NONRESIDENT
TRAINING
COURSE

July 1990

Ship's Serviceman 3

NAVEDTRA 14239

Although the words "he," "him," and "his" are used sparingly in this course to enhance communication, they are not intended to be gender driven or to affront or discriminate against anyone.

PREFACE

By enrolling in this self-study course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program.

COURSE OVERVIEW: In completing this nonresident training course, you will demonstrate a knowledge of the subject matter by correctly answering questions on the following: organization and security of supply afloat; operation of the sales outlets; stowage and custody of ship's store stock; customer service in the afloat barbershop; operation of the ship's laundry and dry-cleaning plant; and general maintenance of ship's store equipment.

THE COURSE: This self-study course is organized into subject matter areas, each containing learning objectives to help you determine what you should learn along with text and illustrations to help you understand the information. The subject matter reflects day-to-day requirements and experiences of personnel in the rating or skill area. It also reflects guidance provided by Enlisted Community Managers (ECMs) and other senior personnel, technical references, instructions, etc., and either the occupational or naval standards, which are listed in the *Manual of Navy Enlisted Manpower Personnel Classifications and Occupational Standards*, NAVPERS 18068.

THE QUESTIONS: The questions that appear in this course are designed to help you understand the material in the text.

VALUE: In completing this course, you will improve your military and professional knowledge. Importantly, it can also help you study for the Navy-wide advancement in rate examination. If you are studying and discover a reference in the text to another publication for further information, look it up.

1990 Edition Prepared by
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Sailor's Creed

"I am a United States Sailor.

I will support and defend the Constitution of the United States of America and I will obey the orders of those appointed over me.

I represent the fighting spirit of the Navy and those who have gone before me to defend freedom and democracy around the world.

I proudly serve my country's Navy combat team with honor, courage and commitment.

I am committed to excellence and the fair treatment of all."

CONTENTS

INSTRUCTIONS FOR TAKING THE COURSE

ASSIGNMENTS

The text pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions. Pay close attention to tables and illustrations and read the learning objectives. The learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

SELECTING YOUR ANSWERS

Read each question carefully, then select the BEST answer. You may refer freely to the text. The answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the course.

SUBMITTING YOUR ASSIGNMENTS

To have your assignments graded, you must be enrolled in the course with the Nonresident Training Course Administration Branch at the Naval Education and Training Professional Development and Technology Center (NETPDTC). Following enrollment, there are two ways of having your assignments graded: (1) use the Internet to submit your assignments as you complete them, or (2) send all the assignments at one time by mail to NETPDTC.

Grading on the Internet: Advantages to Internet grading are:

- you may submit your answers as soon as you complete an assignment, and
- you get your results faster; usually by the next working day (approximately 24 hours).

In addition to receiving grade results for each assignment, you will receive course completion confirmation once you have completed all the assignments. To submit your assignment answers via the Internet, go to:

http://courses.cnet.navy.mil

Grading by Mail: When you submit answer sheets by mail, send all of your assignments at one time. Do NOT submit individual answer sheets for grading. Mail all of your assignments in an envelope, which you either provide yourself or obtain from your nearest Educational Services Officer (ESO). Submit answer sheets to:

COMMANDING OFFICER
NETPDTC N331
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

Answer Sheets: All courses include one "scannable" answer sheet for each assignment. These answer sheets are preprinted with your SSN, name, assignment number, and course number. Explanations for completing the answer sheets are on the answer sheet.

Do not use answer sheet reproductions: Use only the original answer sheets that we provide—reproductions will not work with our scanning equipment and cannot be processed.

Follow the instructions for marking your answers on the answer sheet. Be sure that blocks 1, 2, and 3 are filled in correctly. This information is necessary for your course to be properly processed and for you to receive credit for your work.

COMPLETION TIME

Courses must be completed within 12 months from the date of enrollment. This includes time required to resubmit failed assignments.

PASS/FAIL ASSIGNMENT PROCEDURES

If your overall course score is 3.2 or higher, you will pass the course and will not be required to resubmit assignments. Once your assignments have been graded you will receive course completion confirmation.

If you receive less than a 3.2 on any assignment and your overall course score is below 3.2, you will be given the opportunity to resubmit failed assignments. **You may resubmit failed assignments only once.** Internet students will receive notification when they have failed an assignment--they may then resubmit failed assignments on the web site. Internet students may view and print results for failed assignments from the web site. Students who submit by mail will receive a failing result letter and a new answer sheet for resubmission of each failed assignment.

COMPLETION CONFIRMATION

After successfully completing this course, you will receive a letter of completion.

ERRATA

Errata are used to correct minor errors or delete obsolete information in a course. Errata may also be used to provide instructions to the student. If a course has an errata, it will be included as the first page(s) after the front cover. Errata for all courses can be accessed and viewed/downloaded at:

http://www.advancement.cnet.navy.mil

STUDENT FEEDBACK QUESTIONS

We value your suggestions, questions, and criticisms on our courses. If you would like to communicate with us regarding this course, we encourage you, if possible, to use e-mail. If you write or fax, please use a copy of the Student Comment form that follows this page.

For subject matter questions:

E-mail: n313.products@cnet.navy.mil
Phone: Comm: (850) 452-1001, Ext. 2167
DSN: 922-1001, Ext. 2167
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC N313
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32509-5237

For enrollment, shipping, grading, or completion letter questions

E-mail: fleetservices@cnet.navy.mil
Phone: Toll Free: 877-264-8583
Comm: (850) 452-1511/1181/1859
DSN: 922-1511/1181/1859
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC N331
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

NAVAL RESERVE RETIREMENT CREDIT

If you are a member of the Naval Reserve, you may earn retirement points for successfully completing this course, if authorized under current directives governing retirement of Naval Reserve personnel. For Naval Reserve retirement, this course is evaluated at 11 points. (Refer to *Administrative Procedures for Naval Reservists on Inactive Duty,* BUPERSINST 1001.39, for more information about retirement points.)

Student Comments

Course Title: *Ship's Serviceman 3*

NAVEDTRA: 14239 **Date**: _____

We need some information about you:

Rate/Rank and Name: _____ SSN: _____ Command/Unit _____

Street Address: _____ City: _____ State/FPO: _____ Zip _____

Your comments, suggestions, etc.:

Privacy Act Statement: Under authority of Title 5, USC 301, information regarding your military status is requested in processing your comments and in preparing a reply. This information will not be divulged without written authorization to anyone other than those within DOD for official use in determining performance.

NETPDTC 1550/41 (Rev 4-00

CHAPTER 1

ORGANIZATION AND SECURITY

This training manual has been prepared for members of the Regular Navy and Naval Reserve in the Ship's Serviceman (SH) rating who are preparing for advancement to Ship's Serviceman third class (SH3).

Ship's Servicemen operate and manage resale activities such as ship's stores, commissary stores, and Navy exchanges; service activities of the ship's stores and Navy exchanges such as laundry and dry-cleaning facilities, vending machines, snack bars, and barbershops; and they perform clerical and stock control functions for all activities operated.

As an SH3, you will work primarily as a sales outlet operator, bulk storeroom custodian, barber, or laundryman. The majority of these billets are aboard ship, so the afloat procedures should be your main concern.

To be successful in this rating, you must possess certain personal characteristics. You should like dealing with people, have a good speaking ability, possess above average arithmetic skills, and have basic recordskeeping abilities.

Getting along with people deals with customer service which is completely covered in the *Navy Customer Service Manual,* NAVEDTRA 10119-B, and therefore, material already included in that manual will not be covered in this manual.

The material covered in this manual is the minimum required of an SH3 to perform the job properly. These are the minimum requirements based on the occupational standards for SH3, which can be found in the current advancement handbook for Ship's Servicemen.

SUPPLY AUTOMATION

The Navy has developed many new systems to make the job of supply personnel easier. Recently, the Navy developed a system for the automation of ship's store records. It is called the Resale Operations Management (ROM) system. The ROM system has been successfully tested and used aboard ship. It has proven to enhance the accuracy and timeliness of doing ship's store records. The system makes the SH's job easier because it does much of the work the SH used to do by hand.

The ROM system *Terminal User's Guide* (TUG) is the computer system reference book providing detailed information on how to operate the ROM. This publication was developed by and is available free from the Navy Management Systems Support Office (NAVMASSO) located in Norfolk, Virginia. NAVMASSO has also published a *Resale Operations Management (ROM) Desk Top Guide* which is a supplement to the ROM TUG. It is exclusively made up of job sheets. Each job sheet contains a step-by-step guide in performing a ROM function. Although the occupational standards for SH3 do not indicate the use of the ROM system, many of the tasks performed by an SH3 will be centered around the ROM system. Throughout this manual you may see the terms *manual recordskeeping,* ROM *procedures,* and ROM *users.* The term *manual recordskeeping* relates to performing a task without the use of the ROM system. The term *ROM procedures* or *ROM users is* used to indicate that the procedures being discussed are done using the ROM system.

THE SUPPLY SYSTEM

Today's Navy requires millions of items to maintain its operational readiness. The supply system supports these material needs. The supply system is composed of a group of activities that is responsible for procurement, distribution, inventory control, and stowage of all materials except ammunition.

In this chapter you will learn the basics of the supply system and the organization of supply department afloat. You will become familiar with supply department security regulations that you must observe in performing your everyday duties.

NAVAL SUPPLY SYSTEMS COMMAND

The Naval Supply Systems Command (NAVSUPSYSCOM) provides management policies and technical guidance for naval material to activities of the Navy and Marine Corps. This includes provisioning, cataloging, inventory management, distributing, material handling, traffic management, transporting, packaging, preservation, receipt, stowage, issue, and disposal functions. NAVSUP administers the Navy Stock Fund (NSF) and the Navy Resale Program. NAVSUP also exercises management control of field purchasing offices, inventory control points, supply centers, and other offices concerned with supply support.

NAVY RESALE PROGRAM

The Navy Resale Program has the responsibility for providing an adequate selection and inventory of health and comfort items for Navy personnel. The Navy Resale Program takes care of these needs through the operation of individual stores, service activities, and other offices. The purpose of the Navy Resale Program is as follows:

- To provide a convenient and reliable source from which personnel may obtain, at the lowest practical cost, necessary articles for the health, comfort, or convenience of personnel and services needed in day-to-day living

- To provide through accrued profits a source of funds for the recreation of naval personnel

- To promote good morale

NAVY RESALE AND SERVICES SUPPORT OFFICE

The Navy Resale and Services Support Office (NAVRESSO) is responsible for administering the Navy Resale Program.

NAVRESSO is located in Fort Wadsworth, Staten Island, New York, and is under the command and the authority of the Commander, Naval Supply Systems Command.

NAVRESSO provides technical guidance and administrative assistance to ship's stores afloat. It conducts research, develops new ideas, and advises sea and shore activities on possible improvements that have been developed. It issues the lists of items authorized for sale in the resale program, enters into agreements with commercial suppliers as to the quality and price of merchandise, and issues or causes to be issued the *Ship's Store Contract Bulletins, Ship's Store Afloat Catalog, NAVRESSO Price Agreement Bulletins,* and other publications concerned with the displaying and selling of merchandise.

FLEET ASSISTANCE TEAMS

NAVRESSO manages the fleet assistance teams. These teams, located in the major port areas, are made up of master chiefs, senior chiefs, or chief petty officers. NAVRESSO established these teams to provide technical assistance and guidance in all areas of the ship's store operation to shipboard personnel.

Ships can get assistance by calling the fleet assistance team, by submitting a letter to the proper fleet assistance team, with a copy to the Fleet Assistance Team Branch (NAVRESSO), or by naval message in urgent cases. Depending on the size of the ship, visits normally last from 2 to 5 days with no formal report made upon completion.

Ships preparing to deploy should schedule a visit 120 days in advance of the scheduled departure date. During the actual predeployment visit, the fleet assistance team provides information on the *Consolidated Afloat Requisitioning Guide Overseas* (CARGO) (NAVSUP Pub 4998), Q-cognizance items, foreign merchandise, vendor control, and endurance loading. This information is beneficial to the ship preparing for deployment.

The fleet assistance teams may also be helpful before overhaul. Ships scheduled to go to overhaul should schedule an assistance team visit 18 months before the overhaul date. This time is required to permit timely submission of work requests for repair or replacement of equipment.

In addition, the fleet assistance team provides the following services in the operation of the sales outlets:

- Modernization planning

- Merchandise promotion assistance, including layout, display, and signing

- Merchandise planning, including stock control review, model stock plans, and disposition of excess stock

- Pricing procedures

- Accounting records, returns, and bill payment

- Internal operating procedures

- Internal controls, including cash handling, security, and receipt and inspection procedures

- Procurement assistance including purchasing procedures, contract administration procedures, vendor relations, merchandise quality assurance, and processing of the special DD Form 1155 for merchandise ordered under simplified purchase procedures

- Training

- Periodic review of ship's store operations

The aid provided by the fleet assistance teams is not limited to just the sales outlets. They also provide help in the service activities including the following:

- Job instruction and training programs

- Work scheduling and control

- Equipment maintenance (minor repairs)

- Safety and sanitation

FLEET ACCOUNTING AND DISBURSING CENTERS

There are two fleet accounting and disbursing centers (FAADCs) to service the fleet. They are the Fleet Accounting and Disbursing Center Atlantic (FAADCLANT) located in Norfolk, Virginia, and the Fleet Accounting and Disbursing Center Pacific (FAADCPAC) located in San Diego, California. The FAADCs perform such functions as auditing ship's store returns, paying dealer's bills, reconciling cash reported in returns, maintaining files, and reconciling differences with documents covering receipts from purchase and receipts from other supply officers.

FLEET COMMANDER

The commander in chief of the fleet is responsible for issuing logistics policies, plans, and orders for support of the fleet and shore activities under the commander's control. The fleet supply officer assists the fleet commander in carrying out these responsibilities. The fleet supply officer is a professional advisor to the commander concerning supply and transportation matters.

TYPE COMMANDER

Ships of the fleet are grouped by ship types and are assigned to type commanders (TYCOMs) for administrative purposes. TYCOMs are responsible for implementing the logistics policies, plans, and orders of the fleet commander for their particular group of ships. The Supply Corps officers on the staff with the TYCOM provide aid and advice concerning supply matters. They also conduct inspections of supply functions, if required, and supervise replenishment of supplies from mobile supply units under the operational control of the TYCOM.

SUPPLY DEPARTMENT AFLOAT

The supply department afloat has many responsibilities that can be broken down into two functions, material support and service. The material support functions relate to operational and maintenance requirements, while the service functions relate to the operation of the service activities.

The overall mission of the supply department afloat is to support the material and service needs of the ship. To do this, supply must procure, receive, inspect, stow, issue, and account for general stores, repair parts, equipage, equipment, ship's store stock, clothing, and subsistence items. The department will also have to operate a ship's store, snack bar, laundry, barbershop, drycleaning plant, and disbursing office as required.

SUPPLY DEPARTMENT ORGANIZATION

The supply department is organized into divisions to make the performance of duties easier

(fig. 1-1). The number of divisions varies according to the type of ship and number of personnel aboard.

Supply Officer

The head of the supply department is the supply officer. The supply officer is the senior Supply Corps officer aboard and he or she is responsible to the commanding officer for the proper operation and administration of all supply department functions. The supply officer prepares the organizational chart. The chart identifies all the essential functions within the supply department and defines channels of responsibility and authority. The chart is normally located in the supply office and is updated as personnel are reassigned.

The accountability for the ship's store and other areas of supply may be assigned to a subordinate Supply Corps officer; however, this does not relieve the senior Supply Corps officer of his or her responsibilities. The supply officer assigns responsibilities by written request routed through the commanding officer for approval. The subordinate Supply Corps officer is responsible

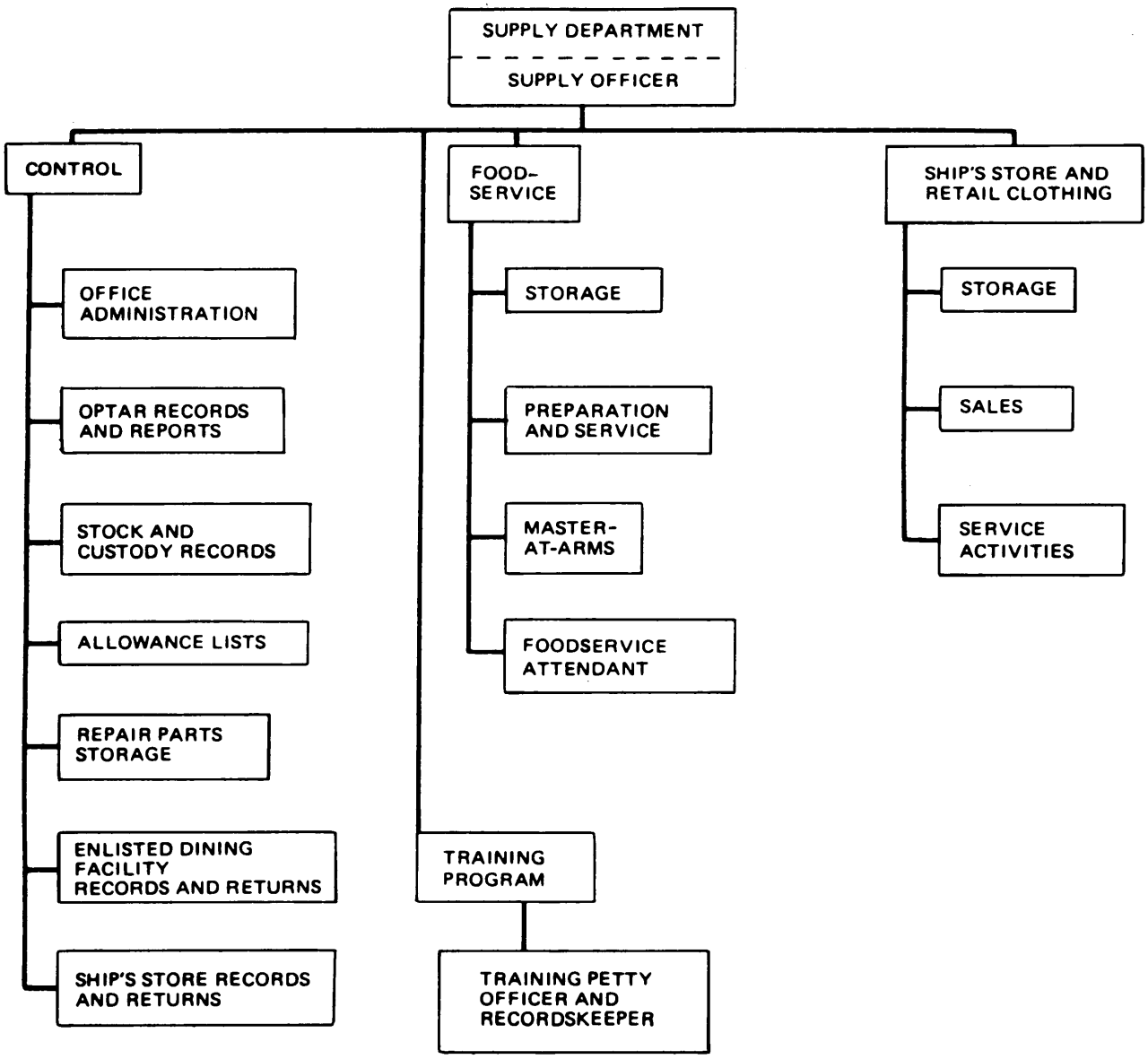


Figure 1-1.—Typical supply department on a ship with a Supply Corps officer.

to the supply officer for the efficient operation of assigned areas as required by the NAVSUP publications. The approval of these requests is terminated upon detachment of the supply officer or assistant for ship's store, disbursing, or foodservice.

S-1 Division

The S-1 division is made up of personnel from the Storekeeper (SK) rating. Their duties vary according to the size of the ship and unit requirements.

In general, SKs procure, receive, stow, expend, and account for consumables, equipage, repair parts, and other material as assigned. They also maintain records; prepare correspondence, reports, and returns; and perform required obligation recordings.

In stock control, SKs determine stock requirements; prepare requisitions; process receipt and expenditure documents and maintain related files and records; perform financial accounting for material; and maintain material catalogs, allowance lists, and technical publications.

S-2 Division

The S-2 division is made up of personnel from the Mess Management Specialist (MS) rating. They operate all phases of the general mess and make authorized issues, sales, and transfers of food items.

In general, they determine requirements; prepare requisitions; and receive, stow, expend, and maintain related files and records for food items. They also prepare and serve food to the crew, including the operating of foodservice equipment, and are responsible for the cleanliness and upkeep of assigned spaces.

S-3 Division

The S-3 division is made up of personnel from the Ship's Serviceman (SH) rating. SHs operate and maintain all resale and service activities such as the ship's store, clothing store, snack bar, vending machines, laundry, barbershop, and dry-cleaning plant.

SHs also determine requirements for stock and operating supplies; prepare requisitions and purchase orders; receive, stow, issue stock; conduct inventory; operate the ROM micro-computer; and maintain related records and files. They also operate all related service activity equipment, other office equipment, and are responsible for the cleanliness and upkeep of assigned spaces.

S-4 Division

The S-4 division is made up of personnel from the Disbursing Clerk (DK) rating. Their duties include collecting and disbursing all public funds aboard ship and performing all pay and allowance functions. The DKs' duties also include maintaining military pay records, preparing money lists, preparing and verifying public vouchers, and preparing reports and financial returns.

ORGANIZATION OF A LARGE FLEET SHIP

The organization of the supply department may differ on larger ships. The more personnel aboard, the more complex the supply department becomes. As you study figure 1-2, you will notice three additional divisions. These divisions are found on larger fleet ships.

S-5 Division

The S-5 division is made up of personnel from the MS rating also. They do work that is similar to work done in the S-2 division, with the exception that their duties are performed in officer's country. These duties may include receiving, stowing, issuing, and accounting for foodservice and other stores. They also prepare and serve all meals in the wardroom and perform other jobs such as cleaning, delivery, and pickup of officers' laundry.

S-6 Division

The S-6 division performs all functions related to procurement, receipt, stowage, issue, and accounting for aviation material. This division is manned and operated by personnel from the Aviation Storekeeper (AK) rating.

S-7 Division

The S-7 division operates all data processing equipment, maintains files and records, and prepares and processes documents to produce records and reports as provided for in the automated supply and accounting system. This division is manned by personnel from the Data Processing (DP) rating.

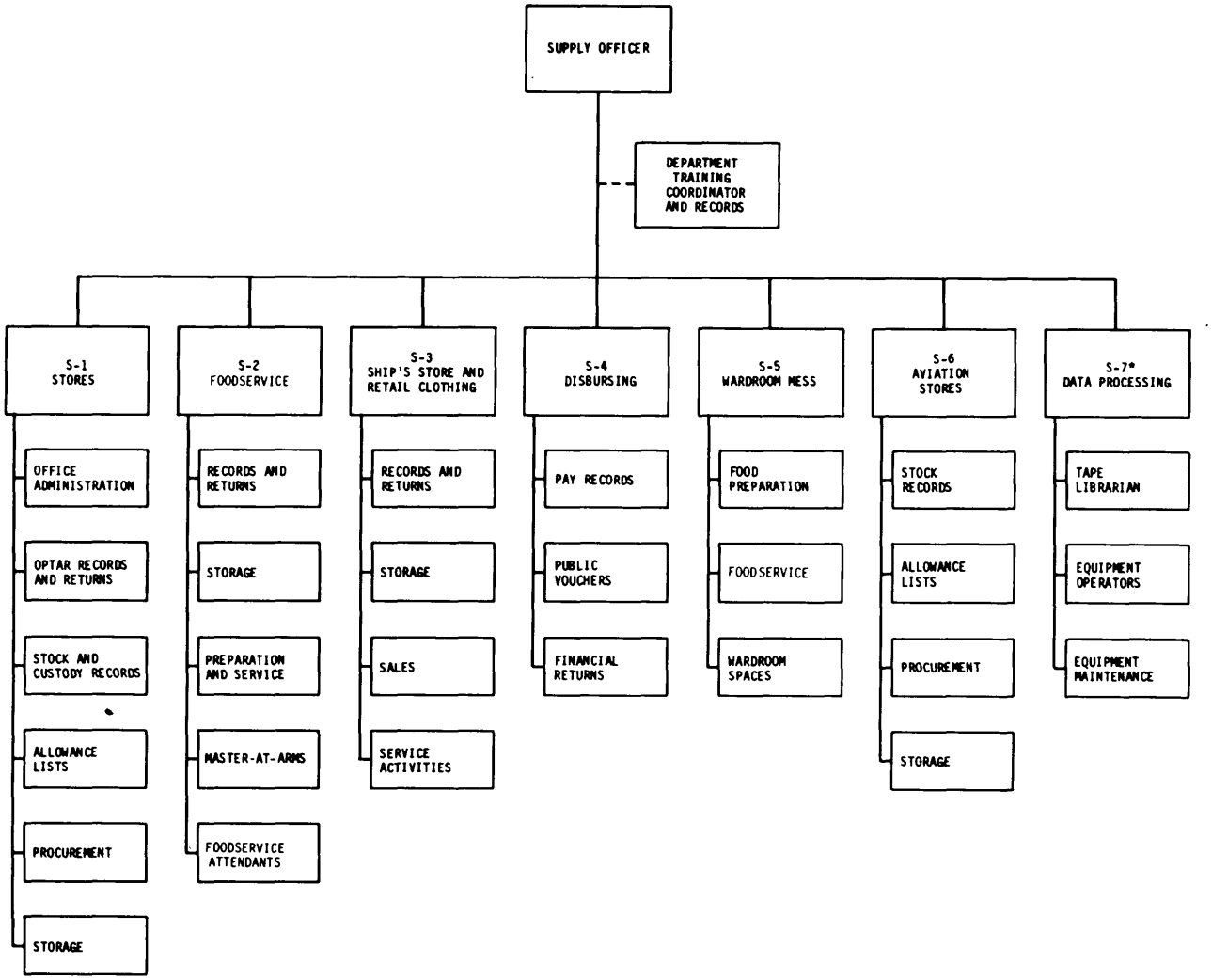


Figure 1-2.—Organization of a supply department of a large fleet ship.

Probably the most important aspect of the supply department is security. The supply officer is responsible for making sure functional areas remain on track; however, many problems may be met if security is not maintained.

Security regulations are listed in the *Ships Store Afloat,* NAVSUP P-487, and the *Afloat Supply Procedures,* NAVSUP P-485, that you, as an SH3, will need to know. Your knowledge of these regulations will not only help you to keep your area on track, but also help keep the supply department on track. Read, remember, and follow security regulations.

SECURITY OF SUPPLY DEPARTMENT SPACES

There are a few general rules you will need to remember to keep supply department spaces secure.

- All stock should be kept under lock and key.

- Supply spaces should be locked when unattended by authorized personnel.

- Responsibility for security rests with the person in charge of each space.

- Permission for entry of unauthorized personnel into a supply department space will be

obtained from the supply officer or the designated assistant.

- No space will be secured in such a manner to prevent access by use of damage control equipment during an emergency.

- All keys to supply spaces will remain aboard ship in a key locker.

- A key log will be maintained to identify the holder of the key.

- Combinations to combination locks will not be recorded in writing except as prescribed in the NAVSUP P-487.

- All key padlocks should be 1 1/2-inch pin-tumbler type, with a dead bolt made of either brass or bronze.

- Keyless padlocks should be the three-combination manipulation type.

SECURITY SPACE GROUPINGS

Supply department spaces are organized into groups as prescribed by the NAVSUP P-485. These groupings are shown in figure 1-3. The supply department is required to split the spaces into groups to meet the many different security requirements.

Group I

This group is made up of general store spaces, including storerooms, special lockers, and related spaces. The lock to one of these spaces will be opened by an original or duplicate key different from keys to any other locks.

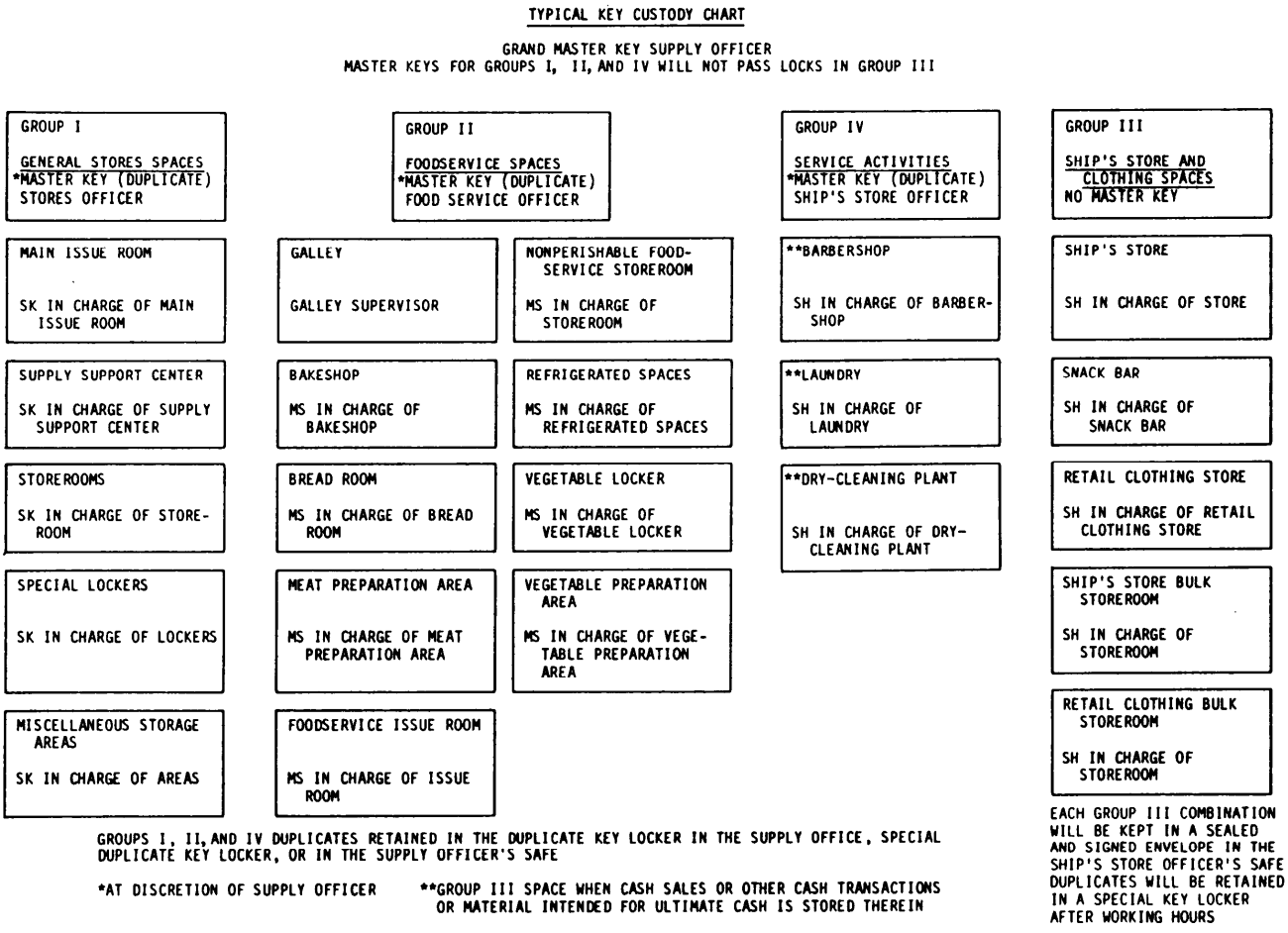


Figure 1-3.—Supply department security groupings.

