



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

OPNAVINST 4710.31
Ser N87/2U584476
9 October 1992

OPNAV INSTRUCTION 4710.31

From: Chief of Naval Operations

Subj: TRIDENT PLANNED EQUIPMENT REPLACEMENT (TRIPER) PROGRAM

Ref: (a) OPNAVINST 4000.57E (Logistic Support of the TRIDENT and POSEIDON Fleet Ballistic Missile (FBM) Systems)

Encl: (1) TRIPER Program Policies and Functional Responsibilities

1. Purpose. To define concepts, policies, procedures, and responsibilities in support of the TRIDENT Planned Equipment Replacement (TRIPER) Program.

2. Cancellation. NAVMAT Instruction 4710.2

3. Scope. This instruction prescribes the functions and responsibilities of TRIPER Program participants and applies to the Commander, Naval Sea Systems Command (COMNAVSEASYSKOM); Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM); Commander, Naval Space and Warfare Systems Command (COMSPAWARSYSCOM); Submarine Force Commanders and all System Acquisition Program Managers whose equipments affect TRIDENT configurations. The TRIPER Program has no precedent within submarine logistics and will not be subject to lower level directives which do not address planned equipment replacement concepts. Excluded from the TRIPER Program is equipment under the cognizance of the Director, Strategic Systems Program (DIRSSP), and the Deputy Commander, Nuclear Propulsion Directorate, Naval Sea Systems Command (SEA 08).

4. Background. The TRIDENT submarine was designed to have a 50 percent increase in missile availability and a 20 percent increase in on-line availability over previous SSBNs. The TRIPER Program was developed to attain these increased availability requirements. Shipboard equipment (Hull, Mechanical, Electrical and Combat Control Systems) requiring maintenance beyond the capability of ship's force and which likely cannot be accomplished during refit periods without unacceptable impact on other refit requirements are included in the program. They are removed and replaced on a planned basis, thus accomplishing a progressive incremental overhaul. TRIPER inventory assets are controlled and issued to assure their sole dedication to support of USS Ohio (SSBN 726) Class submarines.



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5. Program Objectives. The objectives of the TRIPER Program are to:

a. Support in accordance with reference (a), the progressive, incremental overhaul of the ship to ensure a high state of material readiness during the extended operational period between shipyard availabilities, and to minimize the size of the availability work package and attendant duration.

b. Maximize work accomplished during scheduled refits by allowing quick equipment replacement, with minimum manpower expended, to permit integrated system testing prior to return to SEA.

c. Replace equipment just prior to failure, to maximize its operational availability and avoid disruptions and potentially excessive damage caused by run-to-failure.

d. Shift the burden of TRIPER equipment refurbishment from the refit period to other time periods independent of the refits.

e. Minimize planned and corrective maintenance actions at the operational level.

6. Action. To accomplish the objectives listed above, TRIPER Program activities will perform the functions outlined in enclosure (1).



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TRIPER PROGRAM POLICIES AND FUNCTIONAL RESPONSIBILITIES

1. Program Management. The TRIPER Program will be managed by a inter-Systems Command management team composed of the following key members:

a. NAVSEA PMS396 will direct the TRIPER Program within the policy and guidance of this instruction, exercise total authority and responsibility over all aspects of TRIPER Program operation and its assets, and interface with cognizant commands and higher authority on major policy matters. NAVSEA PMS396 will also coordinate all technical aspects of the TRIPER program such as procurement and refurbishment specifications, Designated Overhaul Point (DOP) validations and assessments, and maintenance plans. NAVSEA PMS396 directives for implementation policy and measurable performance criteria will be contained in the NAVSEA PMS396 "TRIPER Operations Manual".

b. COMNAVSUPSYSCOM as the designated inventory manager will coordinate all inventory management aspects of the TRIPER Program in support of NAVSEA PMS396 program direction. These include maintenance of a stock level computation model, budgeting, asset procurement, inventory control and distribution, etc. The Inventory Manager shall maintain a management plan in consonance with program direction.

c. Submarine Force Type Commanders (TYCOMs) are designated to coordinate TRIPER Program asset changeouts, refurbishments, and storage. The TYCOMs shall designate site managers to maintain a management plan in consonance with program direction established by NAVSEA PMS396.

d. System Acquisition Managers (COMSPAWARSYSCOM, Program Executive Officers (PEOs), etc.) will provide technical assistance to NAVSEA PMS396 for cognizant items.

Directives and management plans will be jointly developed and concurred in by the principal TRIPER support commands.

