediate and advanced phase of training. A highly effective preventive maintenance program is crucial to combat readiness. Inter-Deployment Training Cycle (IDTC) reduction initiatives have reduced shipboard PMS requirements, but they were not intended to lessen the required standards. Our shipboard maintenance personnel and their supervisors must be intimately familiar with the organizational maintenance and

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support programs on all of their equipment and properly execute assigned maintenance. The critical importance of the 3M Program must be clearly conveyed throughout the force, and excellence must be expected and demanded. The intent of this program is to ensure material condition and readiness of surface ships is being maintained to the highest standards.

5. **Program Changes**. 3M is the fundamental process for maintaining material condition and readiness on surface ships. Increased focus on preventative maintenance and 3M support systems is required to ensure the highest standards of material readiness and to provide our Sailors with the highest quality of equipment preparedness. Changes include:

a. The 3M Program Assessment will no longer be optional. Each ship will have an ATG-led 3M Baseline Assessment and ISIC Certification prior to the completion of the basic training phase of the IDTC.

b. The 3M Program Assessment and Certification will be conducted in accordance with the procedures outlined in Chapter 31 of Volume IV, Part I of reference (b) and as modified by this instruction.

c. The NAVSURFPAC and NAVSURFLANT 3M Program Certification process is an "assess & measure - train - certify" progression. The certification process consists of an Initial Baseline Assessment, followed by training if necessary, culminating with a Certification. The goal is to achieve 3M Program Certification at the 3M Baseline Assessment.

d. 3M Certification is required to be eligible for the Battle Efficiency Award and must be achieved once per IDTC cycle or not to exceed a 24-month period.

e. Equipment validations are to be conducted on a weekly basis by each work center to ensure proper logistics support of shipboard equipment. The force goal is to validate all equipment in a five year period. To accomplish this, one equipment validation per week per work center is required for each 250 equipment files assigned to that work center. For each equipment validation conducted for SNAP systems, the Ship's Equipment File Detail Print, and for OMMS-NG systems, the Validation AID shall be printed and annotated with corrections and notes. The person conducting the equipment validation shall sign, print, and date upon completion. These validations shall

be maintained on file for a minimum of 18 months and provided to the 3M Coordinator to submit necessary changes.

f. Each ship is required to have an aggressive spot check program involving all levels of the Chain of Command from Work Center Supervisor to Commanding Officer. Enclosure (1) is provided to assist and document performance of PMS spot checks.

g. The PMS Assessment is a check of monthly and above maintenance requirements (MR) performed during the 13 weeks prior to the assessment. It does not include situational MRs. Spot checks will be conducted on 2% of those maintenance requirements reported completed.

h. Maintenance personnel will perform Situational Checks (R checks) as required and record them as completed on the appropriate schedules and accomplishment logs. 3M Assessment teams will assess Situational Check performance and report the results.

6. **Certification Process**. The goal and intent of the certification process is to ensure the ship's 3M Program is effective and in compliance with the requirements of reference (a). 3M Assessments and Certifications consist of an assessment of both Planned Maintenance System (PMS) and Maintenance Data System (MDS). Details of the assessment procedures and criteria are contained in Volume IV, Part 1, Chapter 31, Sections 1 through 3 of Appendix A of reference (b) as modified below.

a. **Certification Criteria**. The requirements for certification are based on the guidelines found in reference (b). As modified, the minimum TYCOM criteria for certification are:

(1) Accomplishment Confidence Factor (ACF) shall be 90% or better.

(2) Recorded Accomplishment Rate (RAR) shall be 90% or better.

(3) MDS Performance Rate (MPR) shall be 80% or better.

(4) PMS or MDS Work Center Administration for a department will not be certified if more than 25% of the WCs in the department do not meet the minimum certification criteria outlined above.

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(5) A department will not be certified if more than 25% of assigned WCs or if the department-wide evaluation does not meet minimum certification criteria outlined above.

(6) The ship will not be certified if two or more major departments or if the ship-wide evaluation does not meet minimum certification criteria outlined above.

