

APPENDIX A

COORDINATED SHIPBOARD ALLOWANCE LIST PREPARATION AND PROCESSING

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6-A.0 INTRODUCTION

This appendix defines the Coordinated Shipboard Allowance List (COSAL) and provides procedures for the development and distribution of COSAL data. A ship's COSAL is the definitive allowance document for a ship. A COSAL, which is both a supply and technical publication, is developed from one of the largest and complex programs in the Navy. While the actual use of the traditional COSAL has been diminished due to the automation of supply and maintenance processes, COSAL remains the basis for the automated products and tools that have taken its place; including OMMS-NG/R-Supply and the Automated Shore Interface (ASI). The COSAL establishes the allowance for spare and repair parts, Maintenance Assistance Modules (MAMs), Operating Space Item (OSI), General Purpose Test Equipment (GPETE), special purpose test equipment, and special tools required to operate and maintain systems and equipment installed in U.S. Navy ships.

The COSAL is provided as data to ships in either CD-ROM format and/or as the Organizational Maintenance Management System Next Generation (OMMS-NG). OMMS-NG is the preferred method of providing COSAL data to ships in the Fleet. This appendix provides step by step actions required to implement the policies set forth in Chapter 6 Section 6.4 of this manual. It describes a COSAL in terms of its derivation from the Weapon Systems File (WSF) and describes the actions and milestones that must be completed to develop the data required to support a COSAL computation. OMMS-NG provides an automated methodology for maintaining the ship's configuration baseline and for maintaining inventory control of the ship's allowances of spares and MAMs.

6-A.1 COORDINATED SHIPBOARD ALLOWANCE LIST (COSAL)

In an effort to simplify data storage onboard ship and move toward a "paperless" environment, the Navy is increasingly using computerized methods for managing supply and configuration information. The use and accessibility of a COSAL has been significantly enhanced with the conversion of the hard copy product into a database application in Microsoft Access format, referred to as COSAL In Access (CIA), with user friendly automated navigational tools. While CIA is the primary medium for distributing the COSAL publication today, the basic format and structure of the hardcopy COSAL is retained. The COSAL is produced in three major parts.

6-A.1.1 Automated COSAL Format

Automated COSALs are structured as follows:

INTRODUCTION - The introduction to a COSAL is best defined as a document that establishes the shipboard material support for installed and portable equipment and provides a list of equipment required for a ship to perform its operational mission. It is designed to achieve support among the various equipments enabling the ship to have a maximum, self-supporting capability for an extended period of time. By contrast, the Coordinated Shore Based Allowance List (COSBAL) establishes the shore-based support for installed and portable equipment and is essentially similar to the COSAL.

COSAL PART I - Part 1 of the COSAL is made up of six different index sections and serves as the table of contents for the publication. Each of the indices contains the same information sorted in a different sequence.

- SOEAPL: The COSAL Summary of Effective Allowance Parts List (SOEAPL) lists non-supported and full supply support APLs/AELs. The SOEAPL contains all APLs/AELs that apply to the ship. The SOEAPL is broken down by equipment type.
- COSAL Index Sections A & B: Primarily contain the same information, but the sequence in which this information is listed differs. Section A is arranged in alphabetical sequence by noun name and partial characteristic description of each APL, AEL, and ACL. Section B is arranged alphabetically by Service Application.
- COSAL Index Sections C, D, & E: This index provides a listing of systems and equipment included in the COSAL. These indexes are arranged in sequence by APL/AEL to Equipment Identification Code (EIC) (Part 1 Section C), by Equipment Identification Code (EIC) to Allowance Parts List (APL)/Allowance Equipage List (AEL) (Part 1 Section D), and by AILSIN/Functional Group Code (FGC) to APL/AEL (Part 1 Section E)

COSAL PART II - Part II of the COSAL contains the allowance documentation (actual APLs and AELs) for the equipment installed in a ship.

- Section A: Allowance Parts Lists (APLs).
- Section B: Circuit symbol data for all electronic APL's in Navy use contained on GDAPL CD-ROM. (No longer provided as part of the COSAL).
- Section C: Allowance Equipage Lists (AELs).

COSAL PART III - Part III of the COSAL is the Stock Number Sequence List (SNSL) which contains allowances broken down into various types, including 6 sections.

- Section A: Storeroom Items (SRIs)
- Section B: Operating Space Items (OSIs)
- Section CF: Maintenance Assistance Modules (MAMs)
- Section CR: Ready Service Spares (RSSs)
- Section D: Alternate number to stock number cross reference to NIIN/NICN
- Section E: General Use Consumable List (GUCL)
- Section F: forms and Publications (I COG)

6-A.2 COSAL COMPUTATIONAL MATH MODELS

The development of COSAL or OMMS-NG database allowances is driven by the ship's configuration baseline, maintenance and insurance level of the ship, duration period, equipment criticality, and computational model selected. This COSAL development process requires extracts of systems and equipment data from Ship Configuration and Logistic Support Information (SCLSI) and WSF databases. Most COSAL computation models begin by calculating the expected quantity of each part needed for a specified period of time. The models then calculate an allowance quantity based on the expected number of replacements.

The COSAL computational models vary based on the parameters built into the model. The following list consists of the math models used in the computation of a COSAL:

- .5 Price Sensitive FLSIP Plus Fleet Logistics Support Improvement Program (FLSIP .5 PLUS)

- .25 FLSIP
- .10 Modified FLSIP (MOD-FLSIP)
- Readiness Based Sparing (RBS) (usually applied at system/equipment level)
- TRIDENT
- Conventional

RBS and .5 Price Sensitive FLSIP Plus are the models most commonly used in the COSAL computation process. See the Readiness Based Sparing Chapter of this manual for a complete explanation of the RBS process.