The original key will be drawn from the general key locker in the morning by the person in charge of that particular space. That person will keep the key until the end of the workday and then return it to the general key locker in the supply office. The duplicate key will be kept by the supply officer in a duplicate key locker or safe.

All master keys to Group I spaces will be in the custody of the supply officer. The supply officer may appoint, in writing, permission for an officer or petty officer to hold a duplicate master key, if so desired.

Group II

This group includes all foodservice spaces including the galley, bakeshop, breadroom, vegetable preparation area, issue room, meat preparation area, refrigerated spaces, and foodservice storerooms. Keys to Group II spaces will be handled in the same manner as Group I except original keys to the galley, bakeshop, breadroom, meat preparation area, and vegetable preparation area will be passed between galley supervisors as they relieve each other. The master key and duplicate master key will be handled in the same manner as Group 1.

Groups III and IV

Group III spaces are made up of the ship's retail and clothing stores, the snack bar, vending machines, and bulk storerooms. Group IV spaces are made up of the ship's store service activities such as the laundry, barbershop, and dry-cleaning shop. Any Group IV space will be considered Group III when cash transactions are made within those spaces or material intended for resale is stowed there. We will discuss both of these groups more thoroughly under Group III space security later in this chapter.

SUPPLY DEPARTMENT OFFICE

The security of the supply office is very important since all keys to supply department spaces are located in the supply office. There are also many important records, documents, and files in the supply office. This office should be secured after working hours not only to prevent unauthorized entry into other supply department spaces, but to prevent important items from disappearing.

The keys to the supply office are issued at the discretion of the supply officer. After working hours, the duty supply officer is responsible for making sure the office is secured. The duty supply officer is normally an officer or senior petty officer representing the supply department after working hours. He or she is directly responsible to the supply officer for the operation and security of the supply department in his or her absence.

THE ROM SYSTEM SECURITY

The ROM system is an unclassified system and is not intended to store any data that is classified. The ROM system itself should be located in an area accessible only to personnel with a need to use the system. For security and accountability purposes, all system administrative duties are assigned to the ship's store officer, the system administrator. The ship's store officer must make sure the information generated and processed by the ROM is protected from unauthorized access to the system. The information within the ROM is protected from unauthorized use through the use of IDs, passwords, and access codes. Before a person can have access to the ROM system, the ship's store officer is required to input user IDs and passwords on a need-to-know basis. Password/ security instructions are contained in the ROM system TUG, appendix F, and are distributed only to the ship's store officer during implementation. Any persons having access to the ROM system will be listed on the ROM security access rights list. This list will be placed in an opaque envelope and sealed, and tape will be affixed over the flap. The envelope containing the ROM security access rights list along with the password/security instructions will be retained in the ship's store officer's Accountability File, SSA-21. The ship's store officer will review the ROM security access rights list monthly.

GROUP III SPACE SECURITY

Group III spaces were discussed under Groups III and IV as being all spaces that sell or stow resale merchandise in them. As an SH3, you may be the operator of one of these spaces and must know the security requirements for Group III spaces. This will not only improve your on-the-job performance, but help you recognize problem areas so you may correct them before problems arise.

Working Keys and Dead Bolt Locks

All doors leading to Group III spaces should have dead bolt locks installed. This may be

impractical in certain situations and a high-security key-type padlock with a shrouded shackle and a high-security hasp may be used as an alternative. The responsible custodian holds the working keys to these locks and should make sure they are locked properly before securing for the day. The responsible custodian will then return these working keys to a separate key locker for the night. This key locker will not be the same as the key locker used for supply spaces. This key locker will be specifically for the one Group III space.

Duplicate Keys

The spare keys to the spaces are the duplicate keys. These keys are required in times of urgency or when required by higher authority. To protect the security of your space these keys need to be handled in a manner to prevent unauthorized entry. These duplicate keys will be placed in a sealed envelope, signed and dated across the flaps by the ship's store officer and responsible custodian, and placed in the ship's store officer's safe. The flaps of the envelope will have cellophane tape placed over the signature and any other openings. This envelope will be changed when the responsible custodian or ship's store officer is relieved.

Padlocks and Combinations

In addition to dead bolt locks, the keyless combination lock listed in the NAVSUP P-487 will be used for securing Group III spaces. In the event the keyless combination lock is not available through supply, the key-type padlock also listed in the NAVSUP P-487 may be used as an alternative. If the key-type lock is used, a numbered car seal will also be used with it. The car seal number will be logged by the ship's store officer in the Car Seal Log. This key-type lock should be removed and changed as soon as the combination lock is available through supply. While the key-type locks are being used, keep in mind that the duplicate keys to these locks will also be secured in a sealed envelope and placed in the ship's store officer's safe.

The responsible custodian will set a combination in the keyless combination lock. The lock comes with a setting-in key and instructions for setting the combination. The custodian of the space should do the following:

- Set the combination in the lock selecting the numbers at random. Do not use popular dates and so forth.

- Record the combination on a piece of paper, wrap it in a sheet of carbon paper, place this in an opaque envelope with the setting-in key.

- Seal the envelope, sign name, and date the flap in the presence of the ship's store officer.

After the custodian does the above, the ship's store officer should do the following:

- Receive the sealed envelope.

- Sign name and date over the other flap in the presence of the custodian.

- Seal the flap with transparent tape.

- Then retain the sealed envelope in a safe.

Keep in mind, do not disclose this combination to anyone. Do not record this combination anywhere, except for the piece of paper in the envelope. Make sure no one can see your combination while you are opening the space. Do not risk your space's security for any reason.

Hinges and Hasps

Hinges and hasps used on Group III spaces should be manufactured of hard steel that cannot be cut with a bolt cutter or hacksaw. When the hasp is installed, make sure tamperproof bolts are used. Tamperproof bolts are more secure and cannot be removed using a wrench or screwdriver. Pop rivets are considered inadequate and should not be used in place of these bolts. Additionally, hinges should be installed so that the hinge pin is not exposed, if possible. Hinge pins that are exposed should be tack welded to prevent entry.

Sales Windows and Visible Storerooms

There are several retail stores that have removable sales windows. Check these windows daily. Make sure the perimeter of the frame is secured by means of inside locks. Do not use bars that may be popped out by an intruder. The keys to these inside locks will be in the possession of

the retail store operator. The duplicate key will be secured in a sealed envelope and retained in the ship's store officer's safe.

As custodian of a bulk storeroom that is visible from the outside, you should make sure adjacent passageways are well lighted. If you have high-cost, small-cube items such as watches, jewelry, and so forth, stowed in the storeroom, take the proper precautions. These high-value items should be consolidated in the retail store and not stowed in out-of-the-way bulk storerooms.

Make sure the ship's security watches are checking your storeroom. The bulk storeroom, retail store, and other Group III spaces should be checked at varying intervals for security discrepancies. Any security discrepancy, however slight, should be immediately reported to higher authority.

Security After Working Hours

The main purpose of security after working hours is to prevent forced or unauthorized entry. Before you secure for the day, conduct an inspection of your display cases, display windows, doors, stockrooms, and merchandise. You should be familiar with the way you left the store so you can reinspect the same area in the morning and report discrepancies.

You should not use your Group III space for personal reasons after working hours, whether in port or at sea. If circumstances warrant reentering after working hours, you should first obtain final permission from the ship's store officer.

To reduce the temptation of theft after working hours, items of higher value than $50 should be removed from sight including cartons for these items. If space permits, they should be placed in a locked container within the space.

VENDING MACHINES

The vending machines aboard ship are considered Group III spaces too; however, they are secured a little differently. This is because the vending machines do not always have a custodian watching over the funds at all times. There are certain security regulations that must be followed.

Padlocks and Keys

The vending machines not only need to be secured on the outside, but also on the inside. The lock inside will secure the money box and may be a keyless padlock or key type. The custodian will not have access to the money box. The key or combination to this inside lock is kept by the ship's store officer or cash collection agent.

The outsides of most machines have an installed lock. These locks are considered inadequate for security purposes. Install a hasp and hinge made of hardened steel, using tamper-proof bolts, and secure this with a keyless combination lock. Combinations to these locks are handled in the same manner as all other ship's store spaces. They will be sealed in an envelope and locked in the ship's store officer's safe.

Money Boxes

Several ship's store officers are now installing locked money boxes in their vending machines. These money boxes are provided with two sets of keys. One set of keys is for locking the box inside the machine and the other set is for locking the box. The key that locks the box inside the machine will be kept by the vending machine operator. The key that secures the coins in the money box will be kept by either the ship's store officer or designated cash collection agent. Duplicate keys will be sealed in an envelope and kept in the ship's store officer's safe.

AMUSEMENT MACHINES

A metal restraining bar device is required for all amusement machines. This device will lock in front of the coin box. A keyless combination padlock will be used to lock the device in place. The combination to this lock will be known only to the ship's store officer or cash collection agent.

EMERGENCY ENTRY PROCEDURES

Since the custodian may not always be aboard, certain procedures need to be set up in case an emergency entry has to be made into your space.

In the event an emergency entry has to be made, the ship's store officer will enter the space in the absence of the custodian; it should be done in the presence of two witnesses. One witness should be a commissioned officer. After obtaining these witnesses, the ship's store officer will remove the combination and keys from the sealed envelope in the safe. The space will then be opened. The two witnesses will not leave the space unattended until secured. Once the problem has been resolved and access is no longer required, the space will be secured by replacing the lock and sealing the space with a numbered car seal. The

two witnesses will be present during this process. The ship's store officer will log the car seal number in the Car Seal Log and the log will be initialed by both witnesses.

Upon return of the custodian, the car seal will be removed by the custodian in the presence of the ship's store officer. The custodian will verify the seal number and then change the combination to the lock and reseal the new combination and duplicate keys to the dead bolt in separate envelopes. These envelopes will be replaced in the ship's store officer's safe. If desired, you, as the custodian of the space, may conduct an inventory.

In urgent situations, the command duty officer (CDO) may enter a Group III space in the absence of the custodian and ship's store officer. The entry by the CDO will be made in the presence of two witnesses, one of whom is a commissioned officer. Access to the space can be made with damage control cutters or burners. The two witnesses will not leave while the space is open.

After the problem has been resolved, the CDO will secure the space with a lock and numbered car seal. The lock and car seal will be placed on the door to the space in the presence of the two witnesses. The car seal number will be recorded by the CDO and initialed by the two witnesses. The next morning, the car seal number will be given to the ship's store officer by the CDO. You, as the custodian, will handle this matter in the same way as if the ship's store officer had entered. You will more than likely have to obtain a new lock and go through the same procedures again for setting the combination. If the dead bolt was damaged, a new one must be installed.

Emergency entry procedures are included in the supply department instructions. A copy of these instructions should be posted outside each and every Group III space.

GROUP IV SPACES

Basically, Group IV spaces include all service activities. There are no cash sales or transactions made through these spaces. If cash transactions are made or ship's store stock is stowed in these spaces, they will be considered Group III spaces.

The working key to Group IV spaces is obtained in the morning. The person in charge of the space will sign for the original keys in a key log and remove them from the general key locker normally located in the supply office. During work hours, the person in charge of the space will keep the keys. After work hours, or when work is complete, the working keys will be turned over to the duty supply officer who will secure them in the general key locker.

Duplicate keys to Group IV spaces will be kept by the supply officer in a special duplicate key locker in the supply office, or in his or her safe. If the lock to the space is part of a lock set, the original master will be kept by the ship's store officer. The duplicate master to all Group IV spaces will be kept by the supply officer in his or her safe or the duplicate key locker.

ADDITIONAL SECURITY

There are many additional security measures the ship's store officer may follow, if necessary. The use of car seals is recommended but not mandatory. Using these seals may alert the ship's store officer of unauthorized entry. These numbered car seals are available from servmart and should be placed on external locks after working hours. These car seals are issued by the ship's store officer or a designated assistant to the custodian of the space. They are logged in the Car Seal Log and the number is checked in the log before removing any installed car seal.

The ship's store officer may also have roll-up grills or scissor-type gates installed outside of retail stores. An intrusion alarm system may be installed to protect retail stores or storerooms. The alarm should be connected so it will sound off in an area that is manned 24 hours.

CHAPTER 2

OPERATION OF THE SALES OUTLETS

As a Ship's Serviceman third class, you can expect to operate one of the sales outlets aboard ship. The sales outlets are part of the ship's store and include retail stores, vending machines, amusement machines, snack bars, and standard Navy clothing stores. The sales outlets are basically used to display and sell ship's store merchandise, except in the case of amusement machines where you are selling the use of the video game itself. The cash received from sales in these sales outlets is normally more than the original cost of merchandise, unless you are selling standard Navy clothing stock which is sold at standard prices. This additional cash is used to pay for expenses incurred in operating the activities of the ship's store. Any cash left after paying expenses is available for transfer to the recreation fund, which is used for the recreation of crew members aboard ship.

SHIP'S STORE

As mentioned earlier in chapter 1 of this training manual (TRAMAN), the S-3 division is part of the supply department and is manned by Ship's Servicemen. In a broad sense, the ship's store is the S-3 division because it includes all the activities that make up the S-3 division. This is why we commonly refer to the S-3 division as the ship's store operation. In chapter 1 of this TRAMAN, we mentioned that the supply officer is responsible for the overall operation of the supply department including the ship's store. On ships with junior Supply Corps officers attached, the commanding officer may designate them in writing to assume financial accountability and overall management for the ship's store. Once designated, this officer is referred to as the ship's store officer.

ESTABLISHING A SHIP'S STORE

A ship's store consisting of sales outlets and service activities will be operated on ships in commission (except submarines) to which an officer of the Supply Corps is assigned. Before establishing the ship's store, the commanding officer must report by letter the date the ship's store will begin operations to the Navy Resale and Services Support office (NAVRESSO). A copy of the letter should be forwarded to the ship's type commander and Fleet Accounting and Disbursing Center, Atlantic Fleet, by ships with service designator V and Fleet Accounting and Disbursing Center, Pacific Fleet, by ships with service designator R. Once this is done, the commanding officer may authorize any or all of the following activities to operate:

Sales Outlets

Retail store(s)

Vending machine(s)

Amusement machine(s)

Snack bar(s)

Standard Navy clothing store(s)

Service Activities

Barbershop

Laundry

Dry-cleaning plant

Operation of the ROM microcomputer and maintenance of automated ship's store records

The size of the ship's store operation varies from one ship to another. The size basically depends on the size of the ship, the number of customers served, the number of qualified Ship's Servicemen aboard, and the requirements of the commanding officer.

Precommissioned Ships

A ship's store may also be established on a precommissioned ship as long as the prospective supply officer has already reported aboard. Once the prospective supply officer is aboard, the prospective commanding officer may establish a ship's store in the same manner as commissioned ships, except the letter request must be sent via the ship's type commander.

Unauthorized Activities

Only those activities authorized by the commanding officer may operate aboard ship. No sales outlet or service activity outside the ship's store operation is authorized and considered a concession. No commercial vendors should be allowed aboard to sell merchandise to the crew, under the agreement to pay a portion of the profits to the ship's store or receive payment for items sold by invoicing them through the ship's store. No officer, enlisted, or civilian can sell merchandise individually owned through the ship's store for personal profit or interest. Ship's store personnel working in the service activities cannot accept money or extra compensation for work performed.

PURPOSE OF THE SHIP'S STORE

The objectives of the ship's store (fig. 2-1) consisting of sales outlets and service activities are as follows:

1. Provide a source of funds to be used for the recreation of naval personnel through profits from sales
2. Provide a convenient and reliable source for personnel to obtain articles considered necessary for their health, comfort, or convenience at the lowest practical price
3. Provide services necessary in day-to-day living
4. Promote morale

The objectives mentioned previously are not easily obtained. It takes much work and effort by all Ship's Servicemen.

Objectives 2 and 3 entail several tasks; however, as a sales outlet operator, you will not be involved in all these tasks. Since the sales outlets are located aboard ship, they are a convenient source for crew members to obtain articles necessary in day-to-day living. However, if the sales outlet is not a reliable source, it is no longer considered a convenient source; therefore, as the sales outlet operator, you should make sure the most popular and essential items are available to the customers. The ship's store officer will prepare and approve a list of basic stock items, based on the information in the *Consolidated Afloat Requisitioning Guide Overseas* (CARGO) NAVSUP Pub 4998, chapter 2. This basic stock list includes the most popular and essential stock items and will be made available to ship's store personnel to assist them in keeping these items stocked in the retail stores. As the retail store operator, you should notify the sales office in advance when there is a shortage of any of the items contained in this basic stock list.

There are also several publications and guides listed in the NAVSUP P-487 that will assist ship's store personnel in acquiring articles necessary for the health, comfort, and convenience of personnel and providing services necessary in day-to-day living. NAVRESSO also provides contracts and bulletins so you can purchase these articles at the lowest practical prices.

Objective 1 is directly related to objective 2. If you provide desirable merchandise at a low practical price, sales and profits will increase, thus providing a source of funds to use for the recreation of the crew.

The fourth objective, promoting morale, is easy to define but hard to fulfill, and almost impossible to measure. To promote morale, you must have satisfied customers. The best way to satisfy a customer is to provide what the customer wants or a satisfactory answer, and that can only be done by improving your knowledge of the ship's store operation, especially in the areas with which you should be familiar.

ACCOUNTABILITY AND RESPONSIBILITY

Before we discuss the various sales outlets, there are a few terms you need to be familiar with because they relate to the ship's store operation. For now, we will discuss the terms *accountability* and *responsibility*. These two terms are closely related; however, they have noticeable differences.

The term *accountability* is an obligation imposed on an officer to give an account for property, funds, and returns in his or her custody. In the ship's store operation, the ship's store officer is obligated by law, lawful order, and regulation to give an account of all property or funds and their intended use in the ship's store;

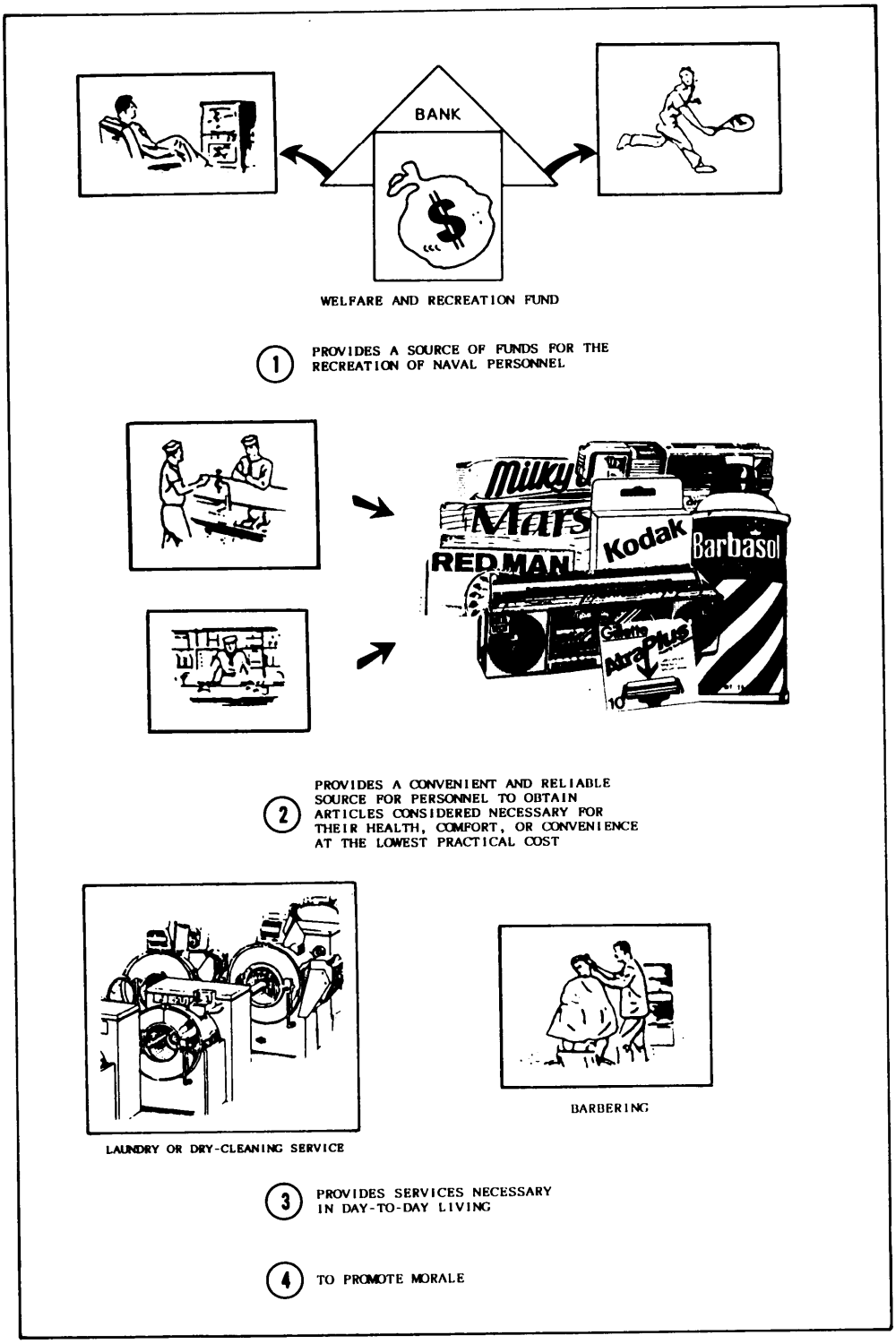


Figure 2-1.—Purpose of the ship's store.

therefore, he or she has accountability for the ship's store operation.

The term *responsibility* is an obligation placed on an individual to exercise custody, care, and protection in keeping property, records, or funds entrusted to him or her or under his or her supervision. This obligation is placed on an individual by law, lawful order, regulation, or custom of service. In the ship's store operation, the sales outlet operator is obligated to exercise custody, care, and protection in keeping all property, records, or funds in his or her sales outlet and, therefore, he or she is responsible to the ship's store officer who is accountable for that sales outlet. The ship's store officer will hold you responsible for performing your duties in the sales outlet properly. This is why it is very important that you fully understand your responsibilities because if you fail to carry out these responsibilities properly you may be punished under the *Uniform Code of Military Justice* (UCMJ).

Assigning Responsibilities

Listed below are some of the responsibilities that may be assigned to you and are common to the ship's store operation:

- Custody, care, and protection of monies and property
- Proper documentation of receipt and issue of materials and monies
- Custody and accurate maintenance of stock and financial control records
- Inventory control practice to ensure prescribed stock levels
- Completion of inventories and preparation of ship's store returns
- Preparation of required reports

Keep in mind, the term *monies* as used previously is referring to cash transactions in the ship's store operation and does not include monies held by the disbursing officer.

Although you may be well trained in your area of responsibility, the supply officer will still exercise certain controls to maintain his or her accountability. First, the supply officer will prescribe the responsibilities assigned to you in the supply department organizational chart, manual, or other written directive and in the letters of assignment issued by the ship's store officer. Second, the supply officer will conduct frequent inspections of spaces and operations to make sure responsibilities are being carried out properly. Third, the supply officer will conduct internal reviews to make sure tasks are being completed according to the NAVSUP P-487 and other current manuals, publications, or directives. Fourth, the supply officer will make sure responsible personnel are being properly trained and supervised. Your assignment as sales outlet operator in no way relieves the supply officer or the ship's store officer of his or her responsibilities to the commanding officer for the proper operation of the sales outlet.

Letters of Assignment

The ship's store officer is required to assign in writing all responsibilities to personnel. These letters will include your duties and limitations, effective date, and the person you relieve, if any. You will acknowledge acceptance of these responsibilities required to perform your duties. These letters of assignment will be filed and maintained in the Military Correspondence File, SSA-17, for a period of 2 years.

Separate and Combined Responsibilities

As a Ship's Serviceman, you will often hear the terms *separate responsibility* or *combined responsibility*. You should be familiar with and understand the difference between these two terms because many ship's store tasks will differ procedurally between the two.

A separate responsibility operation is one in which two or more persons are responsible for the operation of a sales outlet and the bulk storeroom that supplies that sales outlet. On the other hand, a combined responsibility operation is one in which one person is responsible for both a sales outlet and the bulk storeroom that supplies that sales outlet. Most ships are under separate responsibility operations; however, some ships have combined responsibility operations and some ships have a mixture of both.

Multiple Sales Outlet Operators

When circumstances make it necessary, the commanding officer may request to have more than one person operating a sales outlet. Once the

type commander approves the commanding officer's request, a two-drawer cash register must be used, where each operator has access to only one drawer. When two persons operate one retail store, cash will be collected at the end of each shift and inventory will be held monthly.

OPERATION OF THE RETAIL STORE

The primary sales outlet aboard ship is the retail store (fig. 2-2). This is not only the most difficult sales outlet to operate, but customer contact is normally heavy. Most ships have one or two retail stores; however, this is dependent on the size of the ship and crew. As the retail store operator, you will eventually become the center of attention among the crew. This is why you will need to learn your job well so you can perform for your shipmates in a beneficial manner. You will perform many tasks, need to know many policies, and familiarize yourself with many procedures before you operate a retail store.

AUTHORIZED CUSTOMERS

Ship's store and clothing stock may be sold to officers and enlisted personnel of all branches of the armed forces, Public Health Service personnel, National Oceanic and Atmospheric Administration personnel, and foreign service personnel of the United States who are on board for duty, active duty for training, or passage en route to a duty station. Accredited United States technicians (military or civilian) who are assigned on board in an official capacity are authorized customers. Also authorized are the previously mentioned personnel who, while not actually on board, are located in remote areas where armed services exchange facilities are not available.

Items purchased from the ship's store by authorized customers must be purchased for the personal use of the purchaser or dependents or

Figure 2-2.-The retail store.

as gifts and must not be resold or exchanged in barter with any other person.

All items of insignia, including buttons, have been designated as distinctive items of the Navy uniform and will not be sold to anyone who is not authorized to wear these articles as items of uniform.

Service-Type Ships

On service-type ships such as ADs, ARs, and ASs, ship's store stock and standard Navy clothing stock are authorized for sale to officer and enlisted personnel other than ship's company when they are attached to those ships receiving support.

Survivors of Marine and Aircraft Disasters

Ship's store stock and nondistinctive items of clothing may be sold for cash to the survivors of marine and aircraft disasters, if such survivors have personal funds available. If the survivor is without personal funds, emergency issues may be made according to the procedures outlined in the NAVSUP P-487.

Other Military Activities

Ship's store stock and items of clothing may be sold to ships not operating ship's stores and to armed services exchanges. Ship's store stock and nondistinctive items of clothing may be sold to exchange locations operated on board civil service manned ships of the Military Sealift Command (MSC), private messes, cigar messes; to the commanding officer for recreational purposes; and to other duly constituted clubs or messes that have been authorized by a commanding officer and whose monthly records are audited.

Official Government Organizations

Upon approval of the commanding officer, cash sales of ship's store stock and nondistinctive items of clothing may be made to representatives of official United States Government organizations at isolated activities outside the United States when the stock items cannot be conveniently obtained elsewhere and the normal operation of the ship's store is not impaired by doing this.

Foreign Governments

Ship's store stock and nondistinctive items of clothing may be sold to personnel of foreign ships in distress and to personnel of foreign ships visiting U.S. ports.

PERSONNEL OF FOREIGN SHIPS IN DISTRESS.— Sales for cash of ship's store stock and nondistinctive items of clothing may be made to personnel of foreign ships who are in distress. A request for sale must be submitted by the commanding officer of the ship concerned and must be approved by the commanding officer of the ship making the sale. Only such quantities that can be spared will be sold or transferred.

FOREIGN SHIPS VISITING U.S. PORTS.— Sales for cash of ship's store stock and nondistinctive items of clothing may be made to military personnel attached to foreign ships visiting United States ports in connection with the following:

- Participation in exercises with the U.S. fleet
- Research, development, and evaluation programs
- Outfitting incident to ships' transfer programs
- Scheduled conversion, overhaul, or repair

Merchant Ships

Sales for cash of ship's store stock and nondistinctive items of clothing may be made to merchant ships in distress or in need of supplies when normal sources do not exist. A request for sale must be submitted by the master of the ship concerned and must be approved by your commanding officer. Only such quantities as can be spared will be sold.

HOURS OF OPERATION

The hours of operation of the retail and clothing store are prescribed by the commanding officer. Consequently, they will vary from ship to ship or on change of command. The important thing to remember is that these prescribed hours must be prominently posted at all times.

Store hours of operation decals are available on request from NAVRESSO. The decal is pressure sensitive and is applied easily. Lettering is brilliant gold on a blue background, hours are interchangeable, and complete sets of different hours are supplied with each decal for at sea and in port.

The hours of operation should be prominently posted and visible from the outside of the store; usually on the door of a walk-in store or a window of a smaller store.

Stores should be open at least 42 hours per week underway and 20 hours in port. The hours should be set to provide the entire crew an opportunity to shop and should be staggered for different outlets to provide service after working hours, especially while underway. Customers should be allowed an additional 15 minutes in walk-in stores to conclude shopping. Whenever changes are made to store hours or when the store is going to be closed, customers should be notified at least 1 week in advance.

POLICY SIGNS

Policy signs should be prominently posted in the retail store so customers can see them. There should be signs stating that personal checks are accepted up to the amount of sale.

A sign about the harmful effects of cigarette smoking must be placed in each area where cigarettes are sold, whether by the pack or by the carton.

A sign showing the regulations for authorized customers should be posted near each register. A sign should be posted near the suggestion box stating "To better serve you we solicit your comments on items carried and services offered. Drop a note in the suggestion box. The ship's store officer will give it special attention."

There should be a sign stating that all profits go to the recreation fund. A notice should be posted that special orders may be made through the ship's store office for authorized merchandise not carried in stock.

There should also be a sign stating the ship's store policy on returning defective merchandise bought in the store. Some of the signs previously mentioned are available from NAVRESSO ship's store division. Consult the *Ship's Stores Afloat Visual Merchandising Supplement* on "Basic Display and Signing Requirements" for what is currently available. The other signs can be locally prepared.