(7) For the purpose of this instruction a major department is defined as Operations, Engineering, and Combat Systems for CRUDES ships and Operations, Deck, Engineering, and Combat Systems for Amphibious ships, as well as Air and AIMD on LHA/LHD ships. In addition, any department possessing 20% or more of the total PMS checks of the entire ship will be considered a major department.

b. 3M Program Baseline Assessments. This assessment will be scheduled as close as possible to the beginning of the basic training phase of the IDTC. Enclosure (2) is a sample 5-day assessment schedule. During the 3M Baseline Assessment, the status of the shipboard 3M Program will be determined and quantified using the previously stated grading criteria. Details of the PMS Assessment are contained in enclosure (3). Details of the MDS Assessment are contained in enclosure (4). If individual departments on a ship are performing at certification levels during this Baseline Assessment, the ATG 3M Program Training and Assessment Team will forward a recommendation to the ISIC for early certification in those applicable departments. If the Baseline Assessment reveals performance below certification standards, then additional training support will be required, and training opportunities will be scheduled by the ISIC/ship and provided to ship's force personnel by the ATGs.

c. Training by ATG. Ship 3M Coordinators (3MC) can schedule 3M Program training from ATG at any time. Training opportunities are available prior to the Baseline Assessment and should be considered as part of maintaining a robust and vibrant PMS Program. Vigorous internal and external PMS reviews will improve PMS performance, and ultimately material condition.

d. Certification. In support of the ISIC, ATG will return for the Final Assessment and Certification of the ship/departments that were not certified at the 3M Baseline Assessment. This certification should come prior to the end of the Basic Training Phase. ATG will recommend ship 3M

certification to the ISIC when all departments achieve the criteria established in this instruction.

e. Reporting. Results of the 3M assessments will be reported using the format contained in enclosure (5).

7. Responsibilities. In order to ensure the PMS Program remains effective, an organization within the chain of command must be fully employed. In amplification and addition to those listed in references (a) and (b), the following responsibilities are provided.

a. Type Commander. Exercises primary responsibility for the effective operation and support of the program. Support includes properly funding organizational maintenance and manning the ships at designed level, including 3M Coordinators.

b. ISIC. Serves as the certification authority for the ship's 3M System. To ensure standardization across the surface force, ATG will assist in conducting the certification.

c. Commanding Officer. Responsible for 3M Program ownership. Ownership at this level emphasizes the priority of the 3M Program and places responsibility for program management and monitoring clearly within the lifelines. Commanding Officers will ensure a 3M Program is functional and fully meets required standards. Additionally, continuous self-assessment will be sustained, to include a robust spot check program and aggressive action to address any identified shortfalls or problem areas.

d. Executive Officer. Reports directly to the Commanding Officer on all 3M Program matters. Acts as principle advisor to the Commanding Officer on 3M issues.

e. 3M Coordinator. Responsible for sustaining the shipboard 3M Program and keeping the chain of command informed as to current procedures concerning the 3M Program revisions. The 3M Coordinator also serves as the main point of contact with the ATG 3M Training and Assessment Teams. Based on the results of the 3M Baseline Assessment, the 3M Coordinator will schedule the appropriate training from the Afloat Training Group.

f. Afloat Training Group. Conduct the 3M Baseline Assessments and make recommendations to the ISIC regarding the assessment and certification of ships under their cognizance.

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The Afloat Training Group will also provide training in support of the assessment and certification process as required.

8. Qualifications and Accountability. The keys to the success of the Navy 3M Program are having well-trained, knowledgeable Sailors accomplishing the maintenance, and a properly administered program. All personnel assigned to billets associated with the 3M System must be 3M PQS qualified for their assigned billet in accordance with reference (c). To maintain accountability, all maintenance personnel are required to sign for the completion of assigned maintenance actions in an Accountability Log shown in Appendix H of Volume IV, Part I, Chapter 31 of reference (b) or the accountability log generated by the SKED program. All entries in the log shall be reviewed for completeness and accuracy by the Work Center Supervisor. Accountability sheets will be maintained in the Work Center PMS Manual for a period of not less than 13 weeks.

(Signed)
R. A. SPICER
Deputy and
Chief of Staff

Distribution:

SNDL Parts 1 and 2
26A1 Amphibious Group Lant
26A2 Amphibious Group PAC
26C2 Beach Group PAC
26E2 Amphibious Unit PAC
26J2 Afloat Training Group and Detachment PAC
26T2 Regional Support Organization PAC (San Diego only)
26Z2 Shore Intermediate Maintenance Activity PAC
26GG2 Explosive Ordnance Disposal Group and Unit PAC
28A1 Carrier Group Lant
28A2 Carrier Group PAC
28B1 Cruiser-Destroyer Group Lant
28B2 Cruiser-Destroyer Group PAC
28C2 Surface Group and Force Representative PAC
28D1 Destroyer Squadron Lant
28D2 Destroyer Squadron PAC
28J1 Combat Logistics Squadron Lant
28L1 Amphibious Squadron Lant
28L2 Amphibious Squadron PAC
29 Warships
29A2 Guided Missile Cruiser PAC (CG) (CGN)
29C2 Coastal Patrol PAC (PC)