2. TRIPER Selection Criteria. In order for an item to qualify for the TRIPER Program, off-hull equipment planned maintenance (as contained in the class maintenance plan) that is beyond the capability of the organizational level must be required during the Operational Phase (i.e., the period between shipyard availabilities). In addition, one of the following criteria must be met:

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a. Equipment refurbishment time exceeds the refit duration. Refurbishment time shall include the time required to accomplish all events commencing with the start of interference and equipment removal, and ending with the completion of interference reinstallation and shipboard testing. For non-TRIDENT Refit Facility (TRIREFFAC) DOPs, this time will include an allowance for receipt inspections and shipping.

b. Equipment refurbishment time, although less than the refit duration, adversely impacts the parent system maintenance, grooming, and testing (i.e., the refit duration criteria is reduced by the time required for planned maintenance, grooming, and testing in support of the parent system).

c. Equipment refurbishment time, although less than the refit duration, adversely impacts maintenance, grooming, and testing of other ship systems (i.e., the refit duration criteria is reduced by the time required for planned maintenance, on grooming, and testing in support of other system(s)).

d. The aggregate requirement for TRIREFFAC shop resources (personnel or shop equipment) needed to complete refits on schedule is excessive.

3. Additions and Deletions to the Program. NAVSEA PMS396 will approve, after coordination with TYCOMs, all additions or deletions to the program. Long Lead Time (LLT) pool assets shall be in place within 3 years. New items added to the program shall be listed in an interim status until all elements of logistics support are in place.

4. Program Monitoring. A Material Condition Assessment (MCA) Program will be maintained to refine equipment designs and maintenance plans. Assessments will be based on accumulated performance monitoring data, repair and refurbishment experience, and operation and support costs.

The following responsibilities are assigned:

a. NAVSEA PMS396 will manage the MCA Program which will include all TRIPER items.

b. TYCOMs will provide maintenance and operational feedback data.

c. NAVSEA PMS396 will coordinate TRIPER program, maintenance plan, or design changes with respective TYCOMs.

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5. Inventory Management

a. Inventory Control - Ready-for-Issue (RFI), pretested assets will be provided to support all planned or emergent changeout requirements. A TRIPER stock level computation model will be used to calculate and forecast pool requirements at both TRIREFFACs. This model will incorporate a mathematical analysis of the following factors as a minimum: ship and shipboard component population, maintenance plan engineered periodicity, Refurbishment Turnaround Time (RTAT), procurement lead time, recoverability rate, and a safety level that reflects the variability of key parameters. Assets will be centrally managed using a single pool concept in which assets will be assigned, stored and maintained by both TRIREFFACs. TRIPER inventory assets will be controlled and issued solely for the use of OHIO Class submarines. Cognizance symbol "4Y" will be assigned to all TRIPER items.

Positive inventory control will be maintained at all times over every TRIPER item. This will include the tracking of each item on a real time basis, by serial number whether installed aboard ship, in storage, or undergoing refurbishment.

The following responsibilities are assigned:

(1) NAVSEA PMS396 will:

(a) Validate technical parameters in the TRIPER stock level computation model.

(b) Fund TRIPER item acquisitions, including preparing and presenting TRIPER procurement budgets.

(c) Approve, with TYCOM concurrence, release of TRIPER pool assets for non-OHIO Class use.

(2) COMNAVSUPSYSCOM will:

(a) Determine stock levels and budget for pool assets, procure assets, distribute and account for inventory, and disposition assets.

(b) Assist NAVSEA PMS396 in matters of levels determination, inventory control, and financial management.

(c) Maintain packaging, handling, storage, and transportation (PHS&T) procedures and responsibilities.

(d) Assign and monitor stock levels at each TRIREFFAC to meet planned and emergent requirements.

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(3) TYCOMs will:

(a) Conduct TRIPER workload forecasts, oversee changeout planning, execution, refurbishment, testing, and return to a Ready for Issue (RFI) status of designated assets.

(b) Maintain procedures to accomplish pool asset relocations and payback, necessitated by emergent conditions.

(c) Provide transportation, storage and inventory control of assigned TRIPER assets and perform Inactive Equipment Maintenance (IEM) on same.

(d) Provide concurrence to NAVSEA PMS396 for approval and release of TRIPER pool assets for non-OHIO Class submarine use.