DISPLAY OF MERCHANDISE

Display of items in the sales outlet should inform and educate the customer as to the quality, price, use, and other important characteristics of the merchandise (fig. 2-3). Displays should make

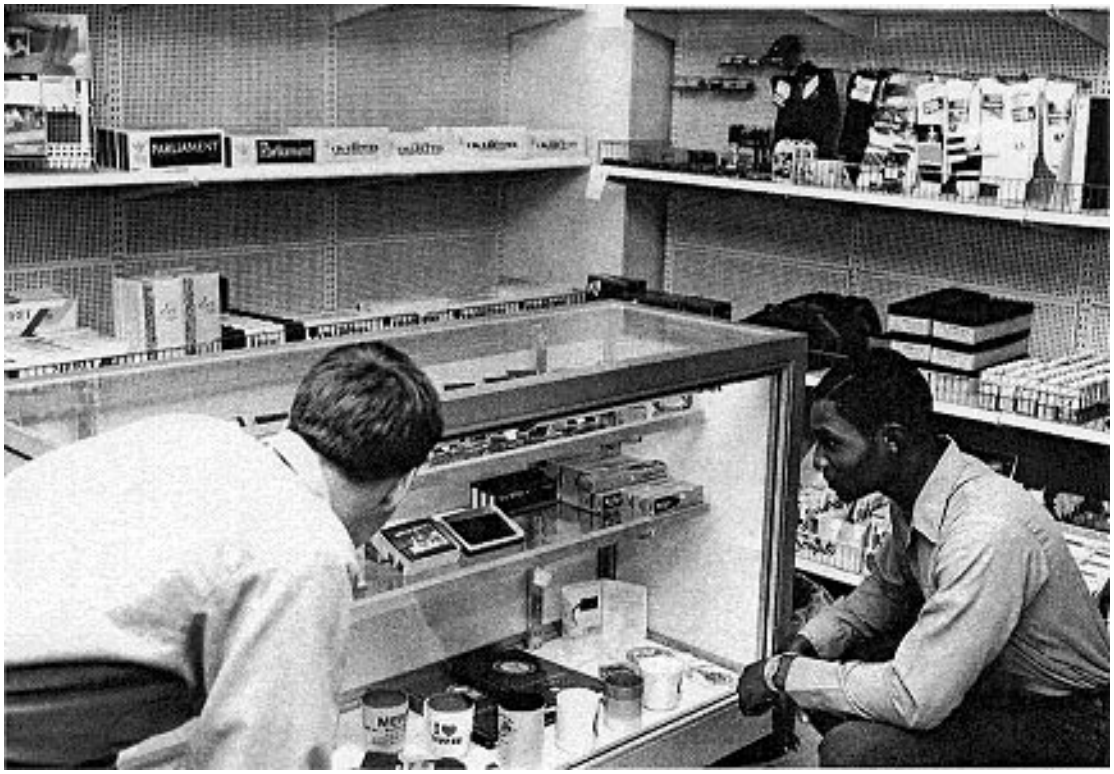


Figure 2-3.-Displays in the retail store.

an impression on the customer that will answer as many questions as possible about the merchandise. This will reduce the time the customer will use in making a decision on whether to buy a product or not, thus shortening waiting time and lines at retail stores. Any display that does not convey, to the customer, sufficient information on which the customer can make a decision is incomplete and fails its purpose. The purpose of a display is to show merchandise in such a manner that it is attractive, easily seen, quickly identified, readily accessible, neatly arranged, and properly correlated for convenient selection and shopping ease.

ATTRACTIVE

Merchandise must be attractive and must be seen under conditions that enhance its beauty and reveal its usefulness and qualities in an attractive setting. Careful attention to the merchandise, the fixtures, and the setting in which merchandise is displayed is very important. The display area must be given the same attention as the merchandise, and constant care must be exercised to make sure cases, paintwork, glass, and the areas in and about the store are properly maintained. Exterior display windows should be used to their full extent and properly signed to present an attractive and effective merchandise display. Displays should be changed frequently to stimulate customer interest.

EASILY SEEN

Place merchandise so that customers can see it without undue effort or strain. Observe the following rules:

- Put large items on lower shelves.

- Put small items at eye level and above (but not too far above).

- Do not hide merchandise behind signs or decorations.

- Use bright lights so that customers can see the merchandise and read the signs without difficulty. Lights should be cleaned periodically and replaced when necessary. You should also identify items temporarily out of stock by using a sign at the shelf location that can be easily seen and read by the customer.

QUICKLY IDENTIFIED

Shopping can be speeded and customers made to feel more satisfied if they can identify merchandise quickly. To achieve this, bear these points in mind when setting up displays:

- Place labels and informative copy on packages face up and right side out so that information is read easily.

- Show the item so that its purpose or use is obvious. This may require the use of a sign or an opening on the item so that its features can be seen.

- Use a picture or sketch from a newspaper or magazine ad and take advantage of the preselling that has been done by the salesman or distributor.

- Identify new items with a sign.

READILY ACCESSIBLE

When displayed merchandise is readily accessible to the retail store operator or the customer, much time can be saved in completing the transaction. Time is important to fellow crew members and you should do everything possible to avoid wasting their time. One way to make items more readily accessible in your store is to use all available purchasing and selling history to determine which items move faster. Display these items so they can be easily handled by the customer. Take the time to set up displays so that two or three other items do not have to be moved or disturbed to get at one that is behind or underneath other merchandise.

NEATLY ARRANGED

Merchandise both on display and within the store should always be neatly and conveniently arranged. When using shelves directly behind the selling area of the store, merchandise should be arranged to fill as much cubic space as possible. Certain items may be stacked two or three deep when practical. If retainer bars are used on shelf fronts, even cans or jars can be stacked by inserting a piece of masonite or cardboard between layers. In walk-in stores do not lay vendor merchandise cards, racks, and so forth, on top of the showcases. Ledges should not be used to store merchandise; they should be used to attractively display the merchandise.

CORRELATED

Displays look best and are most productive and convenient to the customer and the store operator when items are correlated. Simply defined, this means show together items that are related in use or purpose. It is an old retail axiom that one item will suggest another. Therefore, when arranging displays, see that related items are put together. Set up toiletries in a compact section, cigarettes and tobaccos in one, and jewelry in another. This treatment of merchandise permits easier selection, and customers do not have to scan several different areas of display to find what they want. It is much more helpful to the customer if toothbrushes are displayed near the toothpaste, shoelaces near the shoe polish. This correlation of one item with another usually acts as a reminder to customers and encourages or prompts them to select or buy items that they might have forgotten they needed. You should go through the store frequently and take a look at your merchandise arrangements, determine whether each item is displayed to assist the customers, rather than hinder them.

ARRANGING DISPLAYS

The preceding pages have been devoted to explaining the principles of displaying and what good displays should do. Now that you understand that merchandise must be treated in certain ways for maximum effectiveness we must consider the means and devices necessary to get the desired results.

Many factors have to be considered in the operation of a successful and attractive retail store. The location, layout, and condition of equipment are the three elements involved.

Location

The most desirable location is an area adjacent to a mess, recreational area, or other high traffic spot. Space in front should be adequate to permit free flow of traffic without disturbing shoppers.

Layout

Layout of equipment both inside and outside the store should be planned to afford both the customer and the operator as much convenience as possible. In this respect, the location, the selling area, and the arrangement of shelving for fast-selling merchandise must be considered.

Equipment Condition

Equipment, whether new or old, should always be kept in good working order. Special attention should be given to maintenance of locks, door tracks, shelf channels, and so forth. Replacement or repairs should be made without delay when necessary.

Fixtures

The basic fixture requirements for the ship's store are quite limited. The size of the store front, space between shelves, and the nature of the items displayed must be considered before display fixtures are selected for use in any store. Fixtures considered basic for most stores are shown in the *Ship's Stores Afloat Visual Merchandising Guide.* Purchase orders for display aids listed should be forwarded on a DD Form 1155 to NAVRESSO, at which time prices will be negotiated with the vendors by NAVRESSO.

Fixtures should be treated with care. Dust and polish them before each use. When not in use, store them in a safe place where they will be protected from damage or breakage. Fixtures that have been damaged or broken should not be used, since they detract from the appearance of clean new merchandise. Head or shirt forms and other display futures made of papier-mache and coated with plaster can be easily repaired with patching plaster or spackle. Glass, plastic, lucite, and metal fixtures should be spotless when being used. Discard those broken beyond repair.

Signs

Signs are the silent voice of the store operator. They tell the customer where the store is, what is or will be on sale, what the items are, and their price. Any other information, descriptive or explanatory, that will help the customer to shop more easily and quickly should also be included.

Decorations

Decorations should be used in the ship's store displays to arouse customer interest and add to the appearance of the merchandise on display. Decorations will also alert your customers to approaching events or seasons and remind them to purchase their needs in advance. The previously mentioned *Visual Merchandising Guide* includes information on procurement of an all-season display kit.

The retail store should be decorated for all major events and seasonal changes. When displays are installed for seasonal events, the decorations should be changed too. No displays should be left in cases for more than 1 month without being refreshed or changed. Clean, fresh, and colorful displays should be evident at all times. Care must be taken when employing decorative materials to avoid overshadowing or overcrowding merchandise. The use of too much decor can detract from the appearance of the display and cause confusion.

Remember, it is always better to keep displays simple, neat, and lightly decorated. They are more pleasing to the eye and more likely to interest the customer. If it creates interest, shows merchandise at its best, and holds attention, it is a good display.

PRICING POLICIES

As the retail store operator, you will not be concerned with establishing selling prices because this is done in the ship's store office and is the responsibility of the ship's store officer. It is your responsibility, however, to make sure all items are clearly and conspicuously marked, and you should be aware of how prices are determined.

MARKUP

The ship's store officer is responsible for the markup over cost or transfer price of items to be sold in resale activities (excluding standard Navy clothing). The Resale Operations Management (ROM) system automatically computes a 15 percent markup on all retail items. The ship's store officer, if desired, may override the ROM system markup by keying in the desired selling price on the Stock Record, NAVSUP Form 464, and the Purchase Order, DD Form 1155. Markups should be sufficient to provide for the following:

- Cover markdowns and surveys
- Cover other operating expenses
- Meet the requirement of the commanding officer for the recreation fund
- Cover the cost of operations of the sales outlets and service activities

The maximum prescribed overall profit limitation is 15 percent. This limitation applies to a percentage of overall sales and not to individual items. Special order items will be marked up as determined by the ship's store officer.

CLOTHING

Standard Navy clothing items are sold at standard prices, as shown in the *Navy Clothing Price List for Men and Women,* NAVRESSO Pub 90. ROM users will assign department code L-1 to the stock records for all standard Navy clothing items. The ROM system will not compute the 15 percent markup for items assigned department code L-1.

Price changes to standard Navy clothing items are issued in changes to NAVRESSO Pub 90. Standard price changes are effective on the date specified in the change. An inventory will be taken of those items actually affected by a standard price change and any gain or loss as a result of the adjustment will be accounted for on a Retail Price Change, NAVSUP Form 983.

MARK-ONS

A mark-on is an increase in a previously established retail price of an item of merchandise. Mark-ons are done only on the authority of a Retail Price Change, NAVSUP Form 983, approved by the ship's store officer. Before prices can be changed in the sales outlet, the merchandise must be inventoried in the presence of the sales outlet operator by the ship's store officer or designated assistant. After inventory of the merchandise concerned, the sales outlet operator will record the date the prices are changed on the NAVSUP Form 983 and sign it. The NAVSUP Form 983 will then be routed to the ship's store office for posting to the records. Request a copy of the NAVSUP Form 983 from the ship's store office for your files because it is not stated in instructions to give you a copy. As the sales outlet operator you should maintain a file of all documents when a transaction occurs in your sales outlet. These copies can be used as a ready reference and they are your proof that a transaction occurred. Procedures for preparing a mark-on are discussed in the NAVSUP P-487, par. 2106.

PRICES TO OTHER MILITARY ACTIVITIES

Nonexcess salable stock items of ship's store are sold at cost price to other military activities except as follows:

- Sales to the commanding officer of ship's store stock for recreational purposes must be made at the retail price.

- Sales to ships not operating ship's stores must be made at the retail price when the transferring ship provides a composite recreation fund. What this basically means is the requesting ship shares in the profits of the supporting ship; for example, SSNs supported by an AS.

- Authorized cigar messes.

- Merchant ships and foreign governments.

MARKDOWNS

A markdown is a reduction of a previously established price. It is used to stimulate sales of slow-moving merchandise or damaged goods. Markdowns are done only on the authority of a Retail Price Change, NAVSUP Form 983, approved by the ship's store officer.

When a markdown is necessary, it is best to mark down a substantial amount, rather than a small amount one day and a little more a couple of days later. Make a markdown large enough to stimulate the sale now, rather than have the customers try to wait until you have reached your lowest point of reduction. Initial markdowns of 25 percent or 50 percent are not uncommon in the retail trade and should be taken when necessary to stimulate sale of the item.

All markdowns should be prominently displayed so that the customers may notice the sale readily.

Standard clothing items are not marked down on a NAVSUP Form 983, but are reduced on a Report of Survey, DD Form 200. These procedures are covered elsewhere in this manual.

DISPLAYING PRICES

A ship's store must display its prices for each article so that customers can see the prices. Some articles do not lend themselves to individual price marking. These include beef pepperoni sticks, belts, books, candy, chewing gum, cigarettes, combs, flint lighters, greeting cards, handkerchiefs, key rings/chains, magazines, matches, postcards, rating badges, ship photographs, shoelaces, shower shoes, soaps, toothbrush holders, and wick lighters. The selling price for these items should be plainly marked on the bin or shelf holding these items by use of signs or price lists.

The ROM system will generate shelf labels that identify the stock number and price. The *ROM Terminal User's Guide* (TUG) provides instructions on how to produce these labels that can be used for all items in the retail store, but you should make sure all items not mentioned previously are also marked with the price individually. This will help you in selling, merchandising, inventorying, while at the same time prevent price manipulation. A standardized price marker and price tags should be used. Information on these items is available in the *Ship's Store Afloat Basic Display and Signing Requirement,* NAVRESSO VM SUP.

When you receive merchandise into the retail store or snack bar, you will price the merchandise using the retail price list on the Intra-Store Transfer Data, NAVSUP Form 973. When you are using the price marker, attach the price tickets to each item without damaging the product or product container itself. You should also attach tickets uniformly on similar items so they can be easily seen when you are ringing the prices up on the cash register. Never use crayons or grease pencils to mark merchandise because the price can be easily altered. Never re-mark any merchandise unless you have a Retail Price Change, NAVSUP Form 983, approved by the ship's store officer. Always have a price list available in the retail store near the cash register so you can check prices when you are not sure. You should use a copy of the Ship's Store Inventory Count Sheet, NAVSUP Form 238, for this purpose and make changes to this price list as required in ink.

HANDLING CASH FROM SALES

The sales outlet operator is responsible to the ship's store officer for the proper handling of all

cash received from sales (fig. 2-4). Since there is a great deal of cash handled during an accounting period, caution should be exercised by all personnel having anything to do with money.

CASH REGISTERS

All sales in the retail store must be cleared through cash registers. Sales, therefore, shift accountability from merchandise to cash. You are responsible for safeguarding cash in the same manner in which you safeguard merchandise. The retail store operator is the only person allowed access to the cash register. Under no circumstances can anyone other than the retail store operator ring up sales. The cash register provides a record of the amount of money you collect. Use it properly. Keep in mind, however, that you are held responsible for errors in pricing and in making change.

Cash registers should not be turned back, nor should the reading be altered at any time. Readings should be allowed to accumulate. The "paid-out" key, if installed in the cash register, must be blocked out to prevent use.

Location of the Register

The cash register must be located where it will provide the customer with a clear view of the registration of the amount of the sale. As an optional procedure, a cash register that provides the customer with a tape, itemized and totaled, is acceptable.

Cash Register Keys

The keys to the register will be in the custody of the cash collection agent including keys that

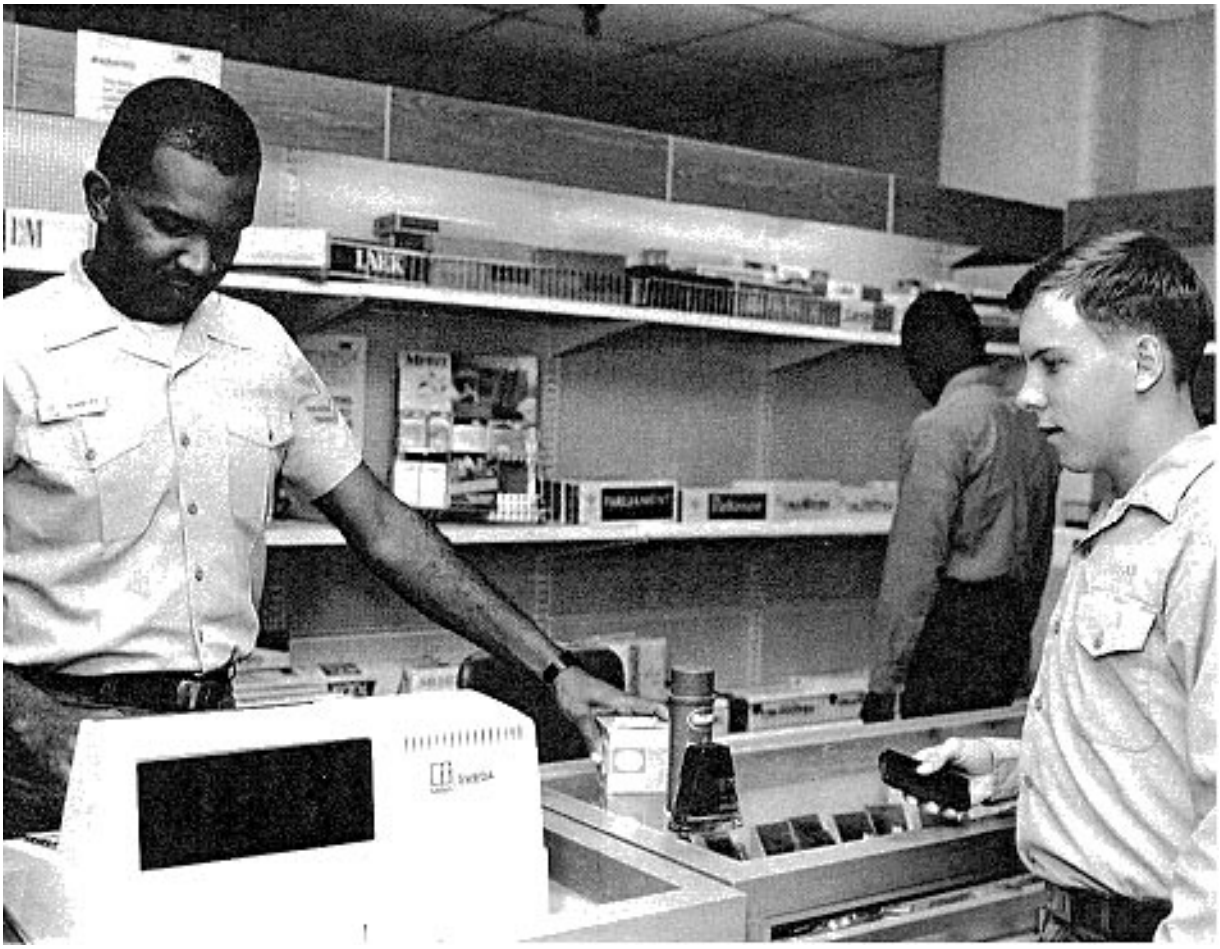


Figure 2-4.—Handling cash from sales.

permit access to the detailed tapes and the key that controls the selection levers. All levers will be locked in the cash position except when the cash collection agent is making collections.

Cash Register Tapes

If the cash register you are using generates tapes, two tapes will be generated. One tape will be produced for the individual customer, while the detailed tape is retained in the register for record of sales. When the detailed tape gets close to running out a green streak will appear on the tape itself. Once the tape runs out you will not be able to use the cash register again until the ship's store officer or cash collection agent changes the tape. The cash collection agent will sign and date the used tape and turn it over to the ship's store officer for filing in the Accountability File, SSA-21. The tape is eventually placed in the retained returns.

CHANGE FUNDS

At the beginning of each accounting period or when the store is reopened after being closed for over 72 hours, advance funds are provided to the store operator by the disbursing officer. On ships operating multiple retail outlets, this advance may be made by the ship's store officer, the designated officer assistant, or designated cash collection agent. The operator must sign a Cash Receipt Certificate, NAVCOMPT Form 2114, for the funds. The funds are used as change until such time as sales are sufficient to provide the required change. The amount of the change fund is usually $50. An instruction on the change funds, including the amount of the change fund, will be approved by the commanding officer and included in the supply department instructions. The advanced change fund is not registered on the cash register, but remains in excess of proceeds from the sales. At the close of the business day or as soon as possible thereafter, the retail store operator returns the amount of funds advanced to the retail store before reading the cash register. At this time, the receipt originally given for the funds is destroyed. Advanced change funds may remain in the cash register overnight only when the day's sales have not produced sufficient cash to provide change for business the following day. On special occasions such as paydays, when a greater amount is required temporarily for change, an extra amount may be entrusted to the retail store operator upon presentation of his or her receipt. Such extra amounts must be specified in the instructions of the commanding officer to the ship's store officer.

CASH TRANSACTIONS

All sales in the ship's store are made on a cash basis and United States currency is the only currency acceptable. In addition to U.S. currency, the customer has the option of using either a personal check or traveler's check. The ship's store as a matter of necessity must impose certain conditions on accepting these documents instead of cash.

PERSONAL AND TRAVELER'S CHECKS

The most widely used alternative to cash is the personal check. You can accept personal checks only from active duty or active duty for training personnel for the amount of purchase only. Two-party checks are not acceptable. Personal checks must be on a United States account, stated in terms of United States currency, inscribed with the printed name of the purchaser and magnetic ink bank account number, and made payable to USS_____. The customer's signature should include his or her first name, middle initial, if any, and last name. Make sure his or her current duty station and social security number are written on the back of the check. The store operator should politely ask for the customer's armed forces identification card and verify the purchaser's signature and social security number on the check with what is on the identification card. Make sure the date on the check is correct and the amount written agrees with the amount shown in numbers. Checking the basic information on the check will prevent the check from being returned because it was not filled out correctly.

Another alternative to cash is the traveler's check. Customers may use traveler's checks in amounts up to $5 over purchase. Make sure the customer endorses the traveler's check in your presence. Ask for the customer's armed forces

identification card and verify the signature to make sure it is the same as that on the traveler's check.

PUTTING MONEY IN THE REGISTER

Once you have signed for your change fund as discussed earlier, you will have to arrange the cash from the change fund in your cash tray. It may seem strange, but the number of cash handling errors you make may be related to how you arrange your money in the cash tray. After you count your money, arrange it in the cash register carefully as shown in figure 2-5. If your cash register has less than five compartments, place any checks you receive during the day under the cash tray in the cash drawer. Make sure all bills are placed in their respective compartments, facing up in the same direction. Make sure while putting the bills in the tray that they do not stick together. If the bills are new, it is a good practice to turn the corner down on each bill to prevent giving two instead of one for change. Large bills such as $50 or $100 should always be placed under the money tray. Keep coins in their own compartments, with pennies on the right, then nickels, dimes, and quarters. Half dollars should be kept together in one compartment next to the quarters.

Before ringing up your first sale of the day you should make certain the area around the cash register is clear. Do not clutter the area surrounding the cash register with signs, notes, or other items. The sales window should be clear so the customer can see the amount of sale being registered.

CHECKS	TWENTIES	TENS	FIVES	ONES
HALVES	QUARTERS	DIMES	NICKELS	PENNIES

Figure 2-5.—Arranging money in the register.

TAKING THE CUSTOMER'S MONEY

Most errors happen during the exchange of money between the customer and the operator of the store. Before you actually take the money, ring up each item the customer is purchasing separately on the cash register. Do not try to add the total price of more than one item in your head. The cash register is designed to do this for you. Complete each transaction before thinking about starting another one. This will prevent confusing yourself and the customer and will avoid any shortages or overages in the cash register. Apologize to the customer who must wait. The better you manage your customers, the fewer errors you will make in handling money.

Count the money as you receive it from the customer for each sale. Repeat out loud the amount of money handed to you, as well as the amount of the sale. By doing this for every sales transaction, you avoid the chance of becoming confused if the customer should claim that a larger bill was given to you. For example, as the customer hands you this money, you should say, "Thank you, that will be $4.35 out of $5." Leave the amount of money received on the change plate until you count the change from the till. If someone interrupts you or you forget, you will have the exact amount received in front of you just below the row of keys on the register. You will not have any doubt or mistakes on the amount. Count the change twice, first as you take it from the till and second as you give it to the customer. Start counting your change from the amount rung up until you build up to the amount received. For example, if you have to ring up $4.35 out of $5, you would pickup a nickel and a dime from your till and count aloud, "Four forty, four fifty," and then pick up two quarters and count aloud, "Four seventy-five, five dollars." Repeat in the same way as you count the change into the customer's hand. If you or the customer finds an error in your count, take back all change from the customer. Make your corrections, and then count the change correctly into the customer's hand. Now remove the money from the change plate and put it in the cash drawer. Be sure to close the cash drawer after every transaction; never work out of an open cash drawer. If your cash register provides a receipt, tear the receipt off and give it to the customer. Always remember to look at your first receipt of

the day to make sure it prints clearly and that the date is right.

CASH REGISTER MALFUNCTIONS

The cash register, like any other piece of machinery, can break down. Most ships normally have a backup cash register to replace the broken one while it is being repaired. However, if a backup register is not available, you should take the following steps while the register is out of order:

- Keep a cash sales log and record the total dollar value of each sale. Use an adding machine to total the value of merchandise bought by each customer. The log will include columns for item sold, quantity of the item sold, unit selling price, and extended selling price.

- Use an adding machine to total the log and balance it with cash on hand at the end of each business day.

- Retain the daily log and adding machine tapes in the same manner as cash register tapes.

- Enter cash collected in the Cash Receipt Book, NAVSUP Form 470, Cash Register Record, NAVSUP Form 469, and the ROM system.

- Collect all cash including change funds daily.

REFUNDS

All sales made in the retail store are final except that merchandise determined to be defective may be returned for refund or adjustment under the following conditions:

- When merchandise is guaranteed by the manufacturer and returned within the warranty period

- When merchandise can be reasonably assumed to have been defective at the time of sale and is returned within 30 days of such sale

All refunds must be approved by the ship's store officer before the retail store operator can accept an item and give the customer a cash refund. Process the refund on an Overring/Refund Voucher, NAVSUP Form 972 (fig. 2-6). The voucher will include a short description of material returned and will be signed by the ship's store officer, the retail store operator, and the customer. Once the store operator receives the signed refund voucher from the customer, a refund can be paid out of the cash in the register. The store operator will then place the overring/refund voucher under the cash tray until daily collections. The voucher will then be collected by the ship's store officer or cash collection agent. The amount of refund will be reported as a separate entry in the Cash Register Record, NAVSUP Form 469, and the Cash Receipt Book, NAVSUP Form 470. The voucher itself will be attached to the applicable page of the NAVSUP Form 469.

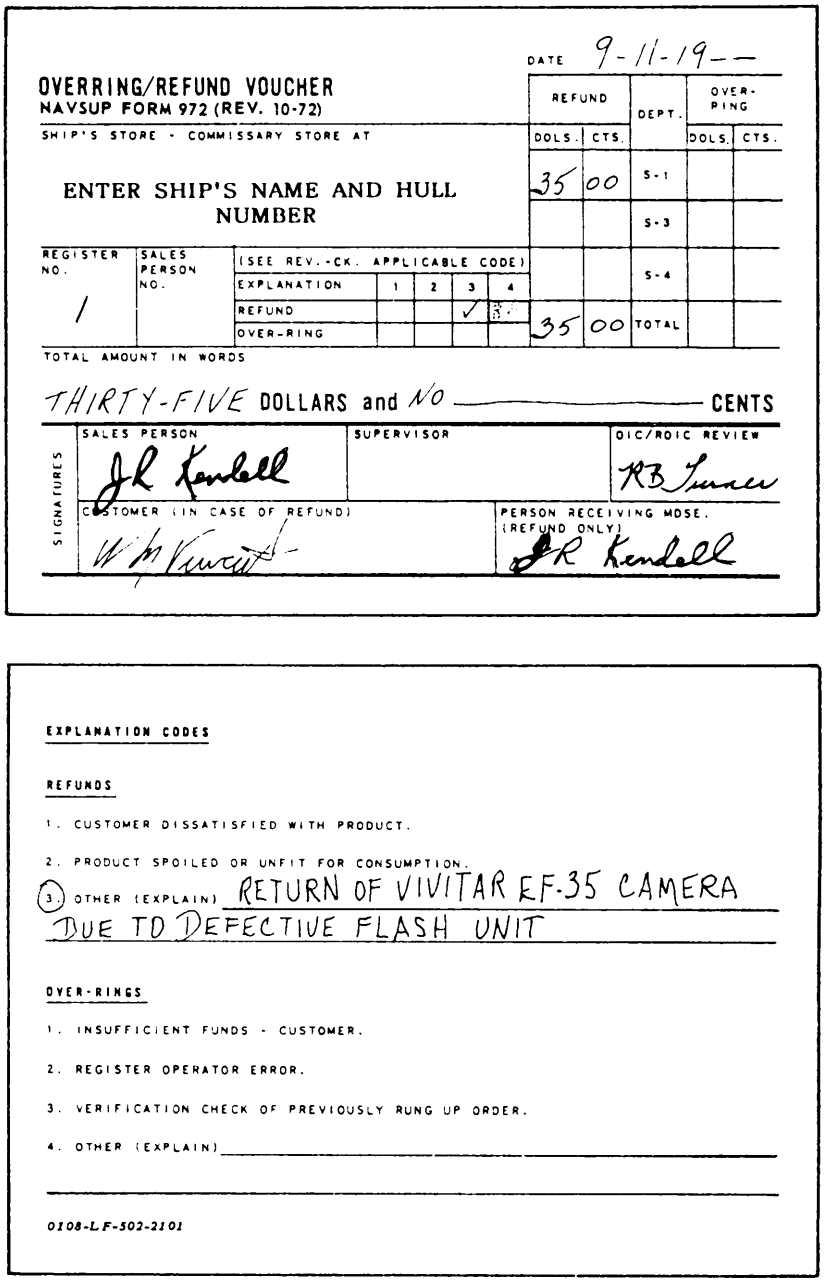
OVERRINGS AND UNDERRINGS

Some cash register operators, it seems, never make a mistake. But what happens if they push the wrong button, or the customer does not have enough money to pay for the purchase? When an underring occurs; that is, you didn't charge the customer enough, you can correct it simply by ringing up the difference between the item's actual retail price and what you charged the customer. For example, the customer purchases a radio for $23. You, however, mistakenly ring up $13. This problem is simply corrected by ringing up an additional $10 ($23-$13). This type of cash register error requires no authorization to correct; however, overrings require the signature of the ship's store officer before they are valid. An overring occurs when:

- the amount rung up on the register is greater than the price of the item, or

- the customer does not have enough money to pay for the purchase.