29E2 Destroyer PAC (DD) 963 Class
29F2 Guided Missile Destroyer PAC (DDG)
29AA2 Guided Missile Frigate PAC (FFG) 7 Class and Fleet
Introduction Team
30 Mine Warfare Ships
31 Amphibious Warfare Ship
31A2 Amphibious Command Ship PAC (LCC)
31G2 Amphibious Transport Dock PAC (LPD)
31H2 Fast Combat Support Ship PAC (AOE)
31I2 Dock Landing Ship PAC (LSD)
31M2 Tank Landing Ship PAC (LST)
31N2 Multi-Purpose Amphibious Assault Ship PAC (LHD)
32C2 Ammunition Ship PAC (AE)
32H2 Fast Combat Support Ship PAC (AOE)
32 Auxiliary Ships
32N2 Oiler PAC (AO)
32Q2 Replenishment Oiler PAC (AOR)
32X2 Salvage Ship PAC (ARS)
32KK Miscellaneous Command Ship PAC (AGF)
36A1 Auxiliary Floating Dry Dock (AFDB) (AFDL) (AFDM) and
Auxiliary Repair Dock (ARD) (ARDM), LANT
36A2 Auxiliary Repair Dry Dock PAC (AFDM) (USS STEADFAST only)
39E1 Amphibious Construction Battalion Lant
39E2 Amphibious Construction Battalion PAC
41 Military Sealift Command
42T1B Tactical Air Control Group and Squadron Pac (VTC)

PMS SPOT CHECK EVALUATION FORM

Department: _____ Workcenter: _____
 Maintenance Person/Personnel: _____
 Assessor: _____ MIP: _____ MRC: _____
 Equipment Nomenclature: _____

- | | | | |
|--|-----|----|-----|
| 1. Maintenance person/personnel qualified to perform MR. | YES | NO | |
| 2. Presented validated MRC using the work center PMS record. (Change page to LOEP to MIP to MRC). | YES | NO | |
| 3. Maintenance person reviewed the MRC before accomplishment of the MR. | YES | NO | |
| 4. Discussed the appropriate safety precautions including Hazardous Material, PPE, Tagout, etc... | YES | NO | |
| 5. Presented the correct tools, parts (NSN), material (MILSPEC), and test equipment (calibrated). | YES | NO | |
| 6. Properly identified the equipment by using location block, LGL, or EGL. | YES | NO | |
| 7. Demonstrated all steps of MR including all notes, warnings, and cautions according to the MRC. | | | |
| a. Steps of the MRC | YES | NO | |
| b. Hazardous Material (use and disposal) | YES | NO | N/A |
| c. Tagout (Standard or PMS) | YES | NO | N/A |
| d. Safety | YES | NO | |
| 8. Report status of MR to workcenter supervisor if completed or not fully accomplished and takes proper corrective action, (i.e.; enters discrepancy in WCWL/JSN LOG or SNAP, submit technical feedback report.) | YES | NO | |

9. Assessment: Fully Accomplished Not Accomplished

NOTES: If all answers to spot check form are YES, then spot check is considered fully accomplished. If maintenance person is not fully qualified to perform the assigned MR, if any safety precautions, notes, caution or warning is violated during the performance of the MR, if any non-calibrated instruments, incorrect MILSPEC material/lubricant/solvents or incorrect repair parts were used, then spot check is considered automatically **not accomplished**.

COMMENTS: _____

SCHEDULE OF EVENTS

1. One-week prior to the Baseline Assessment, ATG will receive from the ship's 3MC:

- Results of self-assessment conducted as per references (a) and (b).
- Current CSMP listing (entire CSMP detailed report by JSN).
- Printout of current suspense file statistical summary report.
- Printout of current equipment file analysis report (SNAP only).
- Ship wide Quals for 3M, DCPO, and Safety PO.
- List of 3M WCS, MP, DCPO, and Safety PO by division.
- User access level listings.
- Listing of outstanding CASREP messages with hard copy 4790-2K.
- Listing by WC all Situational Requirements with date/time last completed and expected date of next required accomplishment.

2. During the Baseline Assessment, a five-day evaluation will be executed as specified below:

- Day 1: In brief with CO/XO/3MC/ISIC Rep/ATG team leader
Commence Work Center PMS assessment
Identify MR Spot Checks
Update 3MC/XO
- Day 2: Continue Work Center PMS assessment (WC level)
Commence Spot Checks
Commence MDS performance review: (Maintenance personnel, RPPOs work center/group supervisors, division officers, department heads, and 3MC)
Update 3MC/XO
- Day 3: Conduct Spot Checks
Continue PMS performance review
Continue MDS performance review
Commence Executive Level PMS and MDS Assessment
Update 3MC/XO
- Day 4: Conduct Spot Checks
Continue PMS performance review
Commence 3M departmental assistant review
Commence Tag-Out Log Review

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Update CO/XO/3MC status/results by ATG team leader.