(e) Maintain prescribed stock levels.

b. Interchangeability - Standardization of those pieces of equipment designated as TRIPER items is highly preferred, but not mandatory (owing to economic realities and possible non-availability of equipment or other procurement constraints). However, equipment interchangeability is mandatory. Those standards and constraints imposed by ship design and construction contracts on TRIPER equipment installed during submarine construction (e.g., non-deviation aspects of fastener, mechanical joint and other interface locations, quick disconnect and disassembly features, handling attachments, etc.) will be similarly required for equipment purchased for TRIPER stock. Technical documentation to ensure the above will be developed and maintained. This is necessary to ensure that equipment interchangeability and the applicability of procedural documentation developed for TRIPER program operation will be fully realized, and that the degree of equipment standardization attained via new construction design and shipbuilding specifications is not degraded or compromised.

c. Procurement Specifications - To ensure interchangeability of TRIPER items, procurement specifications for TRIPER assets will be provided by NAVSEA PMS396 with assist from system acquisition managers providing system and equipment to Ohio Class submarines if required.

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6. Changeout/Refurbishment Management

a. Changeout Management - TRIPER changeouts will occur at intervals that do not exceed their engineered periodicity (i.e., that point in time beyond which unreliable or uneconomical operation or equipment failure may be reasonably expected) as contained in the class maintenance plan unless prior approval is obtained.

The following responsibilities are assigned to the TYCOM:

(1) Maintain procedures for developing, maintaining, and executing changeout schedules.

(2) Maintain procedures for approving deferrals beyond engineered periodicity and unplanned changeouts.

(3) Maintain procedures related to the removal, installation, handling, storage, and testing of TRIPER items.

b. Refurbishment Technical Management - Refurbishments will be accomplished in strict compliance with Maintenance Requirement Procedures (MRPs) at approved DOPs. For items not refurbished at TRIREFFACs, alternate DOPs shall be considered to promote cost effectiveness and/or minimize the risk associated with work stoppages.

The following responsibilities are assigned:

(1) NAVSEA PMS396 will:

(a) Assist TYCOMs in the budget development for refurbishment requirements.

(b) Assign DOPs for all TRIPER items.

(c) Provide an MRP for each TRIPER item.

(2) COMNAVSUPSYSCOM will:

(a) Provide material support for refurbishments by TRIREFFACs.

(b) Administer refurbishments by non-TRIREFFAC DOPs.

(c) Assist NAVSEA PMS396 in defining refurbishment requirements in support of TYCOM budget development.

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(3) System Acquisition Managers will:

(a) Assist in assigning DOPs for cognizant TRIPER items.

(b) Provide technical assistance for acquisition of refurbishment materials for cognizant items.

(4) TYCOMs will:

(a) Manage, budget and fund all refurbishments, for both planned and emergent changeouts, and associated costs for assets utilized by their respective ships.

(b) Ensure adequate manning is maintained to accomplish program refurbishment requirements.

c. Refurbishment Turnaround Times (RTATs) - To ensure maximum asset availability and minimal pool size, each removed asset requiring refurbishment shall be automatically inducted into the refurbishment cycle and completed within its Refurbishment Turnaround Time (RTAT), unless directed otherwise. Whether removed on a scheduled or emergent basis, the RTAT countoff will start no later than the first day after completion of the refit in which the asset was removed. The established RTAT shall allow for timely refurbishment while causing minimal refit workload impacts and inventory size. For assets removed during shipyard availabilities, the RTAT will be adjusted to compensate for workload impacts.

The following responsibilities are assigned:

(1) NAVSEA PMS396 will coordinate approval of RTATs.

(2) TYCOMs will ensure that TRIPER equipment refurbishments are accomplished within RTATs.

(3) TYCOMs will coordinate with NAVSUP to determine which assets should not be automatically inducted into refurbishment.

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7. Configuration/Alteration Management. Changes to TRIPER assets configurations will be implemented via approved alterations. Upon approval of the alterations, action will be taken to initiate the development or revision of logistic technical data, shipboard handling procedures, detailed removal and installation procedures, pre and post installation test procedures, shipboard work standards, Planned Maintenance System, allowance parts lists, and piece part and test equipment support. Actual equipment alteration will not begin until the above support package is complete and will be accomplished during the refurbishment cycle whenever possible. A configuration status accounting system will be maintained to document the exact configuration of each TRIPER asset (i.e., alterations, waivers, deviations, departures from specification, Alterations and Improvements, and all other configuration related information).

a. NAVSEA PMS396 will:

(1) Develop and issue equipment alterations and maintain a configuration status accounting system.

(2) Provide budgeting and funding for alterations.

b. TYCOMs will ensure alterations on TRIPER assets are accomplished and reported to the Configuration and Logistics Baseline Status Accounting System (CLBSA) in accordance with the TRIDENT System Configuration Management Plan .