Once an overring occurs, the sales outlet operator must prepare an Overring/Refund



OVERRING/REFUND VOUCHER
NAVSUP FORM 972 (REV. 10-72)

DATE 9-11-19--

SHIP'S STORE - COMMISSARY STORE AT

ENTER SHIP'S NAME AND HULL NUMBER

REFUND DOLS.	REFUND CTS.	DEPT.	OVERRING DOLS.	OVERRING CTS.
35	00	S-1		
		S-3		
		S-4		
35	00	TOTAL		

REGISTER NO.	SALES PERSON NO.	(SEE REV.-CK. APPLICABLE CODE) EXPLANATION	1	2	3	4
1		REFUND			✓	
		OVER-RING				

TOTAL AMOUNT IN WORDS

THIRTY-FIVE DOLLARS and NO ———— CENTS

SIGNATURES

SALES PERSON	SUPERVISOR	OIC/ROIC REVIEW
J R Kendall		RB Turner

CUSTOMER (IN CASE OF REFUND)	PERSON RECEIVING MDSE. (REFUND ONLY)
W M Vincent	J R Kendall

EXPLANATION CODES

REFUNDS

1. CUSTOMER DISSATISFIED WITH PRODUCT.
2. PRODUCT SPOILED OR UNFIT FOR CONSUMPTION.
3. OTHER (EXPLAIN) RETURN OF VIVITAR EF-35 CAMERA DUE TO DEFECTIVE FLASH UNIT

OVER-RINGS

1. INSUFFICIENT FUNDS - CUSTOMER.
2. REGISTER OPERATOR ERROR.
3. VERIFICATION CHECK OF PREVIOUSLY RUNG UP ORDER.
4. OTHER (EXPLAIN) ————————

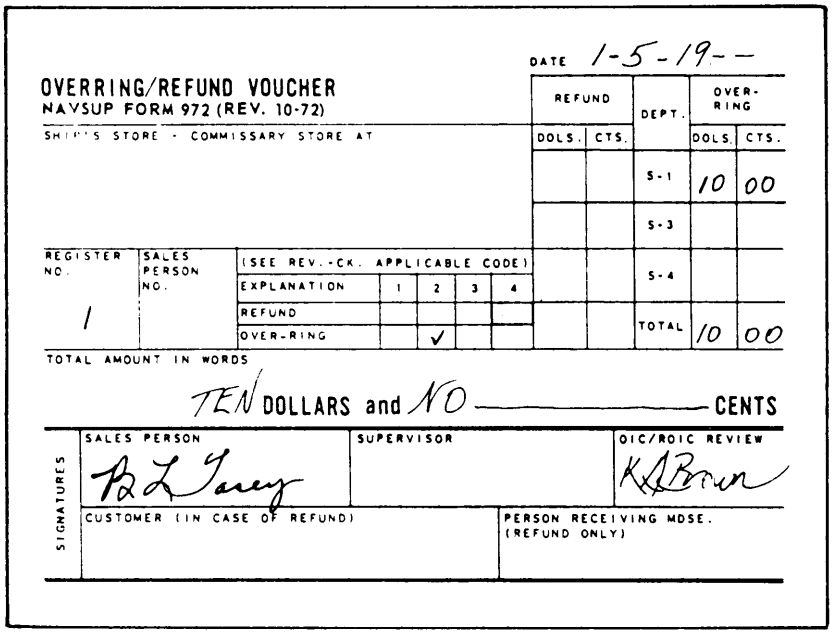
0108-LF-502-2101

Figure 2-6.—Overring/Refund Voucher, NAVSUP Form 972 (for refunds).

Voucher, NAVSUP Form 972 (fig. 2-7). The sales outlet operator and the ship's store officer will both sign the NAVSUP Form 972, and it will be kept under the cash tray in the register until daily collections are made. At the time cash is collected, the person making collections will attach the 972 to the applicable page of the Cash Register Record, NAVSUP Form 469, and make a separate entry on both the NAVSUP Form 469 and the Cash Receipt Book, NAVSUP Form 470.

PERSONAL CHECKS RETURNED BY THE BANK

When a personal check, which was written for purchase in the retail store, is returned to the ship due to insufficient funds, the ship's store officer must reimburse the disbursing officer for the amount of the check from cash in the retail store register. The retail store operator will take the personal check and place it under the cash tray



DATE 1-5-19--

OVERRING/REFUND VOUCHER
NAVSUP FORM 972 (REV. 10-72)

SHIP'S STORE · COMMISSARY STORE AT

	REFUND DOLS.	REFUND CTS.	DEPT.	OVER-RING DOLS.	OVER-RING CTS.
			S-1	10	00
			S-3		
			S-4		
			TOTAL	10	00

REGISTER NO.	SALES PERSON NO.	(SEE REV.-CK. APPLICABLE CODE) EXPLANATION	1	2	3	4
1		REFUND				
		OVER-RING		✓		

TOTAL AMOUNT IN WORDS

TEN DOLLARS and NO ———— CENTS

SIGNATURES

SALES PERSON	SUPERVISOR	OIC/ROIC REVIEW
B L Jarvey		K A Brown

CUSTOMER (IN CASE OF REFUND)	PERSON RECEIVING MDSE. (REFUND ONLY)

Figure 2-7.—Overring/RefundVoucher, NAVSUP Form 972 (for overrings).

in the register until cash, a certified check, or money order is received for settlement. Once one of the above is received, it will be placed in the cash register and the check returned to the individual purchaser.

To account for a personal check returned, you should make a separate entry on the Cash Register Record, NAVSUP Form 469, showing that an uncollectible check is in the cash register. The amount of the check will not be written in the Amount In Figures column of the NAVSUP Form 469, instead the words *Uncollectible Check* will be entered here so it will not be totaled at the end of the month. Once the money is received for the check from the individual purchaser, the amount will be shown on the Cash Register Record, NAVSUP Form 469, for information purposes. The amount will not be included in the total figure but the words *Settled Check* will reentered in the Amount In Figures column of the NAVSUP Form 469 to indicate the check is settled. Keep in mind that the amount of money received to cover the check will not be rung up in the register but just placed in the cash drawer and the check returned to the individual purchaser.

If the check is not settled by the end of the accounting period or when the retail store operator is relieved, the retail store operator should make sure the check is included on the inventory prelisting and the amount of the check included in the inventory.

If, after repeated attempts, the ship's store officer fails to collect the amount of the check, it will reconsidered uncollectible after 4 months. The amount of the check will have to be charged as an operating expense of the ship's store. The amount of the uncollectible check will be reported on the Cash Register Record, NAVSUP Form 469, for information purposes only. The words *Dishonored Check* will be entered in the Amount In Figures column of the NAVSUP Form 469 to make sure the amount of the dishonored check is not included in the monthly total. The dishonored check will be removed from the register and turned over to the ship's store officer. At the end of the accounting period, a Memorandum Invoice, DD Form 1149, will be prepared listing all dishonored checks. The invoice will contain the following:

- Name and social security number of each check drafter
- Date of check
- Bank and bank account the check was drawn from
- Amount of check

A separate entry will be made for all dishonored checks by the office recordskeeper on the Ship's Store Afloat Financial Control Record, NAVSUP Form 235, to adjust the retail store operator's accountability.

ROM users will create a separate Intra-Store Transfer Data, NAVSUP Form 973, for dishonored checks from the retail store to the bulk storeroom to adjust the retail stores accountability on the Ship's Store Afloat Financial Control Record, NAVSUP Form 235. After the ship's store officer verifies that an intrastore transfer was accomplished to adjust accountability, he or she will change the balance on the Stock Record, NAVSUP Form 464, to zero through the ROM corrections function and delete the stock record.

SPECIAL-TYPE SALES

In addition to regular sales transactions, you have special transactions that are authorized for ship's store with which you should be familiar. These include group sales, bulk sales, and the sale of traveler's checks.

Group Sales

The necessity for conducting group sales of ship's store stock is generally limited to ships such as transport vessels or activities that carry or serve individual units of personnel such as Army troops, Marine Corps troops, and large detachments of Navy and Coast Guard personnel. Because ship's store spaces and store hours are generally limited, it is often impossible to serve all the crew plus troop personnel on an individual basis. As a remedy, group sales may be conducted.

Under this system, troop units are divided according to squads, platoons, companies, berthing assignments, or some other category, and individual orders for purchases within a group are combined and turned over to one responsible person. This person may then either purchase the group orders directly from the ship's store during hours when it is normally not open for sales, or may clear the orders through the troop quartermaster for further combining.

In either case, a considerable amount of time will be required for the ship's store operator to make up and check the group orders, and adequate allowance must be made for this time. For example, when orders are submitted late one afternoon, this person will usually have until the middle of the following morning to make up the orders and check them.

Group sales are always made at established retail prices and are cleared through the cash register in the usual manner.

Bulk Sales

Bulk sales normally are made to Navy exchanges, MSC exchanges, or ships not operating ship's stores when the transferring ship does not provide a composite recreation fund. In other words, the requesting ship does not receive a share of the profits from another ship's store.

Bulk sales are made using the Requisition and Invoice/Shipping Document, DD Form 1149. Requests for bulk sales from activities that are authorized to buy ship's store stock at cost price are submitted by the activities' commanding officer. (See fig. 2-8.) Once you receive this requisition, your ship's store officer will approve it by signing the DD Form 1149. You will then sell the items requisitioned at cost price from the retail store. If your retail store stock is insufficient to cover the order, additional quantities should be obtained from the bulk storeroom using the Intra-Store Transfer Data, NAVSUP Form 973.

ROM users must verify that the ship's store stock numbers used by the requesting activity are the same as those used by the issuing ships records. The requesting activity's DD Form 1149 is then taken by the ship's store recordskeeper who will enter the bulk sale into the ROM miscellaneous expenditure function and the ROM will automatically assign an expenditure number. After the bulk sale is entered in the ROM, the DD Form 1149 is taken to the retail store, and the operator will then sell the items requisitioned at cost price.

Normally, payment for bulk sales is required at the time of delivery and you, as retail store operator, will acknowledge receiving payment by signing the DD Form 1149. The purchaser will then sign the DD Form 1149 to acknowledge receipt of material. If for some reason the store operator does not receive payment, a copy of the DD Form 1149 will be retained in the cash register. The value of the material will be carried as inventory and included on the last page of the Inventory Count Sheet, NAVSUP Form 238, until payment is received. Once payment is received, it will be rung up on the cash register and the DD Form 1149 will be removed.

The cash collected from bulk sales will be reported as a separate entry for information purposes in your Cash Receipt Book, NAVSUP Form 470, and the Cash Register Record,

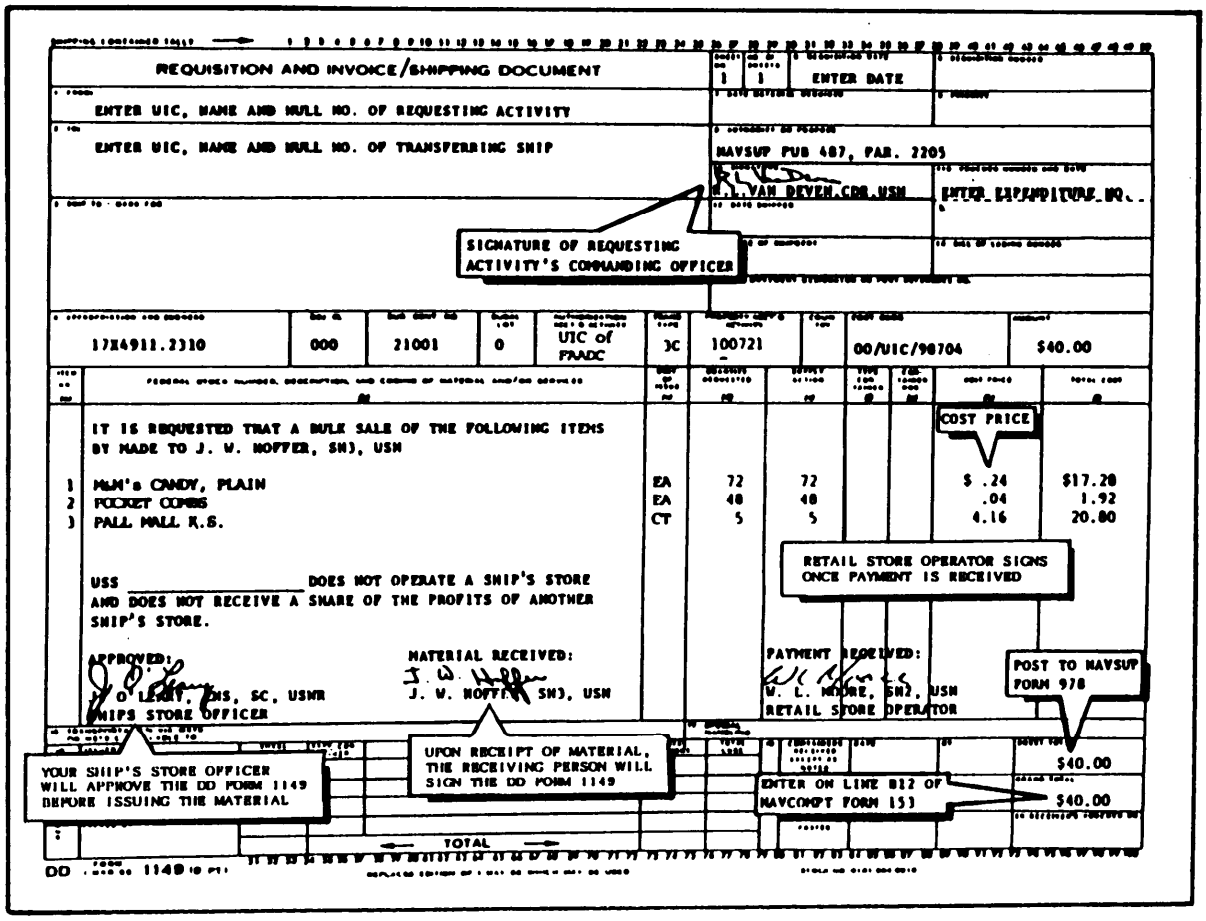


Figure 2-8.—Bulk sales.

NAVSUP Form 469. The amount collected is not added to the total cash collected for the month from the retail store. The words *Bulk Sales* are entered in the Amount in Figures column of both the NAVSUP Forms 469 and 470. ROM users will enter amounts collected from bulk sales in the ROM cash receipt function using store number 99. ROM will automatically total and enter all collections entered for store number 99 to the bulk sales total of the Memorandum Cash Sales Invoice Deposit of Cash with the Disbursing Officer, DD Form 1149.

Since bulk sales are made at cost price, the retail store is losing the difference between cost price and selling price. To account for this, the ship's store office will prepare a Retail Price Change, NAVSUP Form 983, to mark down the items to be sold to cost price. The NAVSUP Form 983 will be posted to the Ship's Store Afloat Financial Control Record, NAVSUP Form 235. The DD Form 1149 for bulk sales is posted to the Journal of Expenditures, NAVSUP Form 978. The ROM system will enter and post the bulk sale automatically to the applicable records. Make sure you receive a copy of the bulk sale and the NAVSUP Form 983 for your retail store file. Larger bulk sales for orders that cannot be filled in your retail store may be made out of the bulk storeroom at cost price. The procedures for doing this are contained in the NAVSUP P-487.

Traveler's Checks

Traveler's checks may be sold through the ship's store after approval of the commanding officer. All traveler's checks are stored in the ship's store officer's safe. Any traveler's checks that will not fit in the ship's store officer's safe will be turned over to the disbursing office for safekeeping. The retail store operator will maintain a working stock of traveler's checks in a three-combination safe. Only the retail store operator

will have access to the safe and any of the working stock not sold during the working day will be turned over to the ship's store officer at the close of business. Traveler's checks are issued by the ship's store officer to the store operator daily. The ship's store officer will maintain a locally developed log to account for the checks. The log is called the Traveler's Check Control Record and this log will have columns for the following:

- Date
- Quantity received from vendor
- Quantity issued to retail store operator
- Quantity returned by retail store operator
- Initials (both ship's store officer's and retail store operator's)
- Balance on hand

The hours in which traveler's checks are sold will be designated by the commanding officer and should not conflict with the regular store hours. The minimum sale of traveler's checks is $50. There will be a surcharge of 1 percent ($1 per $100) of the amount sold. The ship retains two-thirds of 1 percent (67 cents per $1) of the surcharge, while the remaining one-third (33 cents per $1) is given to the vendor. To assist you in selling the traveler's checks, consult the *Ship's Store Afloat Catalog* listing for traveler's checks, which contains complete instructions for selling checks to customers.

At the end of the business day, turn any remaining traveler's check stock and all cash from sales of traveler's checks collected over to the ship's store officer. Use the locally developed Traveler's Check Cash Collection Record log for this purpose. The log will have columns for the following:

- Value of checks issued to the retail store operator
- Value of checks returned
- Cash for face value of checks sold
- Value of surcharge fees collected
- Initials (both ship's store officer's and retail store operator's)

All cash collected from traveler's checks is recorded in a separate Cash Register Record, NAVSUP Form 469.

CASH COLLECTIONS

The ship's store officer is responsible for the collection and deposit of funds received from sales in the ship's store. If desired, however, the ship's store officer may designate an officer or enlisted assistant as collection agent to count and collect cash from retail stores. Such designation must be made in writing. The cash collection agent will not be assigned duties as retail store, vending machine, amusement machine, or snack bar operator. The records keeper may be designated cash collection agent only when sufficient personnel are not available; however, this is not recommended. Although disbursing personnel may not be designated as cash collection agent, they may make collections from the sales outlets by virtue of their position. Cash received from the sales in the retail store must be counted and collected from the retail store operator at the close of each business day except when moneybags or a night depository safe is used. When more than one shift is in operation, all cash from sales must be collected at the end of each shift. All cash including change funds will also be collected at the end of the accounting period (30 Sept, 31 Jan, 31 May), when the sales outlet is closed for 72 hours or more, and when the ship's store officer or the sales outlet operator is relieved.

During actual cash collections, the cash register will be rung out and the reading will be recorded. The difference between the current day's register reading and the previous day's reading minus the cash left in the register for change should equal the cash collected. If it does not, then you have an overage or shortage. Refunds and overrings will be included in the formula when necessary.

CASH DELIVERED BY THE SALES OUTLET OPERATOR

The ship's store officer may have the cash delivered daily by the retail store operator to the designated collection agent. This is normally done when it is impractical for one reason or another for the collection agent to go around to every sales outlet to make collections.

When the cash receipts are delivered to the collection agent, the ship's store officer must

make sure the cash registers, vending machine meters, cash totalizers, and amusement machine meters are read at the end of the business day. When it is impractical to do this daily, it should be done at least twice weekly on an unscheduled basis. Cash for change will be provided daily by the cash collection agent to the store operator in exchange for a cash receipt.

MONEYBAGS

When conditions make it impractical to collect the cash, such as when the retail store is open after regular working hours, including weekends, all cash in the register, including the change fund, may be placed in a moneybag, which must be locked and turned over to the supply department duty officer or to another commissioned duty officer for safekeeping.

All moneybags are numbered on the outside and are logged out in a locally developed log at the time of issue to the retail store operator. The supply department duty officer or another commissioned duty officer keeps the log in his or her possession during the duty day. Each moneybag is provided with two keys. One key is kept by the retail store or snack bar operator and the other one must be kept in a sealed envelope in the ship's store officer's safe. The envelope must be signed across the flap by the ship's store officer and the retail store or snack bar operator.

After closing the retail store or snack bar, the operator places the cash from sales including change fund in the moneybag. The moneybag(s) is/are locked and turned over to the supply department duty officer or another commissioned duty officer to be placed in a safe for safekeeping. The duty officer signs the log acknowledging receipt of the moneybags. The money in the locked moneybag does not need to be counted; however, every subsequent transfer of the locked moneybag should be recorded in the log. The following day, before the start of business, the cash register must be read and the retail store or snack bar operator must open the moneybag, count the money, and turn it over to the person making collections.

NIGHT DEPOSITORY SAFE

An approved night depository safe may be installed for depositing money when sales outlets are opened after regular working hours, including weekends or any other time it is impractical for the person making collections to do so. When the depository safe is used, moneybags will normally be used to collect money from the sales outlets, with the exception of vending machines where money boxes will be used. The actual use of money boxes is discussed later in this chapter. The sales outlet operator should carefully insert the moneybag or money box in the night depository safe, making sure it drops to the bottom. The money safe in the lower depository of the approved type of night depository safe is dual controlled by a key and combination lock. Two keys are provided for the key lock. One is given to a person who does not have access to or knowledge of the combination to the safe and who is responsible for opening the key lock. The other key is placed in an envelope (signed across the flap by the ship's store officer and the person responsible for opening the key lock to the safe) and is kept in the ship's store officer's safe. The combination to the money safe is kept by the ship's store officer or designated cash collection agent. The combination is recorded on a piece of paper and placed in a sealed envelope, signed across the flap by the ship's store officer and cash collection agent, and kept in the ship's store officer's safe.

Before the start of business the following day, the cash register reading will be taken. The key lock and the combination lock to the safe are opened by authorized personnel, and the moneybags or money boxes are removed and opened by the sales outlet operator. The person making collections then counts the money in the presence of the sales outlet operator.

CASH LEFT IN THE CASH REGISTER OVERNIGHT

Cash not to exceed $50 may be left in the cash register overnight except when more than one shift is operated. In each instance when a $50 change fund is inadequate on a continuing basis, the type commander may authorize that cash not to exceed $100 may be left in the cash register overnight except when more than one shift is operated.

It is highly recommended that cash not be left in the register overnight; it should be locked up inside a safe installed inside the store for that purpose. The cash register drawer should be drawn out in the evening to indicate that there is no money in it. Also, a sign should be posted conspicuously outside the store stating that "There is no money left in the register overnight."

ACCOUNTING FOR CASH

Each store operator is responsible for the cash collected from sales as long as it is in his or her possession. Cash is usually collected at the close of each business day by the ship's store officer or a designated collection agent. Two records are maintained in which the cash collection is recorded. In addition to these records, ROM users will enter cash collections in the cash receipt function daily, or as soon as practical.

Cash Receipt Book

The Cash Receipt Book, NAVSUP Form 470, has already been mentioned often in this chapter. The NAVSUP Form 470 shows receipt for all cash and overring or refund vouchers, if any, turned in to the ship's store officer or cash collection agent. This cash receipt book is kept in the custody of each sales outlet operator. The designated cash collection agent, when making the daily collections from the sales outlets, must receipt for all cash in the cash receipt book. (See fig. 2-9.) When the cash collection agent is making collections, the ship's store officer will review the cash receipt book daily, or at least twice a week, and will initial entries. In addition, the ship's store officer will compare the amounts entered on the ROM with the amounts entered in the NAVSUP Form 470 once a week. Spaces are provided in the cash receipt book for the date; the amount of cash turned in (which is written out in words and also entered in figures); and the signature of the person collecting, as well as that of the sales outlet operator. Whenever an error is made, draw a line through the entire line and write the correct information in the following space. Line-outs must be initialed by the sales outlet operator and the person making collections. No alterations are allowed.

Whenever the store is closed for 72 hours or more, record it in the cash receipt book. Record

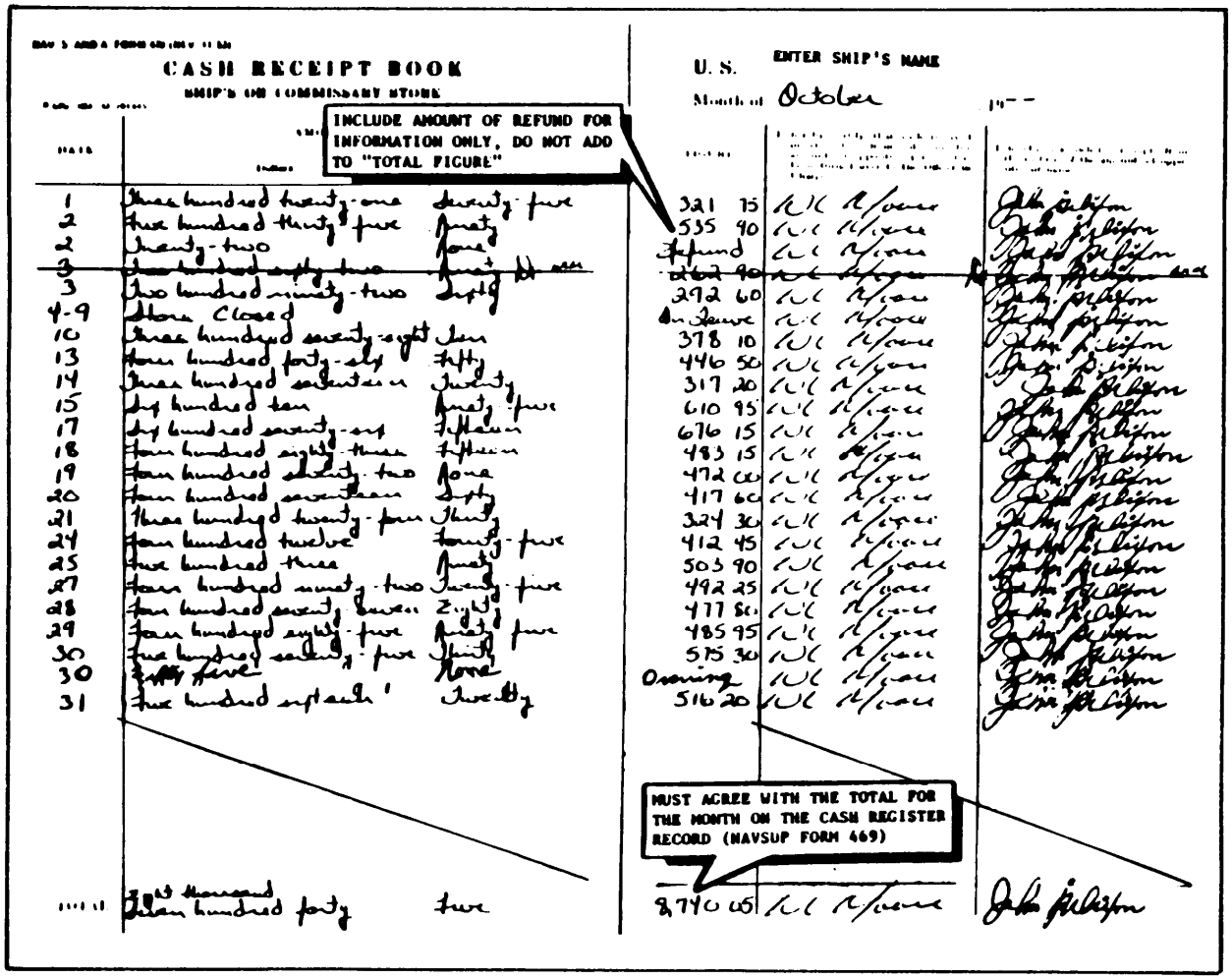


Figure 2-9.—Cash Receipt Book, NAVSUP Form 470.

Overring/Refund Vouchers, NAVSUP Form 972, as a separate entry in words only, with the notation Overring or Refund, as applicable, in the Figures column and with the date and signature included. The amount of the overring or refund voucher will not be added to the total collection figure for the month.

At the end of the month, the sales outlet operator will total the amounts on the NAVSUP Form 470. The total figure must match with the total figure reported on the Cash Register Record, NAVSUP Form 469, and the total cash collections entered in the ROM for that sales outlet.

Cash Register Record

A Cash Register Record, NAVSUP Form 469, is retained in the custody of the person making the collection as evidence of cash collected from sales. Cash including any overring or refund vouchers collected from sales is recorded in this record at the end of each business day. The overring or refund voucher is recorded on a separate line of the NAVSUP Form 469 and the voucher itself is attached to the applicable page. The NAVSUP Form 469 will show when the sales outlet is closed for 72 hours or more. It is not required to start a new cash register record when changing cash collection agents, ship's store officers, or disbursing officers.

ROM users will enter amounts collected from each sales outlet daily in the ROM system or as soon as practical. The ship's store officer will compare amounts entered in the ROM with the amounts entered in the NAVSUP Form 469 once a week.

As the sales outlet operator, you will sign for all cash collected from sales in the cash register record and should be familiar with what is entered in this record. (See fig. 2-10.) The

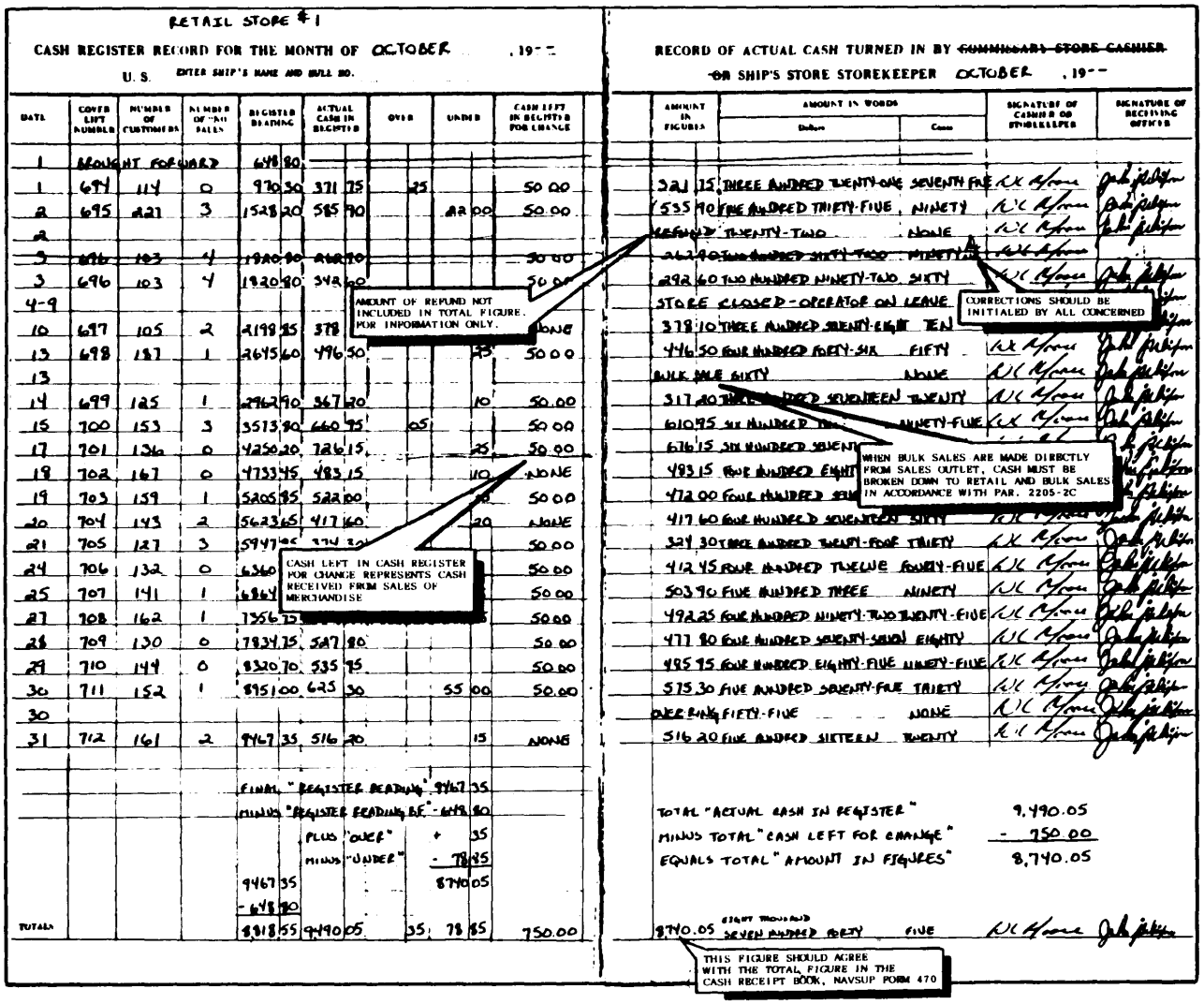


Figure 2-10.—Cash Register Record, NAVSUP Form 469.