Day 5: Complete PMS and MDS Assessment
Outbrief with ISIC Rep/CO/XO/3MC by ATG team
leader.

ASSESSMENT OF PLANNED MAINTENANCE SYSTEM (PMS)

1. Using the basic definitions and guidelines described below, determine PMS Recorded Accomplishment Rate (RAR) for each department.

a. Using each WC quarterly schedule calculate the WC's last quarter's RAR (per reference (b)):

$RAR = (A/S)$
Sat RAR = 90% or better

S --- Total MRs scheduled
A --- Total MRs accomplished

b. Using current WC quarterly schedules for the department, randomly select MRCs that have been recorded as accomplished until at least 2% of the total number of MRCs recorded as accomplished have been selected.

c. Conduct spot check for each MRC selected. Based on the results, evaluate the overall effectiveness of the accomplishment of each MR selected.

d. Calculate departmental Accomplishment Confidence Factor (ACF).

$ACF = (E - N)/E$
Sat ACF = 90% or better

E --- Total MRs Evaluated
N --- Total MRs Evaluated as Not Accomplished

ASSESSMENT OF MAINTENANCE DATA SYSTEM (MDS)

1. MDS Confidence Factor (MCF). The ability of ship's maintenance personnel to initiate complete and accurate MDS documents is the cornerstone of the program. Random spot checks will be conducted as means to gage the ability of the ship to properly submit MDS documents. MCF is define by the following formula:

$$\text{MCF} = \frac{\text{Total Number of Satisfactory Tasks}}{\text{Total Number of Tasks}}$$

2. Confidence Management Factor (CMF). The ability of ship's maintenance personnel to conduct equipment validations and submit accurate database corrections. CMF is defined by the following formula:

$$\text{CMF} = \frac{\text{Total number of Satisfactory Validations}}{\text{Total Number Sampled}}$$

3. Reporting and Automated Shore Interface (ASI) Processing Confidence Factor (RAF). The ability of ship's maintenance and logistic personnel to make sure upline reporting and ASI processing is done correctly and promptly. RAF is defined by the following formula:

$$\text{RAF} = \frac{\text{Total Number of Points Awarded}}{\text{Total Points}}$$

4. CSMP Validity Factor (CVF). The overall qualitative measure of the accuracy and completeness of ship's material deficiencies and deferred corrective maintenance as represented by the complete CSMP. The CVF is defined by the following formula:

$$\text{CVF} = \frac{\text{Total Number of Valid Entries}}{\text{Total Number of Entries Sampled}}$$

5. MDS Performance Rate (MPR). The overall quantitative evaluation of the accuracy and completeness of the ship's MDS program. MPR is defined by the following formula:

$$\text{MPR} = (\text{MCF} \times 0.3) + (\text{CMF} \times 0.3) + (\text{RAF} \times 0.1) + (\text{CVF} \times 0.3)$$

FORMAT FOR REPORTING 3M ASSESSMENTS

4790
Ser
Date

From: Afloat Training Group
To: Commanding Officer, USS (SHIP'S NAME AND HULL NO.)
Subj: REPORT OF 3M ASSESSMENT OF USS (SHIP'S NAME AND HULL NO.)
Ref: (a) OPNAVINST 4790.4; Issue of Ship's Maintenance and
Material Management (3M) Manual
(b) CINCLANTFLT/CINCPACFLTINST 4790.3 (w/ch 4); Joint
Fleet Maintenance Manual, Volume IV, Part I, Chapter
31
Encl: (1) (as required)

1. In accordance with references (a) and (b), a PMS and MDS
Assessment of USS (SHIP'S NAME AND HULL NO.) (Department if
applicable) was conducted during the period (date to date).
2. During this assessment, the following significant deficiencies
were discovered:

a.

Specific department and WC deficiencies are provided in enclosure(s)
() through ().

3. The following overall ship/department numerical assessments
are assigned:

a. PMS Assessment (RAR) _____
b. Accomplishment Confidence Factor (ACF) _____
c. MDS Performance Rate (MPR) _____

4. In addition, ____ of ____ situation ("R") checks were conducted and
documented as completed for an accomplishment rate of ____%.

(SIGNATURE LINE)

Copy to:
ISIC

Enclosure (5)