6-A.2.1 Price Sensitive FLSIP .5 Plus

Price Sensitive FLSIP .5 Plus (PSF .5P). In April 2005 CNO approved the following modifications to the existing FLSIP .5 Plus (F.5P) which is now known as Price Sensitive FLSIP .5P (PSF .5P).

a. A simplified version of the FLSIP formula used to establish the foundation of ship allowances is as follows:

$$UR = \frac{POP \times BRF}{4} \quad UR = \text{Usage Rate. An estimate of how often a part will be needed in each 90-day period.}$$

POP = Population of the part on board the ship
(i.e., installed population)

BRF = Best Replacement Factor. BRF is the actual Fleet reported usage. The BRF is reviewed and updated annually to reflect the latter as reported by fleet users and recorded in the 3-M system. Adjustments to the BRF can result in repair parts being added or deleted in subsequent allowance products. Establishing and updating BRFs are engineering functions under the cognizance of NSLC, NAVICP-M, and Navy Supply Information Systems Activity (NAVSISA). The BRF is the primary variable in the FLSIP model.

4 = Dividing by 4 determines the expected usage for a 90 day period (1 quarter) which is the CNO established stocking level duration.

If UR is equal to or greater than 0.50, the item is carried as an On-Board Repair Part (OBRP). If UR for a given part is

less than .125 (.5 divided 4), these items may be excluded. The excluded items are subsequently passed through the "PLUS" part of the model.

b. This spare parts allowance model significantly reduces OBRPs by removing items that cost \$1,000 or more by sparing them at 4.0 (four demands in a one year period). Items costing less than \$1,000 will remain spared at .5 FLSIP (one demand in a two year period). Readiness Based Sparing (RBS), Planned Maintenance Systems (PMS), Safety Overrides and Operating Space Items (OSI) will remain unaffected.

c. The Plus portion of the model will eliminate C2 Casualty Reports (CASREPs) along with any Maintenance, Material and Management (3-M) ADDBACK information greater than \$1,000. The Price Sensitive variant will expand CASREP ADDBACKs by changing the business rules to 1 hit for C3/C4 CASREPs in a ship class/group over a two year period for items less than \$10K. This ensures items less than \$10K will be allowed and assigned a 'Y' Allowance Derivation Code (ADC).

6-A.3 COSAL PREPARATION

COSALs are initially prepared when a ship is undergoing construction. During that period of time, a ship's configuration file is developed using the Configuration Data Managers Database-Open Architecture (CDMD-OA) and Ship Configuration and Logistic Support Information System (SCLSIS).

CDMD-OA is an automated data system that performs CSA for systems and equipment as they are installed in a ship.

6-A.3.1 Incremental COSALs

A ship is constructed over an extended period of time (usually three to five years). A shipbuilding contract requires a shipbuilder to acquire and install Contractor Furnished Equipment (CFE) and Government Furnished Equipment (GFE) needed to construct the ship. A shipbuilding contract further stipulates that the shipbuilder is responsible for providing the initial On Board Repair Parts (OBRPs) required to operate and maintain the CFE installed by the contractor. Due to the time that it takes to acquire parts and to provide the shipbuilder an opportunity to take advantage of buying parts from the original equipment manufacturer, the Navy extracts several increments of the COSAL. Although the number of COSAL increments may vary, the NAVSEA policy requires four increments for a lead ship of a

class and three increments for each follow ship. These increments coincide with the installation schedule and provide an allowance for the systems and equipment installed in a ship at a specified period of time. The number of increments extracted for a ship varies based on the size of the ship and the length of the construction period. COSAL increments are scheduled to provide the ultimate number of spares and are based on a percentage of completion of installation of systems and equipment.

6-A.3.1.1 Purpose of Incremental COSALs

The purpose of the incremental COSAL is to define responsibility for initial OBRPs and OSI, as well as to provide early identification so the items can be acquired in a timely fashion to ensure meeting readiness milestone requirements. Each part listed in the Incremental SNSL (ISNSL) is designated as CFE or GFE. Each ISNSL provides additions and deletions so spares levels can be adjusted. Additionally, the status of outfitting can be measured throughout the construction period. The shipbuilding contractor is responsible for acquiring and providing the initial allowance of spares designated as CFE. The COSAL increments provide the Shipbuilder with a computed level of spares which reduces the number of individual spares that must be acquired.

6-A.4 COSAL MAINTENANCE

Once OMMS-NG is initialized, the ship enters the COSAL maintenance phase. This phase will continue until the ship is struck from the records. The data files and systems used to extract a COSAL are dynamic in nature. As the ship's configuration changes, the OMMS-NG database is updated. As the WSF is updated, the parts history file changes which means that APLs, AELs, and PALs are constantly changing. Therefore, a method of updating all ships' COSALs is a necessity. For manual ships, COSALs are updated on a Quarterly basis through COSAL In Access (CIA). Automated Shore Interface (ASI) data is used to provide monthly maintenance to OMMS-NG ships.

6-A.4.1 Automated Ships

Ships that have OMMS-NG installed receive monthly ASI data containing configuration, logistics, and allowance information to update their OMMS-NG database.

6-A.4.2 Non-Automated Ships

Upon receipt of the CIA, the ship's Supply Officer is responsible for making sure the COSAL reflects the updated information. This data is provided on a Quarterly basis.