NAVSUP Form 469 provides a record for the following:

- The date that cash was collected.
- The cash register reading at the close of business on the day the cash is collected.
- The actual cash in the cash register.
- The amount over or under according to the difference between the cash in the register and the cash sales registered for the collection period. (Overrings and/or refunds will be included in the amount over or under.)
- The amount of cash left in the cash register overnight for change for the following day.
- The amount of cash collected, both in figures and in words.
- The amount of overring or refund vouchers, if any.
- The signature of both the sales outlet operator and the person making the collection.

Any overages or shortages over 5 dollars not substantiated by an overring or refund voucher must be examined and initialed by the ship's store officer. No signature will be placed opposite any entry on the NAVSUP Form 469 that shows an erasure or alterations. The entire line will be ruled out and initialed by the person making the collections and the sales outlet operator. When the type of cash register permits, the cover lift number, the number of customers, and the number of "no sales" also must be entered on the NAVSUP Form 469. At the end of each month the cash register record must be totaled and compared to the total figure reported in the Cash Receipt Book, NAVSUP Form 470, and the ROM system for the month.

SECURITY

A great deal has been said already regarding security. This is because security is so important and cannot be emphasized too strongly. All sales outlets are group III spaces and should be secured as discussed in chapter 1 of this TRAMAN. In addition to the security mentioned in chapter 1, you should also be aware of the possibility of theft or fraud. If you are not careful, theft may occur while the store is opened. You can pretty well prevent this just by keeping a close eye on the customers. Only allow a limited number of customers at a time to enter the walk-in store and never allow any customers to shop wearing a heavy jacket. Always ask the customers politely to remove their coats or jackets while in the store. A small sign placed on the door will also help to remind them.

BREAKIN TO A SHIP'S STORE SPACE

When a space is broken into, the space involved will have to first be sealed using a serialized seal. The incident and circumstances will be reported to the commanding officer. The commanding officer will conduct an informal examination to reveal the extent of the loss. All spaces will be inventoried; all financial control records or stock records closed to determine the actual dollar value of the loss. If the informal examination reveals no loss, then no further action is required. If the examination reveals a loss due to the breakin, then the commanding officer must do the following:

- Relieve the accountable officer or agent if the examination indicates his or her negligence
- Request the assistance of the local Naval Investigative Service (NIS) for losses in excess of $2,250
- Take disciplinary action according to the UCMJ, if necessary
- Reopen the space after inventory and when accountability is reestablished
- Report findings and action taken by letter to the type commander with a copy to the fleet commander, NAVSUP, Navy Accounting and Finance Center, NAVRESSO, and Naval Supply Corps School, Athens

FRAUD

Fraud in the ship's store operation refers to theft of funds or merchandise or changing official records by the accountable officer or responsible individual. Any person suspecting fraud in the ship's store operation should report it to the commanding officer. The commanding officer will direct an informal examination by someone other than the accountable officer. Any space affected and all ROM backup tapes and transactions on the ROM microcomputer will be secured and the ship's store operation will be inventoried and closed out. If no loss is discovered after the

informal examination, no further action is required and the ship's store operation may resume. However, if a loss is discovered, the accountable officer or agent will be relieved if found to be responsible. The commanding officer will request assistance from the local NIS and will establish a formal fact-finding body according to the *JAG Manual,* par. 0909. Once inventory is completed and accountability reestablished, the ship's store operation will resume. The commanding officer will report findings and actions taken in the same manner as if a breakin had occurred.

INVENTORY

Physical inventory is the process by which you identify, count, and evaluate all stock on hand. Inventory is conducted in the sales outlets at the end of each accounting period (31 Jan, 31 May, and 30 Sept), on relief of the ship's store officer or sales outlet operator, and when directed by higher authority.

The ship's store officer is responsible overall for an accurate and complete inventory. Just before inventory, a two-count system will be employed and, therefore, a minimum of two inventory teams is required. Normally, inventory teams consist of two persons; however, if sufficient personnel are not available, teams may be composed of one person. The office recordskeeper may not be assigned to an inventory team. The first team should consist of the ship's store officer or other commissioned officer and one enlisted person, while the second team will consist of one enlisted person in the supply rating E-6 or above and one other enlisted person.

Since each sales outlet differs in size, volume, layout, and so forth, specific instructions will be prepared locally and distributed to personnel well in advance of the inventory to cover such topics as assignment of personnel, cutoff times, stock arrangements, and so forth. A layout sketch of the sales outlet will also be prepared showing each fixture, bin, shelf, and showcase with a number identifying each one. These layouts are prepared by the ship's store officer in advance of the inventory. An identical number to the one shown on the layout sketch will be attached to each fixture by the sales outlet operator in the sales outlet.

As the sales outlet operator, you should make sure your space is ready for inventory. First, you should arrange all merchandise in the sales outlet, so similar items are together and stacked neatly. Second, you will prelist the space by putting the information, as shown in figure 2-11, on the Inventory Count Sheet, NAVSUP Form 238. The NAVSUP Form 238 is used to record the

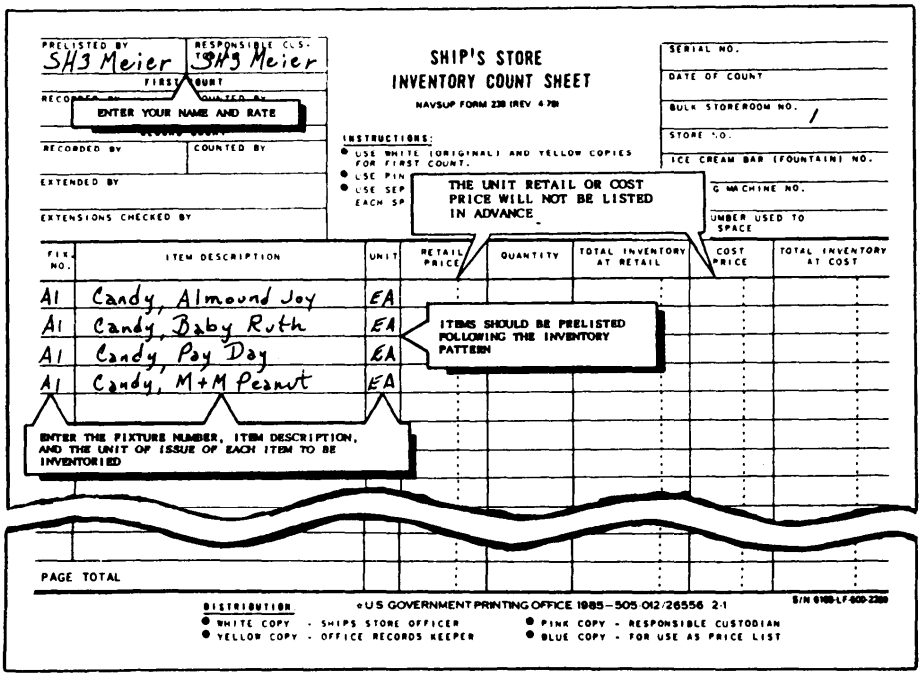


Figure 2-11.—Prelisting for inventory.

inventory; you may obtain the forms from the ship's store officer. You do not need to worry about retail or cost prices on the prelisting; however, be sure you follow the inventory pattern. Prelist from left to right and finish prelisting one fixture before moving onto the next. If your ship uses the ROM system, you may be required to generate or update the inventory prelisting by identifying ship's store stock numbers in the same order as they will be inventoried. During inventory when the actual physical inventory is not in progress, and on completion of the inventory, the retail store must remain closed until it has been determined that there is no excessive shortage or overage. The ship's store officer secures the space with a numbered lead or car seal. A log of these numbered lead or car seals is maintained.

After it has been determined that there is no excessive shortage or overage, the lead seal is broken and the store is reopened for business.

RESTOCKING

The retail store is restocked by breaking out merchandise from the bulk storeroom on an Intra-Store Transfer Data, NAVSUP Form 973. Procedures for conducting breakouts are included in chapter 3 of this TRAMAN. The important thing to remember about breakouts from the bulk storeroom is to check every item to be sure that you receive what you are charged for. If you receive more than you are charged for, you are not making any extra money for the store because the mistake will have to be resolved at the end of the accounting period. Also this causes a great deal of extra work for the office personnel. So demand what you are charged for and take ONLY those amounts.

When preparing requirements for restocking the store, there are a few basic considerations to keep in mind. Make sure you use the basic stock list when you prepare your list of requirements for the retail store. As we discussed earlier, these basic stock items are considered necessary for the health and comfort of the crew and you should try to keep them in stock at all times.

In hot, humid climates, avoid overstocking highly perishable merchandise such as candy bars, chocolates, gum, biscuits, cookies, and some tobacco products. If your retail store is air-conditioned, you will not have this problem. You will be able to control the temperature in your space. You should keep the temperature between 60°F and 65°F to protect all items. If your retail store is not air-conditioned or ventilation is poor, you should use care when preparing your restocking list to avoid overstocking items that may be perishable. Stowage of and information on specific stock items is covered in chapter 3 of this TRAMAN.

STORING FOR SEA

The important thing to keep in mind when preparing your store for sea is to anticipate rough weather. Racks and bins should be used to the fullest extent, especially for all breakable items such as cameras and watches. When these expensive items are damaged beyond sale, the loss is absorbed in your profits and there is no way the money can be recouped. Never secure the store for the day until you have very carefully checked everything and are sure things are secured to withstand any heavy seas that may develop during the night. It takes only one hard roll to bring all unsecured merchandise crashing to the deck. Many retail store operators have learned the hard way when they found themselves putting their store back together, not to mention having to answer for their negligence. Taking the initial precautions and a few extra minutes at the end of each day will eliminate the possibility of any mishaps.

SANITATION AND CLEANLINESS

Sanitation regulations are approved by the senior member of the medical department and issued to all sales outlets and service activities. These instructions are posted in ship's store spaces and must be rigidly enforced. All merchandise, shelves, bins, and the overhead must be kept free of dust and dirt. Keep the decks clean and allow no dirt or dust to accumulate in corners. Dirty merchandise in a dirty space loses its appeal.

In addition, personnel assigned to the spaces must be scrupulously clean at all times. Your customer has every right to expect to be served by a neat, well-groomed operator. Create a favorable impression, and you have a customer who is more easily satisfied.

VENDING MACHINES

Just like the retail store, the vending machines are sales outlets. These machines are another means of merchandising products aboard ship. A vending machine (fig. 2-12) is a coin-operated

Figure 2-12.—Vending machines.

machine that dispenses merchandise after the customer inserts legal coins or currency. The vending machine is equipped with a coin changer that provides change to the customer after purchase. The following coin-operated machines are authorized for shipboard use: cup or can soft drink, candy/cookie, cigarette, hot food/snack, dollar bill changer, and electronic amusement machines.

Vending machines are very important toward high crew morale. The two top jobs of the vending machine operator are keeping the machines full and taking care of customer complaints. Servicing the vending machines is not an easy job. They are the only part of the ship's store operation that provide service 24 hours a day, 365 days a year.

VENDING MACHINE CASH COLLECTIONS

As the vending machine operator, you will normally have another job on top of taking care of the vending machines. To make collections within prescribed time limits and still do your jobs, you will more than likely have to time your collections so they will not interfere with your other work. This can be easily worked out with the person who is making collections. You should keep in mind that the vending machines need to be collected daily or before making any repairs to the coin mechanism or the machine itself whether the ship is in port or at sea. On the weekends in port, cash only needs to be collected from the vending machines if the volume of sales is over $150, or when making repairs to the machine or the coin mechanism. Also when the last business day of the month falls on a weekend or holiday, all cash must be collected.

Collections are recorded on the NAVSUP Forms 469 and 470 according to the procedures previously described. All collections from the vending machines will be entered in the ROM cash receipt function daily, or as soon as practical. When more than one machine is operated, the cash receipts for each machine must be recorded on separate pages of the NAVSUP Forms 469 and

470, and the pages must be identified accordingly. The Cash Receipt Book, NAVSUP Form 470, will be kept in the custody of the vending machine operator. Meter readings are taken at the time of collection and used to determine the amount of cash that should be in the vending machine. A record of these meter readings is maintained on the NAVSUP Form 469 under the column marked Number of Customers. The previous day's meter reading minus the meter reading at the time of collection times the selling price should equal the cash collected.

LOCKED MONEY BOXES

When locked money boxes are installed in drink vending machines, the boxes will be numbered on the outside and issued to the vending machine operator by the person responsible for cash collections. Before issuing the locked money boxes, the collection agent will make sure the box is key locked and a seal is affixed over the lock opening. The number of the seal will be recorded in an unused column of the Cash Register Record, NAVSUP Form 469.

Delivery by the Vending Machine Operator

The vending machine operator may be required to deliver the locked money boxes to the person making collections. If this is done, you should first take the meter reading and write it down before you remove the money box. After you remove the full money box, replace it with the empty one. The locked money boxes in vending machines are provided with two sets of keys, one locks the box inside the machine, while the other opens the money box itself. The vending machine operator will have the key that removes the box from the machine, and the other key that opens the money box will be retained by the person making collections. If the vending machine you are maintaining is not equipped with a meter to count sales, you should figure out how many cans you sold when you replace the money boxes. The total cans in the machine at the last collection plus the cans put in the machine minus the total cans in the machine at the time of collection equal the number of cans sold. After you get the meter reading or figure out the number of cans sold, you will deliver the locked money box to the ship's store officer or cash collection agent. Cash will be counted by the person making collections in the vending machine operator's presence. The person making collections will then make sure the vending machine operator agrees with the meter reading or number of cans sold for each machine and will use them to see if the cash collected is over or short. When the money box is delivered to the cash collection agent instead of the ship's store officer, the ship's store officer must make sure the collection agent is personally reading each vending machine meter at least twice weekly.

Optional Procedures

There may be times such as weekends or after regular working hours when the ship's store officer or the cash collection agent is not available to accept the vending machine coin box. In this case one of two things must be done. Place the money box in a night depository safe or turn the locked money box and meter reading over to the supply department duty officer or another commissioned duty officer for safekeeping.

When the second method is used, a money box log will be maintained by the duty officer receiving the money box. Each time the vending machine operator delivers or receives a money box from the duty officer, an entry will be made in this log and signed by both persons. When the money box is turned in, the duty officer will keep the money box in a safe place until the next day. The vending machine operator will pick up the money box and the cash will be collected and compared to the meter reading or number of cans sold.

VENDING MACHINE CONTROLS

The Vending Machine Control, NAVSUP Form 236, is prepared monthly by the office recordskeeper, for each drink vending machine operated aboard ship and will be signed by the ship's store officer. The quantity of drinks in the custody of the vending machine operator is determined at the beginning and the end of each month. This is done by inventorying the number of drinks in the vending machine and any backup stock that is in the custody of the vending machine operator. The final cash collection of the month is done at the same time inventory is taken on each machine.

Vending Machines in Separate Responsibility Operations

When one or more machines are operated under separate responsibility, the vending machine operator will maintain a daily record of vending

machine drinks. This daily record will be locally developed and placed on the inside door of each vending machine. The form should indicate the date, type of drink, and quantities as shown in figure 2-13. You must make sure you maintain this log sheet accurately because it is turned over to the ship's store officer at the time inventory is done at the end of the month and used in preparing the vending machine control. If this log sheet is inaccurate, the efficiency of the vending machine operation will be hard to determine.

Vending Machines in Combined Responsibility Operations

When your vending machine operation is a combined responsibility, the procedures used will depend on whether you have one or more vending machines.

When you have one vending machine, inventory will be taken monthly of the drinks in the vending machine and the bulk storeroom. The office recordskeeper will post the inventory to the Stock Record, NAVSUP Form 464. Using the information on the NAVSUP Form 464, the office recordskeeper will figure the amount of cans sold as we discussed earlier. The quantity of each flavor sold will be transferred onto an Intra-Store Transfer Data, NAVSUP Form 973. The data on the NAVSUP Form 973 will be used to prepare the Vending Machine Control, NAVSUP Form 236.

On the other hand, if you have more than one vending machine in combined responsibility, you will maintain a daily record of vending machine drinks as discussed earlier. This daily record for each machine will be turned over to the ship's store officer at the end of the month and the quantity of each drink placed in the machine will be transferred onto a NAVSUP Form 973. The data from the NAVSUP Form 973 will be used to prepare the Vending Machine Control, NAVSUP Form 236.

VENDING MACHINE NO: 1
MONTH: September

DATE	FLAVORS					
	PEPSI	COKE	7-UP	MT. DEW	DR. PEPPER	
1	25	30	15	5	10	
3	10	10	20	25	15	
TOTAL						

Figure 2-13.—Daily record of vending machine drinks.

SERVICING THE VENDING MACHINES

The operation of the vending machines is sometimes referred to as automatic merchandising. However, the only thing automatic about it is the customer drops a coin into the machine and receives the product in return. Everything else is done by the vending machine operator who services the vending machine.

Filling the Vending Machine

Filling the vending machine (fig. 2-14) is much easier if the product is stored properly before being dispensed. For instance, during the process of shipping and handling of soda cases, there may be the possibility of damage occurring that goes unnoticed. If these damaged cases are not removed, the cardboard, plastic wrap, and cans in the cases below or adjacent to the damaged cases often remain wet for long periods of time.

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Figure 2-14.-Filling the vending machines.

To prevent this damage, leaking or wet cases must be identified and removed from the pallet. We will discuss damaged cases and storage of different stock items later in chapter 3 of this TRAMAN.

Before you fill the machine, go to each individual machine and count how many of each flavor you will need to fill the machine. Do not guess at how much merchandise you will need or you may find yourself carrying merchandise back to the storage area. Make sure everything you bring to the vending machine is clean and free of damage. Open the machine and place the merchandise in its correct slot or space in the machine. Nothing is more disturbing to a customer than pushing for their favorite brand and receiving something else. Not only will the customer get the wrong product but the vending machine operator is not always readily available to assist the customer. It is best to place a sign on the machine with your name, rate, and ship's telephone number where you can be located if any problems occur. When restocking canned soda machines, do not forget to indicate on the daily record of vending machine drinks how many sodas you have placed in the machine by flavor, if this is required.

After you have filled all slots in the machine, test the vending machine for proper operation. It is very disturbing to the customer when the vending machine will not operate or will not accept money. Cleaning the coin changer regularly will help to prevent contact surfaces from becoming sticky and jamming coins. Make sure all machine lights are in proper working order such as sold-out lights and correct change lights. If you do not replace these burned-out lights and they are inoperative, the customer will put the money in thinking the product is in the machine when it actually is not. They will probably then have to settle for a product they did not want. If you leave the correct change light inoperative, the customers may put incorrect change in thinking they will get their change back and they will not because there will be no change in the machine. Also place a sign on the machine stating the time it was last filled so the customer will know how cold the sodas might be. It is best to fill the machines about an hour before work starts so the sodas in the machine are cold by the time the workday starts.

When possible, you should always try to fill the machine with brand name products. Do not fill the machine with off-brand products that do not sell. You might not have to fill the vending machine as often; however, you are doing your shipmates an injustice and not doing your job according to the purpose of the ship's store. Remember, when you stick to name brand products you cannot go wrong.

The most important factor for you to remember when filling the machines is the timely scheduling of refilling the vending machines to make sure there is a continuous supply of products and services. Not scheduling your refilling times properly will result in empty machines or columns and unsatisfied customers. Remember, you may have to adjust your schedule for specific weather conditions. You sell more sodas when it is hot than when it is cold. On paydays, machines have a tendency to empty more quickly. As you gain experience in filling the machines, you will learn to adjust to these specific conditions.

Vending Machine Displays

All product displays should be kept neat and clean and look appealing to the customer. Displays should be changed frequently to stimulate customer interest. Light bulbs for displays should be changed as soon as they burn out. Broken or discolored glass should be replaced as soon as possible. Plastic product decals are normally available from the company you purchase sodas from and should be used. Never use handwritten signs, if possible.

VENDING MACHINE SANITATION

The vending machines aboard ship should be inspected on a regular basis by a representative of the medical department. Vending machines and the surrounding area should be kept clean. Especially remember to remove all trash, empty soda cases, boxes, and so forth, from around the vending machine after refilling it. The immediate area of the vending machine should be well lighted and provided with a covered trash receptacle. This trash receptacle should be emptied and cleaned frequently.

The vending machine itself should be mounted on a stand so it is about 6 inches off the deck. The reason for this is to make it easier for the vending machine operator to clean under and around the vending machine, especially when seepage occurs. The vending machine should be mounted in an area that protects it from overhead leakage or condensation from water, waste, or sewer pipes.

The actual cleaning of the machine should be frequent enough so that no surface of the vending

machine inside or out is sticky or dusty. The door and panel to the vending machine and any access opening for food should fit tightly and any worn gasket material should be replaced to prevent dust, dirt, or any other foreign particle from entering the machines. The vending machine operator should maintain a record of such cleanings in each machine and the record should be kept current for 30 days and made available during inspections. Sanitation of vending machines is covered in NAVMED P-5010, supplement 1 to chapter 1.

AMUSEMENT MACHINES

Amusement machines aboard ship are operated as part of the ship's store (fig. 2-15). Because of the changing popularity in games, amusement machines are leased instead of purchased. The money boxes to amusement machines should be secured by using a restraining bar across the front of the coin box. A keyless combination padlock is used to lock the device in place. The person making collections is the only one who knows the combination to this lock. You should collect cash from amusement machines as frequently as you do the vending machines. As the amusement machine operator, you will be provided with a Cash Receipt Book, NAVSUP Form 470, to record all cash collected. When you are operating more than one machine, you can record cash collected for each machine on separate pages of the NAVSUP Form 470. Also a separate Cash Register Record, NAVSUP Form 469, is maintained by the person making collections from the amusement machines. Like the NAVSUP Form 470, a separate page will be maintained in the NAVSUP Form 469 for each machine.

Meters are also installed in amusement machines to tell you the total cash receipts for each machine. Meter readings are taken each time cash is collected and recorded on the NAVSUP Form 469. The difference between the present meter reading and the previous meter reading should

Figure 2-15.-A group of amusement machines aboard ship.

equal cash collected. ROM users will enter the cash collected from amusement machines in the ROM amusement machine function daily, or as soon as practical. If a shortage or an overage occurs of $5 or more, the ship's store officer will examine and initial it on the NAVSUP Form 469 and take the appropriate corrective action.

Amusement machines are a great source of additional profits for your ship's store and a big morale booster. You cannot lose with the amusement machine program because the contractor will replace the machine on request, service the machine, furnish a supply of spare parts when the ship is deployed and, in some cases, install the machine. Amusement machines are set to charge 25 cents per play and, depending on the amusement machine contractor, about 65 percent of the 25 cents will go directly to ship's store profits.

SNACK BAR

For promoting high morale among ship's personnel, a well-administered snack bar can be a great asset. The objective of the snack bar is to give the best possible service to the greatest number of people. Many times, the services will include only the sale of "gedunk" (candy bars, potato chips, crackers, canned snacks, and so forth) and soft drinks, either canned or cup type. Many ships have ice cream sales and some have a popcorn machine. If you are assigned to a large snack bar, you must know how to make sundaes, malted milks, milkshakes, and several other specialties. Obviously, you cannot serve these delicacies unless you have the equipment, space, personnel, and time. ROM users will establish a separate outlet in the ship's store constants function so breakouts, sales, and inventories of the snack bar are documented.

PRICES

One thing that all hands are particularly interested in is the price of the items for sale at the snack bar. Snack bar prices are set to realize a profit, but not an enormous one. Prices for snack bar sales of ice cream will include the cost of a serving of ice cream, the ice-cream mix, the flavor, the container, and the spoon. For popcorn sales, the popcorn seeds, oil, salt, and container or box are included in the price. The price for beverages will include the cost of a serving, cost of syrup, the container, and a spoon, if needed. Once prices are set they must be prominently posted near the cash register in full view of the customer.

CASH COLLECTIONS

Aboard ship, all sales in the snack bar are collected and recorded separately from sales in the retail store and the vending machines. Cash collections are made according to the procedures previously described.

COST CONTROL

The ship's store officer must establish a system of cost control that is positive and that meets the requirements for internal control. Most ships have operating goals in order to generate the percent of profit desired, and in connection with the operating goals they keep production records.

Operating Goal

The operating goal is the established gross profit percent desired, and it must be established by the ship's store officer based on the amount of profit that is desired to be generated. Once established, the operating goal should not be changed during the accounting period. The reciprocal of the desired profit will be used to compute the selling prices for various manufactured items. For example, the ship's store officer desires a profit of 35 percent. The reciprocal of 35 percent is 65 percent. You would simply divide the cost of selling a manufactured item in the snack bar by 65 percent to give you your selling price.

Production Records

To determine accurately the cost per portion of those items manufactured on board such as ice cream, a Production Record, NAVSUP Form 241, must be maintained. The NAVSUP Form 241 is maintained by the person in charge of manufacturing the designated item and must be checked by the ship's store officer at least monthly. To ensure accuracy of the cost controls, it is essential that a uniform output of manufactured products be maintained from a given quantity of ingredients. The output generally should be maintained as prescribed in the directions on the container of the mix. The NAVSUP Form 241 must be kept on file in the office when completed.

RETAIL SNACK BAR ITEMS

Many snack bars sell such items as candy, cookies, cigarettes, canned drinks, and so forth. These items are sold at established retail prices and when the cash register permits, sales of these retail items should be made separately from manufactured snack bar items. When this is not possible the value of retail items sold must be computed monthly or as required during the accounting period using the formula in NAVSUP P-487. ROM users must establish a separate outlet for snack bar retail items in the ship's store constants function. This is done so manufactured and retail snack bar items are accounted for separately.

MULTIPLE OPERATORS

Normally snack bars are operated by one person. When more than one person is responsible for the snack bar operation, cash will be collected at the end of each shift and inventory will be taken monthly in addition to each accounting period. Follow the procedures discussed earlier in this chapter under multiple sales outlet operators.

SANITATION OF THE SNACK BAR

Snack bars will be inspected twice monthly by a representative of the medical department. The snack bar operator must receive a physical examination from the medical department before assuming duties in the snack bar. This physical must be redone annually. The following sanitation regulations apply in the snack bar:

- Snack bar operators are considered foodservice workers and the standards of health and personal hygiene apply.

- To safeguard the health of personnel, the medical department will inspect all food offered for sale.

- Syrup containers should be cleaned inside out and no caking or drying should be allowed.

- Only paper or plastic containers can be used for dispensing drinks.

- Disposable spoons should be used for ice cream and ice-cream sodas.

- All utensils (including spoons, spatulas, dippers, scoops, and so forth) used for dispensing ice cream and other frozen desserts will be kept either in running water or in water maintained at 180°F between each serving.

- All equipment and utensils used to manufacture ice cream and frozen desserts will be cleaned thoroughly, rinsed with clean water, and disinfected just before use with a chlorine solution containing not less than 50 ppm of chlorine. The interior of the machine or interior parts that come in contact with the mixes will not be touched with the hands after reassembly and disinfection until ready for disassembly and cleaning again.

- All foods will be kept under secure covers to prevent excessive handling and prevent contact with dust or insects.

- Refrigerators will be kept clean at all times. No spilled ice cream or syrup should remain on the bulkheads or deck of the boxes for more than a few minutes.

CHAPTER 3

STOWAGE

Stowage is the assembly of material from various sources held and protected in the warehouse or storeroom until needed. Materials stowed in various storerooms aboard ship must be arranged to:

- make sure of maximum use of available space,
- provide orderly stowage and ready accessibility,
- prevent damage to the ship or injury to personnel,
- prevent damage to materials,
- make it easier to issue the oldest stock first using the first in, first out (FIFO) method, and
- make it easier to conduct an inventory.

The effective arrangement of materials in storerooms aboard ships begins with the person in charge of the storeroom and continues up the chain of command. Storerooms aboard ship will not be the same size and each storeroom will present a different problem when you are arranging stock. Some storerooms may be difficult to get to because they are in small, out of the way spaces. Many storerooms may have frames, pipes, stanchions, and other obstacles that may interfere with your stowage plans. This is why you often have to change your plans for arranging stock in different storerooms.

BULK STOREROOM STOWAGE

Ship's store storerooms are referred to as bulk storerooms. They are designated Group III spaces when materials intended for resale are stowed in them. Group III spaces must be secured according to procedures discussed in chapter 1.

The person in charge of the bulk storeroom(s) is referred to as the bulk storeroom custodian and . is responsible to the ship's store officer for all material in his or her space(s). The bulk storeroom custodian accepts responsibility for this material, once he or she signs the receipt document and accepts custody of the material. Materials stowed in the ship's store bulk storeroom must be limited to ship's store and standard Navy clothing stock. Any other articles not in the custody of the bulk storeroom custodian must not be stowed in the same storeroom. If an emergency exists, the commanding officer may authorize, in writing, for articles to be stowed in the same storeroom as ship's store and standard Navy clothing stock. Once the emergency passes, articles will be stowed in a separate space.

RESPONSIBILITY OF BULK STOREROOM CUSTODIANS

The ship's store officer is required to assign the responsibilities of the bulk storeroom custodian in writing. Once the persons assigned understand their responsibilities and accept them, they are then responsible to the ship's store officer for performing their duties properly.

The bulk storeroom custodian's primary responsibility is the proper stowage, security, financial accountability, receipt, and expenditure of all stock in the bulk storeroom. The bulk storeroom custodian will receive and issue stock to various ship's store activities once the proper paper work is received. The custodian is also responsible for the protection of stores from damage or deterioration and is the only person who will have access to the bulk storeroom except under emergency entry procedures discussed in chapter 1 of this manual. The custodian must keep stock arranged in the storeroom so breakouts, issues, inventories, and so forth, are easier to

accomplish. Figure 3-1 shows a Ship's Serviceman arranging stock in the bulk storeroom.

RANGE OF RESPONSIBILITIES

Your range of responsibilities as the bulk storeroom custodian may differ from one ship to the next. Your actual responsibilities will be the same, but the size of the ship's store operation and the number of storerooms will determine the difficulty of your tasks.

You may be assigned to a ship that has only 1 bulk storeroom aboard, or a large aircraft carrier that has 10 or more bulk storerooms. When there is more than one bulk storeroom, the ship's store officer will normally number each bulk storeroom 1, 2, 3, and so forth. However, on a large ship such as an aircraft carrier with 10 or more storerooms it may create confusion to number the storerooms in this order. The ship's store officer may elect to number the bulk storerooms using the compartment and frame number of the ship where they are located (for example: bulk storeroom numbers 2-325-0-A, 3-405-1-A, 01-544-1-A, and so forth).

On a large ship with several storerooms, the ship's store officer will normally split up the storerooms between different custodians for

43.1

Figure 3-1.-Stock arrangement.

accountability purposes. It would be unfair and unrealistic to assign one person the responsibility for so many storerooms, so the ship's store officer usually assigns one custodian the responsibility for about three storerooms. The number of storerooms each custodian will be responsible for depends on the manpower availability and the overall number of storerooms aboard ship.

MAINTAINING FINANCIAL ACCOUNTABILITY

In the ship's store operation, each custodian must maintain financial accountability for all stock within his or her area of responsibility. This simply means that the custodian is responsible for maintaining the money value of all stock to prevent a shortage or overage during inventory.

Past inspections have shown that the single most contributing factor to lack of financial accountability for stock in the bulk storeroom is a breakdown in internal checks and controls. Although human perfection is virtually impossible, the custodian of the bulk storeroom must always strive to come as close to perfection as possible. The internal checks and controls we are talking about are included throughout the *Ships Store Afloat,* NAVSUP P-487, and are designed to cut down or eliminate inventory shortages. In this section we discuss some of the major checks and controls considered necessary in maintaining financial accountability in the bulk storeroom, but it will be entirely up to each individual bulk storeroom custodian to always follow the correct procedures outlined in the NAVSUP P-487 when performing daily tasks.

Errors in Receiving

When the bulk storeroom custodian acknowledges receipt of ship's store stock, he or she is accepting responsibility for the disposition of that stock. However, if the responsible custodian does not follow the correct procedures for receiving stock, then he or she is risking financial accountability of the bulk storeroom.

All material received is inspected by the ship's store officer or designated receipt inspector for quantity, quality, and damage. Once this is done, the material is carried to the bulk storeroom. The bulk storeroom custodian will obtain the retained receipt documents from the Incoming Material File (SSA-20), take them to the bulk storeroom, and wait until the stock is brought by the working party. The responsible custodian will make sure boxes brought to the storeroom are not opened and all boxes arrive. If boxes are being numbered by the receipt inspector, the custodian will make sure all numbers are accounted for. Only personnel authorized by the bulk storeroom custodian should be in the storeroom to assist in loading operations.

The custodian of the bulk storeroom accepts the merchandise by circling the quantity received on the receipt document and signing the accountability stamp as shown in figure 3-2. If the quantity of the item counted is not the same as what is shown on the receipt document, record and circle the actual quantity received and cross out the quantity shown on the receipt document. All cross outs must be initialed. The custodian accepting the merchandise and signing the accountability copy is legally responsible for the proper disposition of the material while it is in his or her custody. The custodian will forward the copy of the signed receipt document to the ship's store officer.

The custodian receiving stock into the bulk storeroom must make sure what is signed for is exactly what is received. The custodian must never take for granted what stock is received and just sign the stamped receipt document. The custodian must always make sure the quantity received is the same as shown on the receipt document. If it isn't, the custodian must change the quantity shown on the receipt document to the actual amount received and circle it. It is acceptable for the custodian to use the quantity indicated on the outside of the container if the container has not been opened previously. If the container has been opened before, do not take for granted all the merchandise is in the container—always check it carefully.

Movement of Stock

Most stock movements between the bulk storeroom, sales outlet, and service activities are accomplished through breakouts, breakbacks, and intrastore transfers. This includes items that will be sold to customers and items to be consumed directly in the performance of service for customers such as the laundry or barbershop.

Items that are carried for sale in the sales outlet are considered retail items. Retail items include items sold through the retail store, the snack bar, vending machines, and standard Navy clothing sold at standard prices. The internal movement of these retail items is commonly referred to as a breakout.

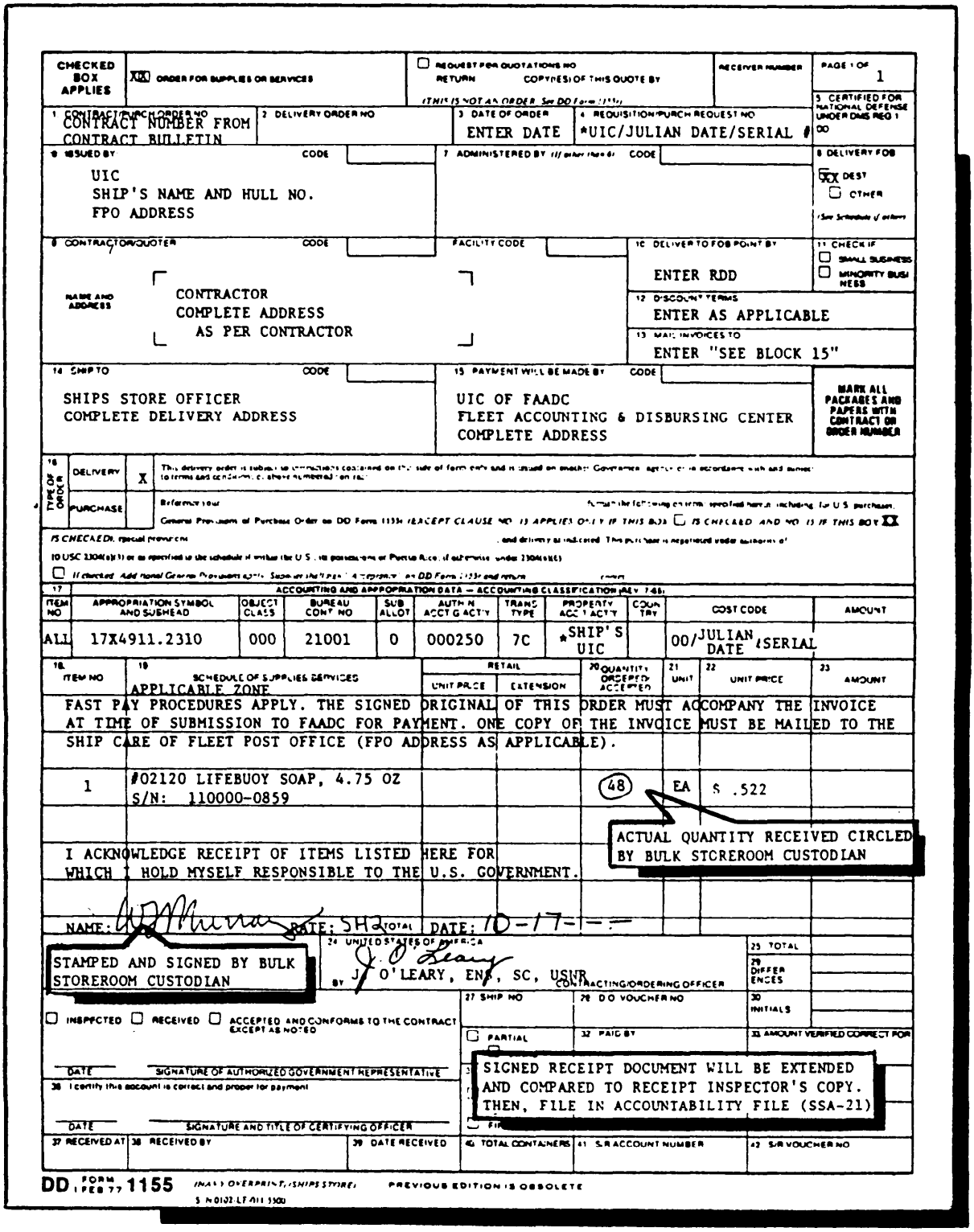


Figure 3-2.—The bulk storeroom custodian accepting receipts.

Items that are carried for ultimate expenditure as cost of operation materials and cost of sales items are called cost items. Cost of operation items include items used in the performance of service to customers; for instance, items used in the laundry, barbershop, and repair parts used for the vending machines and snack bars. The internal movement of cost of operation items is referred to as an issue.

Cost of sales items require further processing or manufacturing and include snack bar ingredients, soft drink syrup, carbon dioxide gas (CO_2), straws, spoons, and paper cups. The internal movement of cost of sales items is referred to as a breakout, like retail items.

A breakback is just the opposite of a breakout. The breakout is when merchandise is transferred from the bulk storeroom to the sales outlet while a breakback is when merchandise is taken from the sales outlet and returned to the bulk storeroom. The internal movement of stock whether breakout, breakback, or issue is documented on an Intra-Store Transfer Data, NAVSUP Form 973.

Requests for breakouts are routed by the sales outlet or service activity operators to the ship's store office for processing. After the office prepares a NAVSUP Form 973, there are certain procedures the bulk storeroom custodian should follow. The ship's store office will distribute the original and duplicate copy of the NAVSUP Form 973 to the bulk storeroom custodian to issue the stock. The triplicate copy is retained by the records keeper. The quadruplicate copy is given to the sales outlet or service activity operator receiving the stock.

On receipt of the original and duplicate copy of the NAVSUP Form 973, the bulk storeroom custodian will break out the stock. The bulk storeroom custodian must record the quantities broken out on the two documents and sign and forward the original to the office recordskeeper. The duplicate copy is retained by the bulk storeroom custodian.

The sales outlet or service activity operator will not have access to the original or the duplicate copy. Once the stock is received in the sales outlet or the service activity, the operator will record the quantities received on the quadruplicate copy of the NAVSUP Form 973. The operator acknowledges receipt of the stock by signing the quadruplicate copy and forwards it directly to the recordskeeper.

After the recordskeeper receives the original and quadruplicate copy, the quantities received will be circled on the original and entered and circled on the triplicate copy. If a discrepancy is noted between what the bulk storeroom custodian broke out and what the sales outlet or service activity operator received, an inventory will be conducted immediately of the item in the bulk storeroom and the count compared against the corresponding Stock Record, NAVSUP Form 464. After reaching an agreement on the actual quantities broken out, the bulk storeroom custodian and sales outlet operator will correct and initial all copies of the NAVSUP Form 973.

Security Controls

In chapter 1 we discussed the controls necessary for maintaining security in supply department spaces. You learned that the bulk storeroom is a Group III space and that it must be secured properly to prevent pilferage or theft. If your bulk storeroom does not conform to these security controls, then you risk losing financial accountability for the space.

Figure 3-3 is a sample security evaluation sheet listing the major controls necessary in maintaining security in the bulk storeroom. When using this sheet, you can determine whether your bulk storeroom is or is not conforming to these controls by the YES or NO markings. If the security control listed on the evaluation sheet does not apply to your storeroom, leave it blank. Any controls to which you answer NO must be promptly investigated and corrected.

Spot Check Inventories

During the fiscal year, the ship's store officer will conduct spot check inventories in the bulk storeroom at unannounced times. The purpose of spot check inventories is to determine if there are any differences between stock on hand in the bulk storeroom and the quantity shown on the Stock Record, NAVSUP Form 464. At a minimum, the ship's store officer should inventory at least 5 percent of the stock in the bulk storeroom monthly. Normally, the spot check inventory should be taken after a breakout or issue. The bulk storeroom custodian will indicate the balance on hand of each item on the Intra-Store Transfer Data, NAVSUP Form 973, after making the breakout or issue. The ship's store officer may also prepare a local spot check inventory sheet similar to the one shown in figure 3-4. The ship's store officer will issue this document to the bulk storeroom custodian with the item descriptions

BULK STOREROOM SECURITY EVALUATION SHEET

1. Are keyless padlocks (NSN 5340-00-285-6523) and a dead bolt door lock used to secure the bulk storeroom?
   YES_____ NO_____

2. If dead bolt door locks are impractical to install, are high-security key-type padlocks with shrouded shackles used instead?
   YES_____ NO_____

3. Are high-security hasps installed on the door to the bulk storeroom and have any hinge pins that are exposed been tack welded to prevent removal?
   YES_____ NO_____

4. Is the combination to the bulk storeroom keyless padlock and the setting-in key placed in a signed, sealed, and dated envelope and held in the ship's store officer's safe?
   YES_____ NO_____

5. Are duplicate keys to the bulk storeroom kept in the ship's store officer's safe in a sealed envelope?
   YES_____ NO_____

6. Has the combination to the bulk storeroom lock been changed within the last 6 months and/or on relief of the ship's store officer or responsible custodian?
   YES_____ NO_____

7. If your bulk storeroom has an intrusion alarm system, is it connected to a central area that is manned 24 hours a day?
   YES_____ NO_____

8. Are emergency entry procedures posted near the entrance to the bulk storeroom where they may be readily seen?
   YES_____ NO_____

9. If the keyless padlock (NSN 5340-00-285-6523) is not available from the supply support activity, are you using key-type padlocks (NSN 5340-00-682-1508 or 5340-00-582-2741) in conjunction with a car seal to secure the bulk storeroom?
   YES_____ NO_____

10. When using car seals to secure the bulk storeroom, are the numbers to the car seals logged in the car seal number log?
    YES_____ NO_____

11. Before removing any car seals, do you make sure the number on the car seal you are removing is the same number recorded in the car seal number log?
    YES_____ NO_____

12. When setting combinations on the keyless padlock, did you pick numbers randomly and not use popular dates or other easy to guess numbers?
    YES_____ NO_____

Figure 3-3.—Bulk storeroom security evaluation sheet.

13. Are you careful not to record your combination anywhere except on the piece of paper placed in the sealed envelope?
YES_____ NO_____

14. Did the ship's store officer place transparent tape over the flaps of the sealed envelope that you and he or she signed?
YES_____ NO_____

15. Does the responsible custodian of the bulk storeroom refrain from disclosing the combination to the keyless padlock on the bulk storeroom to any other person?
YES_____ NO_____

16. If articles other than ship's store or standard Navy clothing stock are stowed in the bulk storeroom, does the commanding officer authorize such action?
YES_____ NO_____

17. Are only authorized personnel allowed into the bulk storeroom?
YES_____ NO_____

18. Are small high-value items stowed in a locked security room or cage within the bulk storeroom when possible and, if not, are they kept out of sight?
YES_____ NO_____

19. Are adjacent passageways to bulk storerooms kept well lighted and are all lights operational?
YES_____ NO_____

20. Do shipboard security watches frequently check your bulk storeroom during the day and night?
YES_____ NO_____

21. If the bulk storeroom has any accessible openings, are they secured by using bars, grilles, or expanded metal?
YES_____ NO_____

22. Is the responsible custodian prohibited from keeping personal belongings in the bulk storeroom?
YES_____ NO_____

Figure 3-3.—Bulk storeroom security evaluation sheet—Continued.

and stock numbers. The responsible custodian will go to the bulk storeroom, make the counts, and return the spot check inventory sheets to the ship's store officer. The ship's store officer will compare the counts with the amounts shown on the NAVSUP Form 464 to make sure inventory accuracy is maintained at 100 percent. Any differences will be handled as a gain or loss by inventory. Ships operating under combined responsibility are not required to do spot check inventories.

Tax-Free Tobacco Products

As the bulk storeroom custodian, you will become directly involved in maintaining accountability for tax-free tobacco products. Tax-free tobacco products must be strictly accounted for because they cannot be sold within the 3-mile limit of the United States. Several tax-free tobacco products will probably be stowed in your storeroom especially when your ship is going through several extensive underway periods.

SPOT CHECK INVENTORY

DATE_____

ITEM DESCRIPTION	STOCK NUMBER	BULK STRM COUNT	NAVSUP 464 COUNT	DIFFERENCES (+) or (-)	REMARKS

REMARKS

_____

_____

_____

_____

_____

_____

_____ BULK STOREROOM CUSTODIAN DATE

_____ RECORDSKEEPER DATE

_____ SHIP'S STORE OFFICER DATE

_____ SUPPLY OFFICER DATE

Figure 3-4.-Spot check inventories.

Inventories must be taken of all tax-free tobacco products when arriving and departing beyond the 3-mile limit of the United States. Inventories will be recorded on the Tax-Free Cigarette Inventory, NAVSUP Form 1234 (fig. 3-5). These inventories must be certified and retained by the ship's store officer who will also add any receipts of tax-free tobacco products each time they are received.

If a discrepancy exists between the arriving and the departing inventories, the ship's store officer is required to submit a written report to the commanding officer concerning the differences. A copy of the report and inventories must be furnished to the inspecting officers and the internal revenue service officers.

Sea stores must also be removed from the retail store or snack bar while the ship is in a United States port unless the stay is 15 days or less and the time does not warrant physical movement of the stock. When sea stores are not removed from the store and the store is open for business, a daily inventory is required to make sure no sales of tax-free products are being made. Tax-free tobacco products may not remain in vending machines under any conditions while the ship is in a United States port.

At the discretion of the commanding officer, an optional procedure may be used instead of inventorying tax-free tobacco products when the ship is in a United States port for a period of 5 days or less and is scheduled to proceed beyond the 3-mile limit of the United States. When a ship arrives within the 3-mile limit of the United States, all tax-free tobacco products may be stowed in a storeroom that must be secured by replacing the locks and attaching numbered car seals. The numbered car seal must be attached to the lock in a manner that requires the seal to be broken before entering the storeroom. A log of the numbered car seals must be maintained by the ship's store officer. When bringing tax-free tobacco products aboard, the seal must be broken and the quantities received must be stowed immediately in the presence of the ship's store officer. The seal must be replaced and the number of the new seal must be entered in the car seal number log. Breakouts from storerooms when using this procedure are not authorized while the ship is within the 3-mile limit of the United States.

STOWAGE OF SHIP'S STORE STOCK

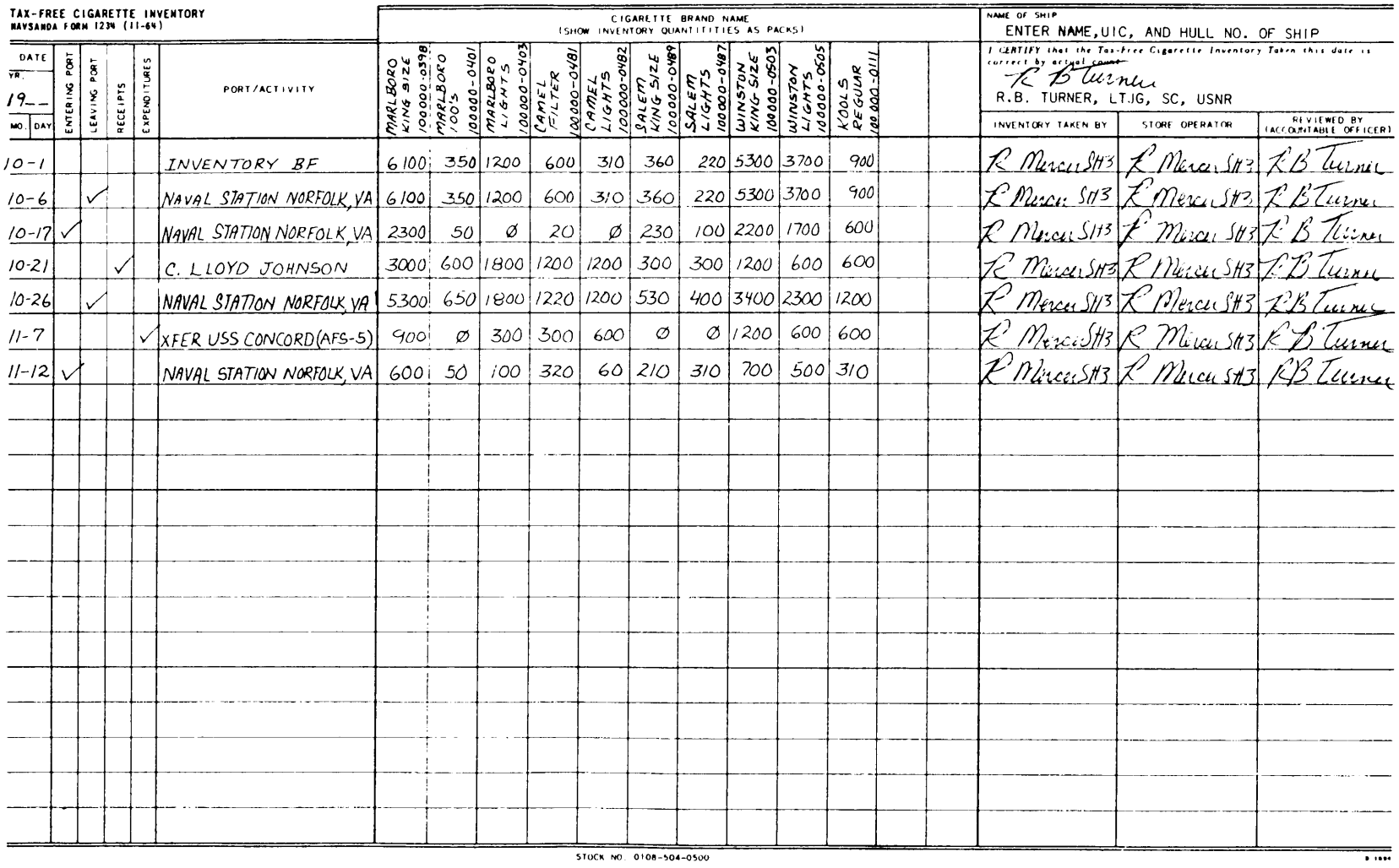
Stow ship's store stock so the storeroom space is used to its capacity and at the same time take precautions to prevent damage and deterioration to stock. To use space properly, you should outline the planned use of the space. Stowage plans should be flexible to provide for changing conditions and requirements. For instance, if your ship is located in the shipyard for an extended overhaul, your requirements for stock will be greatly reduced and your plans for stowing stock will decrease. However, if your ship is planning an extended deployment overseas, you will require many stock items and need to do some preplanning before deployment. Preplanning for stowage of stock for deployment will normally occur 4 to 6 months before the actual departure date. The NAVRESSO fleet assistance team located near your ship is available to assist you in preparing stowage plans, but a request for assistance needs to be submitted at least 120 days before deployment. If your ship is underway or located in an area where technical assistance is not available, the individual ship will have to plan the stowage of stock on its own. Factors that will help you in deciding where to stow stock will be the storeroom's size, location, and characteristics. The characteristics include your stowage facilities such as bins, racks, deck gratings, and so forth. The purpose of these stowage facilities within the storeroom is to help you in choosing locations to fit the requirements for the material you are stowing and to prevent the waste of stowage space.

FUNDAMENTALS OF GOOD STOWAGE

When we discuss the proper stowage of stock it is a lot easier said than done. This is so true when we refer to the stowage of ship's store stock because it is so difficult to properly stow so many different items. The fundamentals of good stowage are those techniques, procedures, and precautions used to properly stow stock.

These fundamentals will not only help you in using your space to the fullest extent, but they will help you in preventing damage or deterioration to ship's store stock. There are some specific items of ship's store stock that require special stowage instructions in addition to these good fundamentals. The general requirements needed to obtain good stowage include the markings of stock, accessibility of stock, arrangement of stock, storeroom maintenance, issue and rotation of stock, proper ventilation and humidity control, and storeroom security.

The bulk storeroom custodian needs to know and follow the fundamentals listed previously



TAX-FREE CIGARETTE INVENTORY
NAVSANDA FORM 1234 (11-64)

CIGARETTE BRAND NAME (SHOW INVENTORY QUANTITITIES AS PACKS)

NAME OF SHIP: ENTER NAME, UIC, AND HULL NO. OF SHIP

I CERTIFY that the Tax-Free Cigarette Inventory Taken this date is correct by actual count
R B Turner
R.B. TURNER, LTJG, SC, USNR

DATE YR. 19__ MO. DAY	ENTERING PORT	LEAVING PORT	RECEIPTS	EXPENDITURES	PORT/ACTIVITY	MARLBORO KING SIZE 100000-0398	MARLBORO 100's 100000-0401	MARLBORO LIGHTS 100000-0403	CAMEL FILTER 100000-0481	CAMEL LIGHTS 100000-0482	SALEM KING SIZE 100000-0489	SALEM LIGHTS 100000-0487	WINSTON KING SIZE 100000-0503	WINSTON LIGHTS 100000-0505	KOOLS REGULAR 100000-0111	INVENTORY TAKEN BY	STORE OPERATOR	REVIEWED BY (ACCOUNTABLE OFFICER)
10-1					INVENTORY BF	6100	350	1200	600	310	360	220	5300	3700	900	R Mercer SH3	R Mercer SH3	R B Turner
10-6		✓			NAVAL STATION NORFOLK, VA	6100	350	1200	600	310	360	220	5300	3700	900	R Mercer SH3	R Mercer SH3	R B Turner
10-17	✓				NAVAL STATION NORFOLK, VA	2300	50	Ø	20	Ø	230	100	2200	1700	600	R Mercer SH3	R Mercer SH3	R B Turner
10-21			✓		C. LLOYD JOHNSON	3000	600	1800	1200	1200	300	300	1200	600	600	R Mercer SH3	R Mercer SH3	R B Turner
10-26		✓			NAVAL STATION NORFOLK, VA	5300	650	1800	1220	1200	530	400	3400	2300	1200	R Mercer SH3	R Mercer SH3	R B Turner
11-7				✓	XFER USS CONCORD (AFS-5)	900	Ø	300	300	600	Ø	Ø	1200	600	600	R Mercer SH3	R Mercer SH3	R B Turner
11-12	✓				NAVAL STATION NORFOLK, VA	600	50	100	320	60	210	310	700	500	310	R Mercer SH3	R Mercer SH3	R B Turner

STOCK NO. 0108-504-0500

Figure 3-5.—Tax-Free Cigarette Inventory, NAVSUP Form 1234.

when stowing ship's store stock. Some of these fundamental; are required and some are effective methods that have been used before in stowage operations. Although they have proven to be effective, knowledge and experience in using these fundamentals afford the custodian of the bulk storeroom the skills required to stow stock properly.

SAFETY

Safety cannot be overemphasized in any phase of the ship's store operation and especially in storeroom stowage. The safety precautions for storeroom stowage are contained in the *Navy Safety Precautions for Forces Afloat,* OPNAVINST 5100.19, chapter 2, "Storeroom Stowage." As the bulk storeroom custodian, you should be familiar with these safety precautions and make sure they are carried out in the bulk storeroom. The ship's store officer is responsible for preparing appropriate safety precautions for the bulk storeroom. These safety precautions should be posted inside the bulk storeroom in plain view.

MANUAL HANDLING

All storeroom custodians should have a pair of leather work gloves because much of the work done inside the storerooms requires manual handling of stock due to limited space. It is important that you understand how to lift correctly because many times custodians do not think about how to lift or handle materials.

The results of improper handling of materials may result in a painful hernia, a strained or pulled muscle, or a disk lesion. The correct method of lifting objects is shown in figure 3-6. You should observe the following rules and precautions for lifting:

1. Do NOT lift an object if it is too heavy or too bulky for good balance. Get help or use mechanical aids such as a dolly or hand truck.

2. Keep the load close to the center of your body. The farther the load is from the small of your back, the greater the strain. That is the reason a heavy compact load is easier to lift than a bulky, lighter load—you just cannot get the bulky object close to you. The best way to handle a compact load is to squat down close to the load with one foot alongside it and the other foot behind it. With the feet comfortably spread, you will have better stability with the rear foot in the position for the upward thrust of the lift.

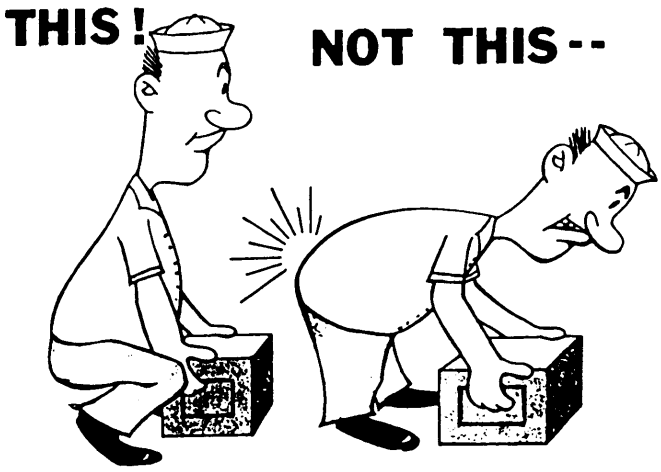


Figure 3-6.-Manual lifting.

3. Pull the load toward you, then lift it gradually. Avoid quick and jerky motions. Push up on your legs while keeping your back straight. A straight back keeps the spine, back muscles, and other organs of the body in the correct alignment. Tucking in your chin helps to align the spine. No matter what size the load, get as close to it as you can; then get a good grip by using the full palm and extending your fingers and hands around the object. Remember that your fingers have very little power and need the strength of your entire hand. Keep your arms and elbows tucked into the side of your body to help keep the body weight centered. Avoid twisting your body during the lift or while moving the load; change directions by moving your feet. Twisting your body during a lift is one of the most common causes of back injury.

4. Be sure to have a clear vision over the load you are handling.

5. Do NOT change your grip while carrying the load.

6. Face the spot in which you intend to set the object down; bend your knees keeping your back as straight as possible and the weight of the object close to your body.

7. Always allow enough room for the load to prevent injury to your toes and fingers.

8. When you are placing a load on the table or bench, set it down on the edge and push it forward with your arms and body. If the load is too heavy or too awkward for you to move alone—GET HELP! Remember: LIFT WITH YOUR LEGS, NOT YOUR BACK!

Markings of Stock

The bulk storeroom custodian is largely responsible for the condition of stock in his or her custody. The custodian must make sure stocks are rotated (first in, first out) so that older stocks do not become shelf-worn or deteriorated while newer stocks are broken out to the ship's store activities. The bulk storeroom custodian can prevent this from happening by placing ROM-generated labels on each case and marking the receipt date or manufacture date on each case before it is stowed. The labels generated by the ROM system contain information about each stock item. These labels, when used, should be placed on a predetermined spot on each stock item by the responsible custodian.

The manufacture date is a coded date shown by some manufacturers on each case. These codes are currently contained in NAVRESSOINST 4067.4, issued by NAVRESSO. For items that may be highly perishable or deteriorate easily, you should use the manufacture date and not the receipt date. When you use the receipt date instead of the manufacture date you are not considering the time the item has been in the supplier's warehouse. If, for example, the shelf life of the item is 5 months and the manufacture date is November 89, the product may begin to spoil or deteriorate around April 90. If you receive the item in February 90 and use the date of receipt, you are not considering the 3-month lapse between manufacture and receipt.

NAVRESSOINST 4067.4 contains codes used by various manufacturers to indicate the date of manufacture for products such as candy, cookies, crackers, tobacco products, canned drinks, and film. A copy of this instruction should be maintained in the bulk storeroom for use by the bulk storeroom custodian.

Accessibility of Stock

Accessibility of stock is simply allowing yourself the capability to reach and remove any stock items out of the bulk storeroom with the minimum of effort. Accessibility of stock is a very important fundamental of good stowage. When you receive new stock you must keep in mind that some day you will issue or inventory items in the storeroom. You do not want to stock 20 cases of an item on 1 case of a different item. More than likely you will use that 1 case before you use the 20 cases. With proper arrangement and use of the storeroom facilities you should never have this problem.

Arrangement of Stock

Bulk storerooms should be neat and orderly and, when possible, container labels should be facing out. Containers should be arranged by item, brand name, and date of receipt or date of manufacture. This way the contents of the item can be determined without handling each item and it will facilitate breakouts, inventory, and proper turnover of stock. Case lots should be stowed on deck gratings and not placed directly on the deck. A few things to keep in mind when you are arranging stock are discussed below:

Item similarity—Items that are similar and have similar handling requirements should be stowed together when practical. This will make your job of issuing and controlling these stock items easier.

Item popularity—The popularity of an item must also be considered when arranging stock. Fast-moving stock should be stowed in areas that are easily accessible. Slow-moving stock should be stowed away from easily accessible areas.

Item size and weight—The size and weight of the item not only affect the amount of stowage space needed, but also affect your decision on where you will stow it. For example, a large, heavy item should be stowed in a location that will provide a balance between accessibility and required handling. In other words, do not stow heavy laundry supplies in the forward portion of the ship while the laundry is located aft.

Item quantity—The quantity of the items to be stocked affects the amount of space required and will affect the arrangements of other stock. If you have a large number of one stock item, it is always better for you to increase the amount of space needed to stock all the items in one space than splitting the items up into two or more different locations. Keeping the item in one location will also help in accounting for the item especially during inventory.

Breakable material—Fragile material should never be stowed in the same location with heavy material. It should be stowed in a separate location to prevent excessive movement while the ship is underway. Empty cardboard cartons may

be cut into strips and used to fill unused space where fragile material is located. Material received in glass containers must receive special attention since breakage not only results in loss of the item but may cause damage to other stores or create a hazard to personnel.

Aisles—When arranging stock, position an aisle about 30 inches wide in the storeroom so you will have access to all stock. If an aisle is not maintained, you will have to remove several items to get to others during breakouts or issues and inventory can turn into a nightmare. It is generally recognized that just before deployment and 1 month into deployment it may be hard to maintain an aisle in the storeroom due to the amounts of stock on board. Lack of stowage space is a very evident problem aboard ship and during predeployment planning these problems need to be resolved. The supply officer may be able to negotiate with other department heads for additional stowage space. If additional space is not available, stowage plans will have to be made on the space available.

Item characteristics—Most items of ship's store stock are of such nature that special stowage is not required. However, there are some stock items that require special considerations such as flammable stock, perishable stock, and so forth. We discuss some of these stock items later in this chapter.

Storeroom Maintenance

The responsible custodian of the bulk storeroom is responsible for cleaning and maintaining the space, including keeping the storeroom free of items that should be surveyed because they are damaged or deteriorated. When such items are present in the bulk storeroom, the responsible custodian should notify his or her supervisor so action can be taken to mark them down or survey them.

The neatness, cleanliness, and order of the bulk storeroom are also responsibilities of the custodian. These are carried out by proper housekeeping and maintenance of the space. Observation of good housekeeping practices in the bulk storeroom promotes safety, reduces losses from damage of merchandise, reduces fire hazards, and increases the efficiency of the bulk storeroom operation.

Before you secure for the day, break down all loose boxes, sweep, and remove all trash from the bulk storeroom. Also inspect and clean bins, shelves, ventilation ducts, and fans periodically. After major receipts or breakouts, stock should be organized with the content labels visible.

The material condition of the space is also the responsibility of the responsible custodian. For instance, rust is an ever-present enemy and requires constant vigilance to keep it under control. Rust spots should be chipped, brushed or sanded, primed, and spot painted. Loose bolts should be tightened promptly to prevent possible damage to the storeroom or its contents. Pipes, valves, electrical systems, watertight fittings, and fire-fighting equipment must be examined daily and any defect reported to the ship's store officer. The ship's store officer should inspect all ship's store activities under his or her control each business day and submit required reports to the supply officer or duty supply officer before 8 o'clock reports. The method and the time of these reports are established in each ship's routine.

Before getting underway into open seas, storerooms must be thoroughly inspected and secured to prevent stores from shifting due to the ship's motion. Bulk stores must be braced or lashed to bulkheads, stanchions, or battens, and the fronts of open bins and shelves secured to prevent stores from falling out on the deck. Once you check and prepare your storerooms for sea, notify your supervisor to have the storeroom checked. After all ship's store spaces have been prepared for sea and checked, the leading Ship's Serviceman reports to the ship's store officer that all ship's store spaces are ready for sea. The ship's store officer passes this information to the supply officer so readiness reports for getting underway may be given to the officer of the deck in the pilothouse.

Issue and Rotation

Earlier you learned that the oldest stock on hand in the bulk storeroom should be issued first. Generally speaking, it is first in and first out. However, when deployed overseas, you may receive stock from naval supply depots or combat logistics force (CLF) units that was manufactured before the stock procured in the United States when loading out. Manufacture age codes that we discussed earlier are especially important in this case because they indicate the date of manufacture. In the instance above, the new stock just received is actually older than the stock already in the bulk storeroom and should be issued first.

Ventilation and Humidity Control

All storerooms must be well ventilated to prevent excessive heat and humidity because high temperature and humidity encourage bacteria growth and insect infestation. In addition, high humidity can result in mold and mildew and may cause mustiness in cookies, crackers, and tobacco products. Of course you have no control over storeroom location, but you are responsible for making sure space is left between cases and structural obstructions such as steam pipes to permit maximum ventilation. When possible, bulk storerooms will be ventilated once a week to permit air circulation and to remove stagnant air that can cause damage to perishable items.

STOREROOM SECURITY

Security of the bulk storeroom has been mentioned several times in this chapter but security cannot be overemphasized. No matter how well you fulfill other requirements for good stowage, without proper security your efforts will be useless. Security is not only important from a standpoint of preventing unauthorized use, pilferage, and theft of stock, it also prevents damage to stock and storeroom facilities and hazards to personnel and the ship due to improper stowage.

SPECIAL STOWAGE

Most items of supply are of such a nature that special stowage is not required. However, there are some items that require special considerations. For instance, some materials have characteristics that require the materials to be specially stowed or handled to prevent a hazard to personnel or facilities. Other materials require a high degree of protection because they have a limited stowage life and care must be taken to make sure the oldest stock or that which may have an earlier manufacture date is issued first. Also many foods or confections must be stowed in areas where the temperature can be controlled to prevent deterioration. When planning the stowage of ship's store items, you must recognize these factors and take appropriate action.

HAZARDOUS MATERIALS

Certain materials with inherent hazardous properties require special stowage facilities and handling precautions. The *Naval Ships' Technical Manual,* chapter 670, and the *Consolidated Hazardous Item List* (CHIL), NAVSUP P-4500 (now known as the *Hazardous Materials Information System* (HMIS) *List,* DOD 6050.5) outline the requirements for stowage of dangerous, semisafe, and safe materials and list these materials under each classification.

Dangerous Materials

Dangerous materials include all types of compressed gases and materials that present a considerable fire hazard or other dangerous characteristics. These materials must be stowed in a cage within the paint and flammable liquid storerooms with access limited to the responsible custodian. Paint and oil constitute the bulk of material in this category that is stocked. The paint and flammable liquid storerooms are normally provided with sprinklers and CO_2 smothering systems that may be activated by automatic temperature sensitive devices inside the storerooms and by manual controls outside the storerooms. A flooding system operated manually outside the storerooms is an additional safety factor. When practical, these storerooms are located below the full load waterline, near either end of the vessel, and not adjacent to a magazine. They are equipped with watertight doors that must be locked and dogged when not in use.

Semisafe Materials

Semisafe materials include linseed oil, paints, and metal polish. These materials are considered safe as long as the containers have not been opened and do not leak. Any leakage must be cleaned up promptly and also the leaking or opened container issued for use or otherwise disposed of. All semisafe materials must be stowed in the paint and flammable liquids storeroom.

Safe Materials

Safe materials include deck wax, furniture polish, and laundry blue. Safe materials are not subject to spontaneous combustion and present no particular hazard due to reactions that might arise from broken containers. No special stowage, fire protection, or ventilation is needed for safe materials.

SPECIAL STOWAGE OF SHIP'S STORE STOCK

Certain items of ship's store stock are highly perishable in nature and, therefore, proper stowage techniques are important. You have already learned that the oldest stock on hand must be issued first, unless the newer stock was manufactured before the stock already in the storeroom. Perishable items should be inspected frequently for signs of damage, spoilage, insect infestation, or rodent contamination. If hot pipes, such as steam lines, are present in your stowage space, you should make sure they are insulated properly to prevent heat transfer to stowed food items. A high stowage temperature is always bad for perishable items. High temperatures increase the risk of bacterial growth, and insect infestation is particularly dangerous when accompanied by high humidity. When high humidity is present, chemical action is accelerated; food acids naturally present within cans become activated resulting in pinholing, blackening of contents, and swelling of cans. In the following section, we discuss specific ways you can prevent damage and personnel hazards from happening when stowing specific items. Although laundry and dry-cleaning chemicals require special considerations, they are not discussed in this section because they are discussed in later chapters.

Flammable Ship's Store Stock

Any ship's store stock that has a closed cup flash point of 200°F or less is classified as flammable stock. These authorized items of ship's store stock are listed in the NAVSUP P-487, par. 6008. The flash point of a liquid can be defined as the lowest temperature at which its vapor forms an ignitable mixture within the air. The flash point measures the risk of combustion when the liquid escapes its packaging. Do not confuse the flash point with the combustion temperature which is when the liquid will actually burn. As long as the temperature remains below the flash point, there is no potential danger of a liquid burning.

The following precautions are taken to minimize the hazards of handling flammable ship's store stock:

- Carefully estimate needs to prevent overstocking of flammable items. Limit retail store quantities to 3 days of anticipated sales.
- Once you receive flammable ship's store stock, check it for condition, correct identification, and proper marking/labeling.
- Do not concentrate flammable items in the store; stow remaining stocks in a flammable liquid storeroom or other protected space.
- Identify flammable stock on the Stock Record, NAVSUP Form 464.
- Periodically inspect flammable stock in the store and in the storeroom for leakage.
- Post NO SMOKING signs and make sure good housekeeping practices are strictly followed in areas containing flammable stock.

Clothing

Dunnage or deck gratings must be used to keep clothing cases off the deck and away from bulkheads since moisture caused by sweating can be absorbed by the cases and result in stains and mildew on the clothing. Clothing should be stowed in a systematic manner; that is, arranged according to stock number and by sizes of articles. When preparing for inventory you will save time in getting the stock ready for counting. Remember to always put the new stock in back of the old stock, so that you can follow the first in, first out rule when issuing material.

Clothing stock, such as gold braids, buttons, cap devices, insignia, and so forth, must be wrapped individually in nontarnishing paper and not held together by rubber bands. Rubber bands and certain types of wrapping paper contain sulfur that tarnishes gilt or gold articles, especially braid and thread. Always be careful when handling white articles because they stain so easily. Any clothing items made with rubber should be kept clear of heat. Frequently you must inspect your storeroom where clothing items are stowed for dampness and the presence of moths.

Food Products and Snack Bar Items

The proper stowage of food products and snack bar items is essential if you are going to give the customer a fresh product. Food products should be stowed at 70°F. Cookies or crackers must be stowed in a well-ventilated space because they will rapidly deteriorate and become stale and musty when the humidity is greater than 75 percent.

Light can cause deterioration to snack bar supplies bottled in glass containers. The cases holding these glass containers should not be opened until ready for use or sale. High temperatures are also the chief cause of accelerated spoilage in snack bar canned foods and toppings and can speed up the pinholing action caused by the acid in canned citrus fruit juices. All snack bar supplies except cups, dishes, and spoons should be stowed in a cool, dry space.

Candy

Candy is included under the confections category aboard ship. Candy will keep reasonably well when it is stowed in a dry space and air freely circulates around the cases. If the air circulation is improper, hot spots may develop and cause the product to deteriorate. Never stack cases of candy over 8 feet high because the pressure and weight will damage the product in the lowercase. Never stow candy with other ship's store stock such as dry goods protected with camphor, detergents, or other products, or the candy will spoil.

Candies can also be spoiled by high temperature and humidity. Chocolates should be stowed and displayed at 60° to 65°F with a relative humidity of 50 percent. If chocolates are stowed above 70°F, the cocoa butter will melt and rise to the surface of the candy causing a condition referred to as white bloom. Although it is still edible, it looks bad and will hurt sales.

Nonchocolate candies are affected more by high humidity than temperature. High humidity will change the taste of nonchocolates. With items such as marshmallows, nougat, and fudge it is just the opposite, if the humidity is less than 40 percent, these types of items will dry out. Other nonchocolates such as jellies, caramels, and hard candies will become sticky when the relative humidity is over 60 percent.

Film

Film should be stowed in a cool, well-ventilated space since it deteriorates rapidly in high heat and humidity. Film stocks must be rotated and issued according to the expiration date printed on the package by the manufacturer. Cut film and sensitized photographic paper should be stowed on edge to prevent them from sticking together.

Tobacco

To keep tobacco products from becoming stale and musty, they should be stowed in a dry, well-ventilated space. Cigarettes should be stowed in a cool place at 70° to 75°F with a relative humidity of 60 percent. Cigars and tobacco require dry stowage of about 60°F.

Canned Drinks

Canned drinks can last for quite a while if they are stowed properly. First, always cross stock sodas to keep the stack solid. Second, do not stack canned drinks too high or bursting and crushing can occur to the lower layers. Third, do not stack canned drinks too close to steam or heated pipes. Fourth, stow canned drinks on pallets or deck gratings secured with battens. This will not only provide good air circulation around the stacks, but will prevent the stacks from falling and becoming damaged while the ship is underway.

Canned drinks must also be properly rotated so the customer purchases a fresh product. You must frequently inspect canned drinks and remove any leaking or wet cans from the pallet to prevent secondary damage. Secondary damage occurs when you leave damaged or leaking cases in a stack of canned drinks. If they are not removed, these cases will cause the cardboard, plastic wrap, and cans below or adjacent to the damaged cases to become wet and sticky for long periods of time. This wetness is sometimes not seen from the outside of the pallet and corrosion will take place. The outside of good cans deteriorates and begins to pinhole and leak. Secondary damage can destroy an entire pallet if the damage is not corrected promptly.

CHAPTER 4

BARBERSHOP SERVICE

Ship's Servicemen operate and manage the barbershop aboard ship. As a Ship's Serviceman third class working in the barbershop, you will cut hair and sanitize equipment and tools to prevent the spread of diseases. The skill of cutting hair comes from constant practice using the basic haircutting methods. Since the methods you should use for cutting hair and the procedures you should follow on how to maintain barbering tools are covered by NEC SH-3122, all occupational standards covering the barbershop have been deleted except for occupational standard 72008 which covers the principles of customer relations. Therefore, since the contents of this manual are based on the occupational standards, we will only discuss material relating to the principles of customer relations at customer contact points. To learn how to cut hair and use barbering equipment, you must attend the Ship's Serviceman's barber school, a 4-week course designed to provide training to enlisted personnel in the area of barbering. Upon completion of the course, you will receive credit for NEC SH-3122 to be designated as a barber.

THE BARBERSHOP

The proper administration and operation of the barbershop is the responsibility of the supply officer. This responsibility for the ship's store and service activities may be delegated to a junior Supply Corps officer attached aboard ship after the commanding officer's approval. This delegation of responsibilities does not relieve the supply officer of any of his or her responsibilities for the department. Barbershop services aboard ship should include regular haircuts, afro haircuts, and tonic. A picture of regular and afro haircuts should be mounted side by side in the barbershop. Other services may be provided if time, space, equipment, and personnel permit; however, no special customer services should be provided.

PURPOSE OF THE BARBERSHOP

The main purpose of the afloat barbershop is to provide regulation haircuts to shipboard personnel and maintain the traditional smart appearance of Navy men and women. As a barber, you should be familiar with the Navy's policy of grooming standards as set forth in *U.S. Navy Regulations*. The Navy judges grooming standards on neatness, cleanliness, military image, and appearance in uniform of Navy members. A sign indicating authorized grooming standards for U.S. Navy personnel should be posted in the barbershop.

STANDARDS OF SERVICE

The standards of service are those standards that are normally expected of the barbershop to provide their customers. These standards will be used by the management to evaluate the effectiveness of the barbershop operation. To make a realistic evaluation, management must take into consideration the facilities, equipment, space, and personnel available. They must take these capabilities and match them with the barbershop standards of service. These standards of service for the barbershop are listed in appendix D of the NAVSUP P-487. You must become familiar with these standards in order to maintain the service your barbershop provides at a high level.

BARBERSHOP INSTRUCTIONS

To assist barbershop personnel in the proper performance of their duties, supply department, medical, and ship's instructions were developed.

Supply Department Instructions

Supply department instructions provide barbers with instructions on doing their job properly in certain areas of the barbershop. A copy of these instructions should be posted in the

barbershop for every barber to see and read. Barbershop instructions may vary slightly from one ship to another; however, they all provide instructions governing barbershop personnel, equipment and spaces, and conduct of barbers. These instructions must be approved by the supply officer and the commanding officer.

Ship's Instructions

Ship's instructions set forth the hours the barbershop will operate, including schedules for officers, CPOS, and crew. These instructions also include the type of scheduling whether it is by appointment system or divisional schedule system. The hours of operation and appointment schedule should be posted on the door entering the barbershop.

Medical Instructions

The medical officer prepares instructions, using the *Manual of Naval Preventive Medicine,* covering the sanitation of the barbershop and personal hygiene. The instructions should be signed by the senior medical officer aboard and posted in the barbershop for all barbers to see. If a medical officer is not attached, the instructions will be prepared and signed by the senior corpsman (HM) aboard.

BARBERSHOP PERSONNEL

The number of personnel working in the barbershop varies from ship to ship. The Ship's Serviceman in charge of the barbershop is responsible to the supply officer for satisfactory operation of the shop.

The senior Ship's Serviceman working in the barbershop is normally the supervisor. The job of the supervisor includes obtaining supplies, making sure quality service is provided, and maintaining security within the barbershop. The main duty of the supervisor is to make sure other barbers are using proper barbering techniques. The supervisor should make sure the barbershop is run in a businesslike manner and emphasize courtesy and military etiquette at all times. Emphasis should be placed on the policy concerning accepting tips for services as this is prohibited.

Although the supervisor is responsible for getting supplies, all barbers should make sure they have all the required tools for cutting hair, such as combs, shears, clipper blades, and so forth. If you are running short on one particular supply, let the supervisor know so it may be ordered.

Security of the barbershop is also important. The supervisor should be the last to leave the shop and should make sure it is secured properly at the end of the workday. Since the barbershop is a Group IV space, the keys should be handled as outlined in chapter 1 of this manual.

Good Barber Ethics

Good ethical conduct deals with the rules and standards for conduct and practice in the barbershop. The way barbers treat their customers builds a good relationship between the barbershop and the ship. These good ethics include the following:

- Opening the barbershop on time
- Giving courteous and friendly service
- Showing no favoritism between customers
- Showing respect for feelings and rights of others
- Fulfilling your duties to the best of your ability
- Setting examples of good conduct and behavior
- Being loyal to other barbers
- Practicing good sanitary techniques
- Having good personal hygiene and personal appearance
- Using correct military courtesy when answering the telephone
- Listening attentively to customers' complaints
- Talking intelligently about your work
- Posting a No Smoking sign in the barbershop

Poor Barber Ethics

Poor ethics also deal with the way barbers treat their customers, but poor ethical conduct can

cause a bad relationship between the barbershop and the ship. DO NOT do the following:

- Criticize other barbers in front of customers
- Use profane language
- Become sarcastic with unpleasant customers
- Accept tips
- Use poor barbering practices
- Be careless in sanitation practices
- Smoke in the presence of customers
- Discuss personal problems with customers
- Lounge on arms of chairs or furniture
- Play the radio too loud
- Carry on a conversation with someone while serving a customer
- Open the barbershop late
- Have poor personal hygiene

SCHEDULING APPOINTMENTS

The purpose of scheduling appointments aboard ship is to provide better service to the customers. Shipboard personnel should receive a haircut once every 2 weeks; therefore, the schedule should be made with this factor in mind. Other factors that need to be considered areas follows:

- Number of personnel aboard
- Number and competency of each barber
- Daily workload of each barber
- Space available for patrons to wait (usually no more than two should wait for each barber)

A barber can usually give a satisfactory haircut in 20 minutes. Therefore, if busy all the time during a 7-hour work period, the barber can give 21 haircuts. The barber needs time for personal hygiene, sterilizing barbering instruments, and for helping with general shop sanitation—to say nothing of rest periods and the noon meal.

The two systems recommended for scheduling appointments for the barbershop are the appointment system and the division schedule.

APPOINTMENT SYSTEM

Appointment schedule sheets are marked off for a definite number of haircuts for each barber during the day. Every barber keeps his or her own sheet and posts it the day before the time the haircut is to be received or early in the morning on the day customers apply. There is a space for the signature of each customer opposite the appointment time selected.

The appointment system works fairly well, although on occasions customers fail to report for appointments and throw your schedule off. Occasionally, an unclaimed period may be claimed by another customer. If you experience too much difficulty with broken appointments, you can report their names to the responsible division officer.

The customers who make what they think are proper appointments and find no barber to serve them are understandably upset. Make sure the procedures you follow are well known by the customers and are followed explicitly by all barbers.

DIVISION SCHEDULE

The division schedule allows a definite number of hours during which personnel in a particular division may receive service in the ship's barbershop. The division petty officer controls the scheduling of appointments and sends a certain number to the barbershop at a time. This method of scheduling prevents broken appointments, but it is generally not preferred over the appointment system.

The barbershop supervisor should save all the appointment sheets for at least 2 weeks just in case someone complains about not being able to get a haircut because of full appointments. This protects the barber in the case of someone failing an inspection and claiming he received a haircut in the shop when he did not.

BARBERSHOP SPACE REQUIREMENTS

The barbershop should be a pleasant space to enter. The air within the barbershop should

neither be dry or stagnant nor have a stale musty odor. Most barbershops are air-conditioned so you can easily control the atmosphere within the shop. The temperature of the shop should be kept at about 70°F. Do not allow the temperature to get too cold or too hot.

You should always check your lighting to be sure there are no burned-out light bulbs and the lighting is sufficient to prevent undue strain on your eyes. The bulkheads, deck, and all flat surfaces need to be kept clean of all hair and dirt. The barbershop should be equipped with a sink, having hot and cold running water. The barbershop should never be used for lounging, eating, or sleeping. A ship having 101 to 300 personnel should have one barber chair with one additional chair for each 300 personnel. Barbershops with more than one chair should have the chairs spaced 4 1/2 to 5 feet apart to allow ample room for each barber. Ships with less than 100 personnel should have portable barbershop utensils stored in a locker. On ships carrying troops, if two or more barber chairs are required for the troops, a separate troop barbershop should be provided.

PERSONAL HYGIENE

Although personal hygiene is a subject most people would choose to keep private, in the shipboard barbershop poor personal hygiene is something that cannot be tolerated.

As a barber you should take pride in the way you look. Pay close attention to correct posture and neatness and do the following:

- Shower daily.
- Use deodorant.
- Clean and brush teeth regularly after meals.
- Use mouthwash.
- Shave daily.
- Keep your moustache trimmed properly.
- Keep hair trimmed and neatly combed.
- Keep nails cut and clean.
- Keep shoes shined.
- Wear pants that are clean, without holes, and pressed.

If you do not follow the previous traits, you should try to conform to them. Personal traits are sometimes hard to change, but after you get into a routine, it will be easier.

Posture is another factor involving your personal appearance. Most barbers do not realize the benefits of good posture. Good posture not only makes you look better, it builds good health and allows the inner organs to function properly. Standing erect improves your speech by freeing the power source of your voice, the diaphragm. Standing for 8 hours at a time puts extra stress on your body. You will find yourself feeling better after a long day when you stand correctly. The following rules should be followed when standing in the barbershop:

- Carry your body weight on the balls of your feet.
- Keep your shoulders back.
- Hold your stomach in, even if you are not overweight; poor posture can give you a potbelly.
- Hold your head high and straight.

Good posture will eventually prevent aching in the neck, shoulders, lower back, and feet, and will make your entire day go easier.

BARBERSHOP SANITATION

The main purpose of barbershop sanitation is to prevent the spread of infectious diseases. Since rendering barbering service requires direct contact with the customers, skin, scalp, and hair sanitation cannot be overemphasized. Barbershops should be inspected a minimum of once a month by a representative of the medical department. Before assuming duties as a shipboard barber, you will receive a physical examination. After the initial physical examination it will be repeated on an annual basis.

BACTERIA

Since the main purpose of sanitation is to prevent the spread of infectious disease, you should familiarize yourself with ways of preventing the spread of disease. Contagious

diseases, skin infections, and blood poisoning are caused by transferring infectious material from one person to another, or by using unsanitary tools. Dirty hands or fingernails are also sources of contagion.

Bacteria, commonly known as germs, are one-cell microorganisms found nearly everywhere. Bacteria exist on the skin, water, air, decayed matter, in the secretion of body openings, on the clothing, and under the fingernails. The microorganisms are normally not visible to the naked eye.

Nonpathogenic Bacteria

There are hundreds of types of bacteria; they are classified into two groups. The first group is nonpathogenic, which is harmless bacteria that constitutes the majority of all bacteria.

Pathogenic Bacteria

Although pathogenic bacteria are the minority of all bacteria, they can cause considerable damage by attacking plant or human tissue. It is because of pathogenic bacteria, which produce disease, that barbershop sanitation is necessary. This group of bacteria belongs to the parasite family which requires living matter to grow.

REPRODUCTION OF BACTERIA

Bacteria consist of a cell wall and internal protoplasm. Using the surrounding environment they manufacture their own food, grow, and reproduce. During the bacteria's life cycle, they have two distinct phases: active and inactive. During the active stage they grow and reproduce. Bacteria multiply in dark, warm, damp, and dirty places where sufficient food is present. The bacterial cell absorbs the food, grows to its capacity, and separates, producing two daughter cells. One cell can lead to the reproduction of millions of cells under favorable conditions. Once the area is sanitized and favorable conditions do not exist, the cells will either die or become inactive. These inactive cells can withstand periods of famine, dryness, and unsuitable temperatures by forming a tough outer shell. These inactive cells can be blown around in the dust and are not affected by disinfectants, heat, or cold. Once conditions are favorable again, these cells will return to the active stage and reproduce.

BACTERIAL INFECTIONS

There are basically two types of infections that pathogenic bacteria can cause, local infections and general infections. A local infection is indicated by a boil or pimple containing pus. A general infection results when bacteria enter the bloodstream.

Control of bacterial infections can only be done through the use of proper sanitation practices. Although all bacteria cannot be killed, they can be kept inactive or harmless through proper sanitation.

SANITIZING

To render all inactive bacteria harmless, all barbering tools must be sanitized. For a barber to do this, the following necessary sanitizing equipment and supplies must be available:

- Chemical disinfectants
- Wet disinfectant (jars using prescribed Navy disinfecting solutions)
- Disinfecting cabinet

CHEMICAL DISINFECTANTS

Chemical disinfectants are germicidal solutions or substances that eliminate or reduce the number of bacteria. They must be used for adequate disinfection of barber instruments. The most commonly used chemical disinfectants in a barbershop are as follows:

- Clippercide Spray 4-in-1 Formula (available through the ship's store contract bulletin) or an equivalent spray that disinfects, lubricates, cleans, cools, and is approved by the Environmental Protection Agency (EPA) and has an EPA registration number—may be used for disinfecting removable clipper heads and other metallic instruments.
- Alcohol 70 percent—may be used for metallic instruments or combs.
- Disinfectant, germicide, fungicide—a standard stock item useful for disinfecting combs.

NOTE: The use of ultraviolet light, formaldehyde tablets, and materials capable of releasing formaldehyde into the air is not authorized for use in ships' barbershops.

WET DISINFECTANT

A wet disinfectant is a receptacle for holding a disinfectant solution in which objects to be sanitized are completely immersed. It is used for nonmetallic instruments such as combs. A barbicide or marvicide solution is used to disinfect tools.

DISINFECTING CABINET

The disinfecting cabinet is used for holding sanitized clipper heads and other metallic instruments that have been disinfected with Clippercide Spray 4-in-1 Formula or an equivalent spray after each use. Remember, the equivalent spray must be approved by the EPA and have an EPA registration number.

CLEANING AND DISINFECTING INSTRUMENTS

Instruments coming in contact with the customer need to be sanitized before reusing. This includes blades, shears, combs, and so forth, which should be thoroughly washed in hot, soapy water to remove film, oil, and debris, followed by placing the combs and other nonmetallic instruments in the wet disinfectant. The medical department determines the frequency for changing the solutions in the wet disinfectant; normally, it should be done at least twice weekly or, if the workload requires, on a daily basis. Combs disinfected in the chemical solution should be disinfected for at least 20 minutes between uses. They should be rinsed in running potable water to remove any chemical residue before using them.

Clipper blades and other metallic instruments must be dusted, wiped thoroughly, disinfected with a commercial disinfectant sprayed after each use, and placed in the disinfecting cabinet immediately. Use commercial spray products according to the manufacturer's instructions on the labels. Do not use any formaldehyde or formaldehyde producing products.

QUANTITY OF EQUIPMENT

To accomplish proper sanitation and allow the barber to have adequate numbers of instruments and supplies, each barber should have the following equipment:

- Clipper blades, three sets of three, each set containing one size each of #000, #1, and #1 1/2
- Seven combs of various design
- Three pairs of scissors
- Two pairs of thinning shears
- Two flatttop brushes
- Six hairclips (3 to 4 inches long)
- Fifteen styling brushes (women)

SANITARY PRACTICES

The following sanitation regulations should be followed in the barbershop:

- Only FDA-approved tonics, lotions, bleaches, dyes, and so forth, will be used. Only EPA/FDA disinfectants or sanitizing agents will be used. Questionable or unlabeled products should be referred to the medical department for determination of suitability.

- Therapeutic practices, such as treating pimples, ingrown hair, and so forth, are prohibited.

- The headrest of barber chairs will be covered with a clean sheet of paper or clean towel for each customer.

- Only types of material approved by the medical officer will be used to stop the flow of blood in case of "nicks." These materials will be applied only with freshly laundered towels or sterile cotton.

- The treatment of eye conditions is prohibited.

- Common brushes, dusters, and shaving mugs are prohibited. The use of automatic dispensers or brushless shaving cream and clean towels, instead of brushes or dusters, is recommended.

- Individual sanitary neck strips will be used for each customer.

- Covering cloths will be changed, preferably daily or as often as necessary, to ensure cleanliness at all times.

- Street clothing of operators will not be stored with that of customers.

- Barbers or beauty operators will not eat, drink, or smoke while attending customers.

- Clean, covered sanitary receptacles will be provided for waste materials and used linen.

- The removal of cut hair from the decks should be done frequently by dustless methods.

- Vacuum-equipped clippers are acceptable.

- When compressed air is used to remove hair from customers, the pressure should be 15 psi or less.

- Ships' barbers are prohibited from shaving customers.

- The barber's uniform will consist of a clean barber's jacket and clean trousers. The barber's appearance at all times will be neat and tidy.

- The barber's hands and fingernails will be clean at all times.

- The barber is forbidden to cut hair of anyone who has any kind of disease or sore on the scalp or the back of the neck within the hairlines. The barber will obtain the name, rate, and division of any person coming into the barbershop who is evidently afflicted with a skin or scalp disease or with sores or boils. This information will be reported to the medical officer.

- The barbers will wash their hands and sterilize their instruments before serving each customer.

- Deodorants and mouthwash should be made available and their use encouraged.

- Each barber's unit will be equipped with a sponge or paper towels to wipe out the washbasin and backbar.

- Bottles and jars should be kept closed when not in use.

- All instruments must be cleaned immediately after each use. Scissors, combs, clipper blades, and other tools must be thoroughly washed with soap and hot water to remove film and debris, then dried with disposable tissue and sterilized after each use.

- Clippers must be kept clean at all times. After each use, foreign matter must be removed, clippers wiped with cotton saturated with sterilizing solution, and dried with a tissue.

- Barbers having any infections or communicable diseases must not attend customers.

- Barbers will not smoke while attending customers. The sanitation regulations should be posted in the barbershop where they can be easily read and adhered to. As stated earlier in this chapter, the medical officer or senior Hospital Corpsman on board will prepare the sanitation regulations and post them in the barbershop.

CHAPTER 5

THE SHIP'S LAUNDRY

One of the supply officer's responsibilities is to provide laundry service to the ship's crew. This is done through the operation of the ship's laundry which is operated by Ship's Servicemen. The laundry service provided is directly in line with the overall mission of the Navy. This service provides shipboard personnel with living and working conditions that will result in a high state of crew morale, health and comfort, adequate to sustain maximum personnel effectiveness, and to support an increase in personnel retention.

The ship's laundry works on a workflow concept; that is, laundry is routed through one work station to another until it is completed. The main purpose of this workflow is to obtain efficient production. As a Ship's Serviceman working in the laundry, you need to become familiar with the different tasks that make up this laundry workflow.

This chapter provides working personnel in the ship's laundry with information and facts concerning the operation of the laundry. It also covers the tasks involved in processing laundry from the receipt of bundles or bulk work through the assembly and issue of the finished work to the individual or division.

SAFETY

Safety is discussed throughout this chapter and is a very important aspect of the laundry process. Safety cannot be overemphasized. The safety precautions for shipboard laundries are contained in *Navy Safety Precautions Afloat,* OPNAVINST 5100.19A, chapter 13, section 2. The laundry supervisor is responsible for making sure all laundry personnel have safe work practices. Technical manuals for each piece of equipment list the safety precautions and safety features for that equipment. A list of safety precautions for each piece of equipment should be posted near the machine for all laundry personnel to read, remember, and practice.

SANITATION

The purpose of the ship's laundry is to produce clean clothing through the laundry process. This washing process should be done in a sanitary manner. The medical officer or senior Hospital Corpsman aboard should inspect the laundry frequently to make sure laundry spaces are kept in a sanitary condition as outlined in the *Manual of Naval Preventive Medicine,* NAVMED P-5010, chapter 2.

The senior medical officer aboard ship prepares the sanitation requirements. If a medical officer is not attached aboard ship, the senior Hospital Corpsman aboard prepares the sanitation requirements. These sanitation requirements are posted in the laundry for all laundry personnel to read and rigidly endorse. The ship's store officer should inspect the laundry each business day to make sure sanitation regulations are complied with.

CHARGES FOR LAUNDRY SERVICE

Normally laundry service aboard ship is free. The materials used in processing laundry are paid for through the profits made by the ship's store. In certain cases these profits, generated through the ship's store, may not be sufficient enough to cover the cost of the supplies necessary to operate the laundry and the commanding officer may authorized the collection of the following charges on a monthly basis:

- Officers $1.25
- Midshipmen and chief petty officers .75
- Other enlisted personnel .35

These charges will also cover the cost of operating supplies for the barbershop and the dry-cleaning plant.

Charges are also made for laundry service provided for the sick bay when the charges exceed $25 per month. Charges are based on services

costing 1 cent per pound of laundry. Records should be kept if the amount of work received from sick bay monthly is in excess of $25. Laundry services in excess of $25 are charged to the ship's OPTAR.

LAUNDRY PERSONNEL

Personnel preassigned to the laundry from the Ship's Serviceman complement. The allowance of rated personnel is based on the assumption that an additional number of nonrated personnel will be required in order to operate the laundry efficiently. These additional personnel, unless detailed for a specified time (3 months or less), are classified as strikers for the Ship's Serviceman rating.

The organization of a ship's laundry varies with the size of a ship. A small ship, for example, may have a Ship's Serviceman 2 in charge of the laundry and two Ship's Servicemen 3 assigned as laundry personnel. These three persons receive, wash, and issue finished laundry. They do everything necessary in the laundry. A large ship, on the other hand, has a much larger laundry operation. A new Navy carrier may have as many as 50 Ship's Servicemen working in the laundry. A guide for determining the number of personnel required to perform the laundry function is 1 laundryman for every 75 to 100 crew members.

Figure 5-1 illustrates the organization of a shipboard laundry on a carrier. This chart gives you a basic idea how duties and responsibilities are administered in the laundry. In a large laundry such as this, each section has its own personnel, although individuals might be moved from one section to another from time to time to accommodate the workload or to provide training and experience. In a small laundry, all these functions are performed with fewer personnel and less working space. The result is likely to be a simpler organization chart, with each person performing a variety of tasks.

LAUNDRY SUPERVISOR

On a small ship, the Ship's Serviceman in charge of the laundry is responsible to the immediate superior for the complete operations. There may be no experienced laundry officer available to provide guidance. On a large ship, the ship's store officer may operate the laundry under the supervision of the supply officer or the supply officer may have an assistant supply officer in charge of the services branch who operates the laundry under the supply officer's direction. In either instance, the supervisor of the laundry has a position comparable to that of a civilian manager of a Navy shore laundry. Responsibilities are many and varied according to the size of the laundry supervised.

The Ship's Serviceman supervising the laundry orders supplies; sees that the laundry is kept clean and that the equipment is properly maintained; assigns and trains laundry personnel; maintains the flow of work through the laundry, maintains the standard of quality required on the ship; and does

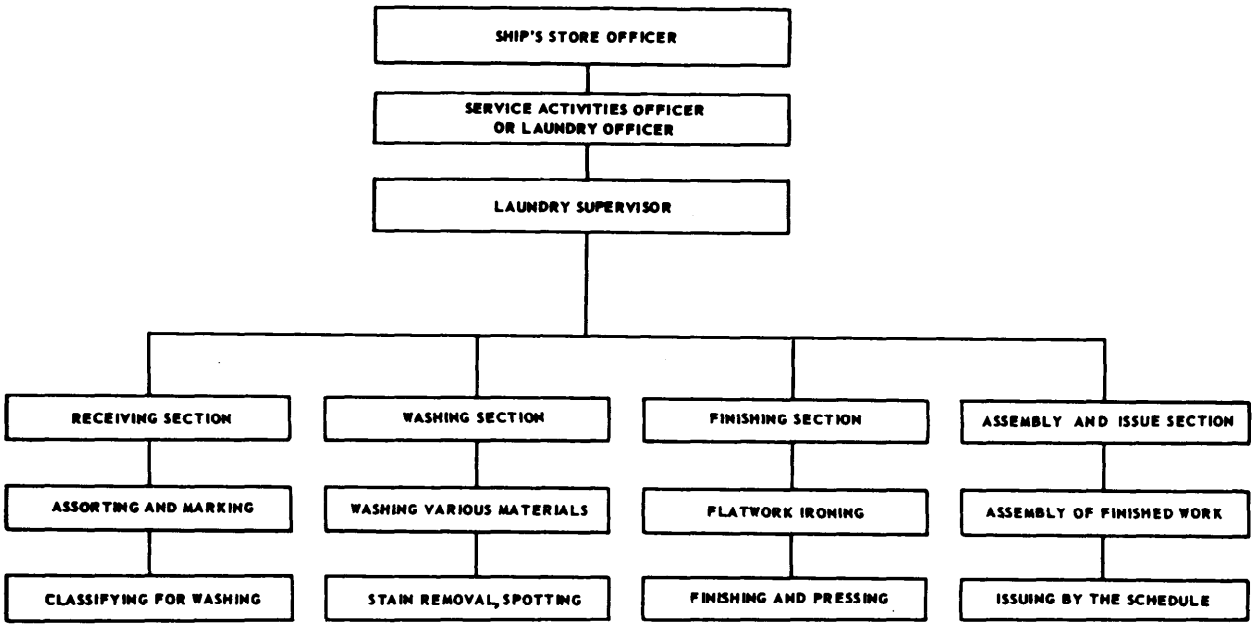


Figure 5-1.—Laundry organization chart on a large ship.

whatever is necessary to make the operation efficient.

OTHER LAUNDRY PERSONNEL

Other laundry personnel are responsible to the supervisor for completing their assigned tasks. They should be ready to pick up any slack that may occur from a shortage in personnel.

Laundry personnel should also avoid safety violations and use all equipment properly and according to manufacturers' instructions. Throughout this chapter the importance of operating equipment properly is stressed along with the consequences of operating equipment improperly. Repeatedly the following facts emerge:

- Laundry equipment will not perform efficiently unless operated correctly, and if operated incorrectly, it is easily damaged.
- Replacements are expensive and not always easily available.
- An efficiently operating laundry is vital to the welfare and morale of the ship's company.
- The articles being laundered are valuable and often not easily replaced if damaged or destroyed.
- Faulty or careless operation can easily injure operating personnel.

LAUNDRY LOGS

To keep track of laundry operations there are certain logs you need to maintain. As a Ship's Serviceman third class, you should become familiar with the following logs:

- Bulk work log
- Press deck log
- Equipment maintenance log
- Heat stress log

These logs are used to log laundry in and out, record maintenance data on equipment, and record temperatures in the laundry. The logs are maintained on a daily basis and should be readily available for any inspecting personnel. The ship's store officer reviews these logs weekly and initials them after review.

BULK WORK AND PRESS DECK LOGS

Your bulk work and press deck logs are shown in figure 5-2. As the receiving laundryman, you

LAUNDRY BULK WORK LOG

DATE 27 Oct 19__

DIV/DEPT	NO. OF BAGS	WHITES (WEIGHT)	DUNGAREE (WEIGHT)	OTHER (WEIGHT)	RECEIVED BY: (SIGNATURE LPO)	DELIVERED BY: (SIGNATURE DLPO)	CHECKED OUT BY (SIGNATURE LPO)	RECEIVED BY: (SIGNATURE DLPO)	DATE	REMARKS/COMMENTS
"A"	4		260	40	P.M. Rudowski	J. Darwin	P.M. Rudowski	J. Darwin	2/28	Dungarees Issued
ENGINEERING	2		110	45	P.M. Rudowski	A. Jones	P.M. Rudowski	A. Jones	2/28	
Deck	3	65	123	55	P.M. Rudowski	B. Barnes	P.M. Rudowski	B. Barnes	2/28	Whites Issued

Abbreviations:
LPO - Laundry Petty Officer
DLPO - Division Laundry Petty Officer

PRESS DECK LOG (OFFICERS AND CPO)

DATE 28 Oct 19__

NAME	LAUNDRY MARK	NO. OF SHIRTS	NO. OF TROUSERS	OTHER	WEIGHT	RECEIVED AND CHECKED BY: (SIGNATURE LPO)	DELIVERED BY: (SIGNATURE)	CHECKED OUT BY: (SIGNATURE LPO)	RECEIVED BY: (SIGNATURE)	DATE	REMARKS/COMMENTS
Smith A	S 1234	2	3		4 lb.	P.M. Rudowski	J. Baker	P.M. Rudowski	J. Baker	10/29	
Barhart SG	3259	1	2		3 lb.	P.M. Rudowski	J. Darwin	P.M. Rudowski	B. Barnes	10/29	

A SEPARATE PRESS DECK LOG SHOULD BE MAINTAINED FOR OTHER PRESS MATERIAL AND SHOULD INCLUDE COLUMNS FOR:

NUMBER OF SHIRTS
NUMBER OF JACKETS
NUMBER OF TROUSERS
NUMBER OF NAPKINS
NUMBER OF TABLECLOTHS
OTHER

Abbreviations:
LPO - Laundry Petty Officer
DLPO - Division Laundry Petty Officer

Figure 5-2.—Laundry bulk work and press deck logs.

should make sure all laundry is carefully logged in. As you study figure 5-2, notice the columns for the bulk log: (1) division or department, (2) number of bags received, (3) weight in whites or dungarees, and (4) another column for miscellaneous items. There are also signature columns for the receiving laundry man and divisional laundry petty officer to check laundry in and out and a column for any additional remarks.

Your press deck log consists of a record of individual officer and chief petty officer lots received in the laundry. As you study figure 5-2, notice the columns for the press deck log.

Under the column marked Other you normally list items other than shirts or trousers. If space does not permit listing these items, you should keep a separate press deck log as indicated in figure 5-2.

At the end of each week, the press deck and bulk work logs are summarized on a locally prepared laundry summary sheet by the laundry supervisor. This summary sheet is routed to the supply officer for review and signature. A copy of the summary sheet should be filed in the laundry for later reference.

EQUIPMENT MAINTENANCE LOG

The equipment maintenance log is shown in figure 5-3. This log is maintained for the purpose of recording historical repair data. A separate log sheet should be kept on each piece of laundry equipment you have aboard your ship.

HEAT STRESS LOG

The heat stress log shown in figure 5-4 is used for the purpose of checking temperatures in the laundry. Temperature readings are taken once every 4 hours and logged in. The number of readings you take depends on how many hours the laundry operates; however, readings will be taken whenever the laundry is manned. If laundry work continues into the night, the log will include each additional 4-hour period.

HEAT STRESS

Heat stress is a very dangerous element in the shipboard laundry. It is a combination of air temperature, thermal radiation, humidity, airflow, and workload that may stress the body as it tries to regulate body temperature. The condition of heat stress can readily cause fatigue, severe headaches, nausea, and poor physical and mental performance. As the temperature of your body continues to increase due to exposure to high heat, you run the risk of having heat exhaustion or a heatstroke.

Listed below are some of the factors that reduce the chances of heat injuries from high temperatures in the laundry.

- Recording temperatures in the heat stress log each 4-hour period
- Inspecting the laundry for conditions that would cause higher heat
- Reporting all temperatures 100° or over as required
- Following the do's and don'ts list included in this chapter

The requirements of the Navy's heat stress program are included in OPNAVINST 5100.20, *Shipboard Heat Stress Control and Personnel Protection.* A hanging dry bulb thermometer should be permanently mounted near the wash and press deck. It should be mounted in such a manner that the bulb of the thermometer is not influenced by adjacent or local heat sources. You should record the temperature readings in the heat stress log using these dry bulb thermometers once every 4 hours. When temperatures are 100°F or more, you should do the following:

- Log the temperature reading and circle it in the heat stress log.
- Notify the ship's store officer and medical officer.
- Leave the laundry until a heat stress survey is done by the medical officer.

You should remain out of the laundry until further directed on what to do by the medical officer. If the temperature remains high, you will only be able to work certain periods in the laundry. These periods are better known as stay times. These stay times are determined by the medical officer and are always followed by a recovery period where the laundry personnel will go to a cool dry place to allow their body temperature to return to normal. The stay time is always half of the recovery time. The recovery period never exceeds 4 hours provided there is no evidence of cumulative fatigue.

LAUNDRY EQUIPMENT MAINTENANCE LOG

EQUIPMENT (SPECIFY) WASHER/EXTRACTOR, 60 POUND

DATE OUT OF COMMISSION	DATE PLACED IN COMMISSION	AMOUNT OF DOWN TIME (HOURS)	REASON DOWN	PARTS REPLACED	REMARKS/COMMENTS
2/27/88	2/27	4	OVERLOAD RELAY CUTS OUT	OVERLOAD HEATERS	REPLACED WITH NEXT SIZE HIGHER
3/4/88	3/4	2	LOAD CYLINDER DOOR LATCH	LATCH AND BOLTS	
3/5/88	3/7	36	DEFECTIVE DRAIN SOLENOID	DRAIN SOLENOID	

MAINTAIN SEPARATE LOG FOR EACH PIECE OF LAUNDRY EQUIPMENT INSTALLED (WASHER, EXTRACTOR, PRESS, TUMBLER, ETC.)

Figure 5-3.—Laundry equipment maintenance log.

DATE OF READING	TIME OF READING	PRESS DECK	WASH DECK	REMARKS
10-5-__	0800	96	87	
10-5-__	1200	(102)	98	Ship's Store officer, medical officer notified
10-5-__	1600	93	88	Laundry secured at 1600
10-6-__	N/A	N/A	N/A	Laundry closed
10-7-__	N/A	N/A	N/A	Laundry closed
10-8-__	0800	92	81	
10-8-__	1200	96	87	

Figure 5-4.-Laundry heat stress log.

Personnel working in a heat stress environment should follow the do's and don'ts listed below:

- Do eat three adequate meals a day.
- Do drink plenty of cool water.
- Do get at least 6 hours of continuous sleep per 24-hour period.
- Do wear clean clothing composed of at least 35 percent cotton.
- Do not take salt tablets.

- Do not wear starched clothing.

- Do not drink commercially prepared liquid electrolyte supplements instead of water.

Past inspections conducted aboard various ships have identified many of the principal problems that may cause a heat stress environment. Some of these problems were so severe that personnel exposures had to be limited to avoid harm. These heat stress conditions are caused by the following:

- Steam and water leaks

- Missing or deteriorated insulation on steam piping, valves, and machinery

- Ventilation system deficiencies, such as missing or mutilated ductwork, misdirected terminals, clogged exhaust screens, closed or partially closed Circle William dampers, dirty ventilation ducting, and inoperative fan motors and controllers

- Ventilation design deficiencies, resulting in less than adequate supply or exhaust air capacity and/or distribution

Even though the above conditions are identified and corrective action taken, there may still be instances where a heat stress situation may occur. Some examples include ship operations in hot and humid climates, performance of hard physical tasks, and so forth. While working in the laundry, you should be aware of conditions that may cause a heat stress condition and report all problems to the laundry supervisor so corrective action can be taken.

LAUNDRY SECURITY

Security of the laundry is the responsibility of all laundry personnel. You must take proper security measures to protect the laundry from loss of personal clothing, damage to equipment, loss of supplies, and unauthorized use.

The ship's laundry is a group IV space, and the keys to the laundry should be handled as outlined in chapter 1 of this manual. The ship's laundry should not be used after working hours except when final approval is obtained from the ship's store officer. The laundry should never be used by unauthorized personnel. Use of the laundry by unauthorized personnel can cause a variety of problems including the following:

- Possible laundry fires due to not following safety precautions and lack of training

- Damage to equipment due to operating incorrectly

- Injury to unauthorized users due to lack of knowledge of safety devices on equipment and safety precautions in the laundry

- Loss of personal clothing or supplies due to theft

A laundry fire can cause thousands of dollars in damage. Damage to equipment can run into loss of production capabilities and longer working hours for all laundry personnel. Injury to unauthorized users could range from burning a hand on a press to heat injuries due to heat stress.

STOWAGE AND HANDLING OF LAUNDRY SUPPLIES

Standard stock laundry chemicals are requisitioned from supply activities ashore. These laundry supplies are used in conjunction with the Navy wash formula to launder clothing. Laundry personnel should be familiar with the proper handling and stowage of all laundry supplies especially the supplies used in the wash cycle. See figure 5-5.

The proper stowage and handling of supplies is essential in order to prevent health and safety hazards. Stowage space aboard ship is normally limited, and some planning is required to make sure space is used efficiently. Laundry chemicals must be stowed in a bulk storeroom. Chemical supplies in the laundry should be limited to those amounts needed for a 1-week period. Heavy laundry supplies should be stowed close to the laundry and small items kept in bins to prevent loss. Items such as pins, laundry net bags, or other pilferable items should be kept under lock and key. Rust remover or stain removal supplies should be stored in a cool, dry space. Within the laundry, chemicals should be stowed in a metal bin using bin liners or plastic bags. The sequence of stowage in this metal bin should be two-shot detergent, laundry sour, and starch.

TWO—SHOT DETERGENT	NSN NOT AVAILABLE	40 lb
SOUR	7930-00-205-2882	50 lb
STARCH	7930-00-841-6362	25 lb

Figure 5-5.—Most common laundry supplies.

HANDLING TWO-SHOT DETERGENT

NAVRESSO recently introduced a new two-shot detergent for use in shipboard laundries. It is called two-shot detergent because it not only includes the detergent it also includes an oxygen bleach. It does all the work that the alkali, type I detergent, type II detergent, nonionic liquid, and powdered bleach did before. Since the amount of chemicals is greatly reduced, you can expect a savings of storage space of about 63 percent. The two-shot detergent comes in a destructproof container and needs to be stored in a cool space. Since it weighs only 40 pounds, it eliminates the problem of handling very heavy laundry supplies. This product is also granular and is nondusting and, therefore, will not disperse into the air. The detergent may contain cakes or lumps which are not readily broken up by hand. Keep the two-shot detergent properly covered to prevent cakes and lumps from forming.

HANDLING LAUNDRY SOUR

Laundry sour is a blue powder received in 50-pound drums. Since sour is used sparingly, you will use about 40 pounds of sour per 100 personnel over a 3-month period. Like most powdered substances, it needs to be covered and stored in a cool, dry space to prevent it from becoming hard and unusable.

Sour may be injurious to you if it comes in contact with your eyes, skin, or if it is swallowed. For skin contact flush with water. For contact with your eyes or if swallowed contact medical personnel. Eye contact requires flushing your eyes with water for 15 minutes.

HANDLING STARCH

Laundry starch is manufactured from corn or wheat or a combination of both. It is considered the safest product used in the laundry. Starch normally comes in boxes or bags, and heavy items should not be stowed on top of it. Always stow it in a cool and dry space. When starch comes in contact with moisture or water it becomes cakey and cannot be used.

DISPOSAL AND ENVIRONMENTAL PROTECTION

The *Environmental Protection Manual,* OPNAVINST 5090.1, issues Navy policy and assigns responsibilities for Navywide actions for control of environmental protection. Commanding officers should coordinate and cooperate with federal, state, interstate, and local pollution control agencies, and follow all standards and regulations in regard to control of environmental pollution.

As a Ship's Serviceman, you should be aware of practices or things that may affect the environment. The water that drains from the laundry is considered waste water and is transported to the collection, holding, and transfer (CHT) tanks. CHT tanks are installed aboard ship for the purpose of handling waste water from showers, heads, laundries, galleys, sculleries, and sinks and is transported by the ship's waste drain system. In port the waste water is transferred ashore for disposal. Underway, the ship should not be within 50 miles of any shoreline to discharge this waste.

Before you dispose of any laundry chemicals in port or at sea, you should first consider whether it is a hazardous substance. A hazardous substance may be defined as any substance or mixture of substances that is toxic, corrosive, irritating, flammable, a strong oxidizer, a strong sanitizer, or that generates pressure through decomposition, heat, or other means. Hazard classifications and stowage requirements for shipboard consumables are contained in NAVSUP Publication 4500, *Consolidated Hazardous Item List* (CHIL), now known as the *Hazardous Materials Information System* (HMIS) list. Information on the disposal of hazardous substance is included in section A of this publication. Section A includes a disposal code for each item listed and explains procedures for disposal of that particular substance.

LAUNDRY SCHEDULES

The laundry supervisor prepares the laundry schedule for approval by his or her immediate

supervisor. As a Ship's Serviceman third class, you should be familiar with factors that determine not only the laundry schedule but how many hours the laundry will be operating. These factors include the following:

- Amount of work that must be processed weekly
- Capacity of laundry equipment
- Number and competence of laundry crew

These factors listed may be overwhelming at times. To eliminate problems and establish normal working hours for personnel, a laundry is generally operated in shifts.

A laundry shift normally lasts 8 hours. Your laundry may operate one, two, or three shifts per day. Each shift must have experienced Ship's Servicemen to handle each shift so work turned out is satisfactory. A shortage of experienced personnel will require strikers to assist SH personnel. Strikers should not be allowed to operate equipment until they are qualified in using that equipment.

PROCESSING LAUNDRY

The first step to processing laundry is receiving the different lots into the laundry, marking them, and classifying them. Articles to be laundered are delivered to the ship's laundry either in bulk lots or in individual bundles. Bulk lots include division laundry (crews' personal clothing and linen), flatwork (towels, linen, and tablecloths from staterooms, officer and CPO messes, and sick bay), and service lots (clothing of cooks and foodservice attendants, barbers, hospital personnel, and snack bar personnel).

The workflow for individual and bulk lots is shown in figure 5-6. The solid black line running from the Bulk Lots block, top left, to the Issuing block at the bottom shows the steps in processing bulk laundry. The broken line on the right side of the chart connects all types of work accomplished on individual lots.

The receiving laundry personnel are responsible for receiving, marking, and classifying all lots delivered to the laundry.

To perform these duties, the receiver should have a list of divisional laundry petty officers. The laundry supervisor provides the receiver with this list in case there is a need to contact a division representative regarding delivery and pickup of laundry or to resolve problems. Meetings are normally held periodically by the laundry supervisor to inform divisional laundry petty officers of any changes that may occur in laundry policy.

RECEIVING BULK LOTS

When receiving bulk lots, the receiving laundry personnel should consider the many problems that may be encountered when identifying, classifying, and marking these bulk lots. Bulk lots are delivered to the laundry in large divisional laundry bags. You should be careful not to accept laundry bags that are overstuffed. Overstuffed laundry bags cause handling problems during the laundry process. For the purpose of safety and production standards, divisional laundry bags should not be accepted over your washer extractor capacity. If you do accept bags over your capacity, they will have to be split upon the wash deck causing delays and possible claims for loss of clothing. Check bulk lots and make sure the division name is stenciled in large letters on all divisional laundry bags received. You should also check bags to make sure blues and whites are not mixed in one bag. If a divisional laundry bag makes it past the receiving section mixed with blues and whites, it will delay the laundry process on the wash deck as the divisional laundry in the bag will have to be separated. Divisional bulk laundry bags should not be accepted until all discrepancies noted above have been corrected. If policies concerning your laundry process are given to divisional laundry petty officers during the monthly meeting, problems will be eliminated.

RECEIVING INDIVIDUAL LOTS

Bundles received daily in the laundry from officers and chief petty officers are considered as one lot of individually marked bundles. If you have more bundles in the daily lots than available assembly bins, it is best to set up two lots daily. You can then assemble and check out the bundles in the first lot before work from the second lot comes to the assembly bins. Twenty bundles in a lot are easy to handle. Never put more than 50 bundles in one lot.

The number of bundles you should put in a lot is affected by the classification of the items in the bundles. Classification is the separation of a bundle of laundry according to color, type of fabric, and degree of soil; that is, white cottons,

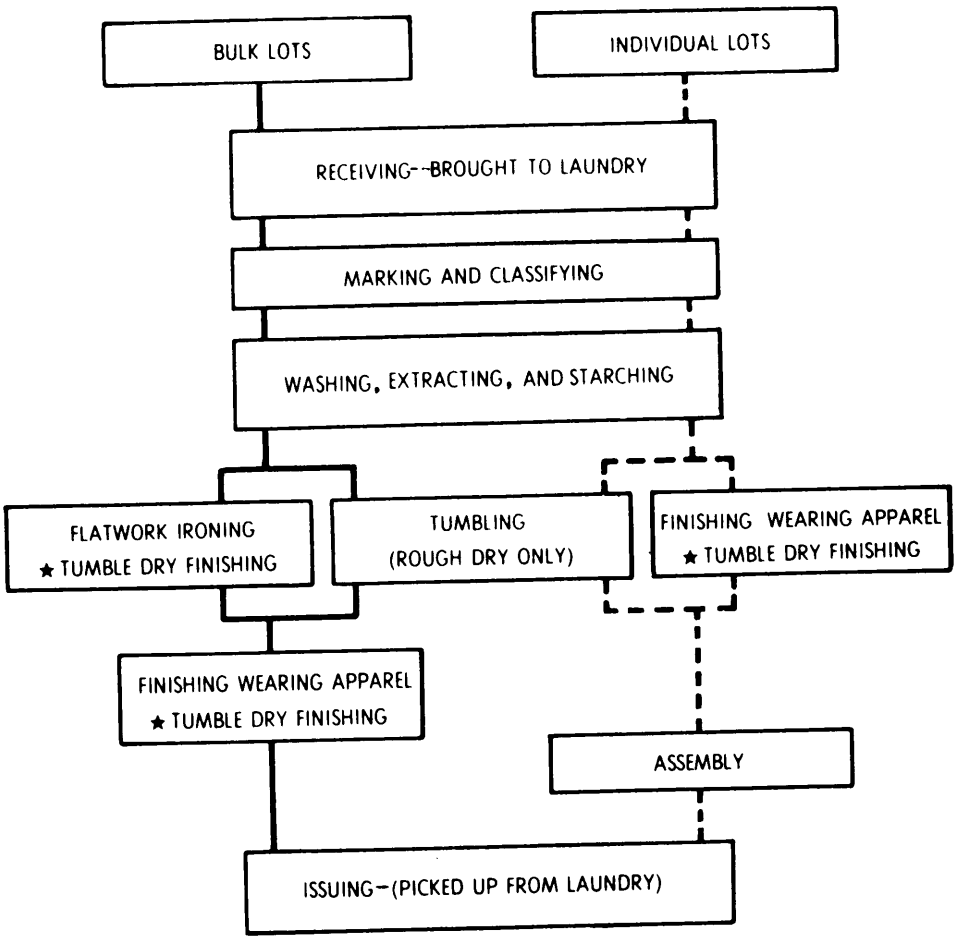


Figure 5-6.—Workflow for a laundry operation.

other white or light-colored fabrics, light cottons with heavy stains, dark-colored cottons, and so forth. Items are classified according to the washing formulas to be used.

HANDLING LOTS

The main problem with handling lots in the laundry is identification. You need to have a good system of identification in the ship's laundry to prevent loss of clothing during the workflow process. There may be several personnel handling the clothing and proper identification is essential.

IDENTIFYING BULK LOTS

The clothing in bulk lots should be delivered to the laundry already stenciled. Each enlisted person is responsible for stenciling his or her own clothing. The laundry petty officer in each division should accept only properly stenciled clothing. Both black and white stencil pens usually are available in the retail store.

Proper stenciling of clothing ensures proper distribution from the laundry. If the laundry supervisor runs into problems with lost clothing and claims, he or she may want to control the items turned in and return these items to each person. The laundry petty officer can list all articles across the top of a sheet of paper and write the people's names in a column down the left side of the sheet. The number of each article sent by each person should be entered in the box opposite the name and below the article. When the articles are returned to the individuals, the names are checked off the list. If all articles are properly

stenciled before they are sent to the laundry, this type of control will generally be unnecessary.

Once bulk work is accepted it is the responsibility of the laundry to make sure it is properly identified from start to finish. You do not have to identify individual items in bulk lots brought to the laundry, but you do need to put some type of marker with each lot so that you can identify it during any phase of processing. You can make your own markers, or flags, from a duck fabric. Cut squares about 8 to 12 inches and hem them. Then stencil one marker for each division, service group, or any activity that brings bulk work to you. When bulk lots are brought to the laundry, put the proper identification markers on them. You can use the same markers week after week. In addition to these markers, the division/department name should be stenciled on the side of the bag in case the marker gets lost during the process.

In the event you are required to split a lot, put the right markers on every part of it. All markers remain with lots and portions of lots during the complete washing and processing cycle. Put the marker in the washer with the load, and identify the load on the shell of the washer with chalk. If it is necessary that you put more than one lot in the washer to get full capacity, use a proper size laundry net for the smallest lot. When more than one net is required for the same lot, use a marker for each net.

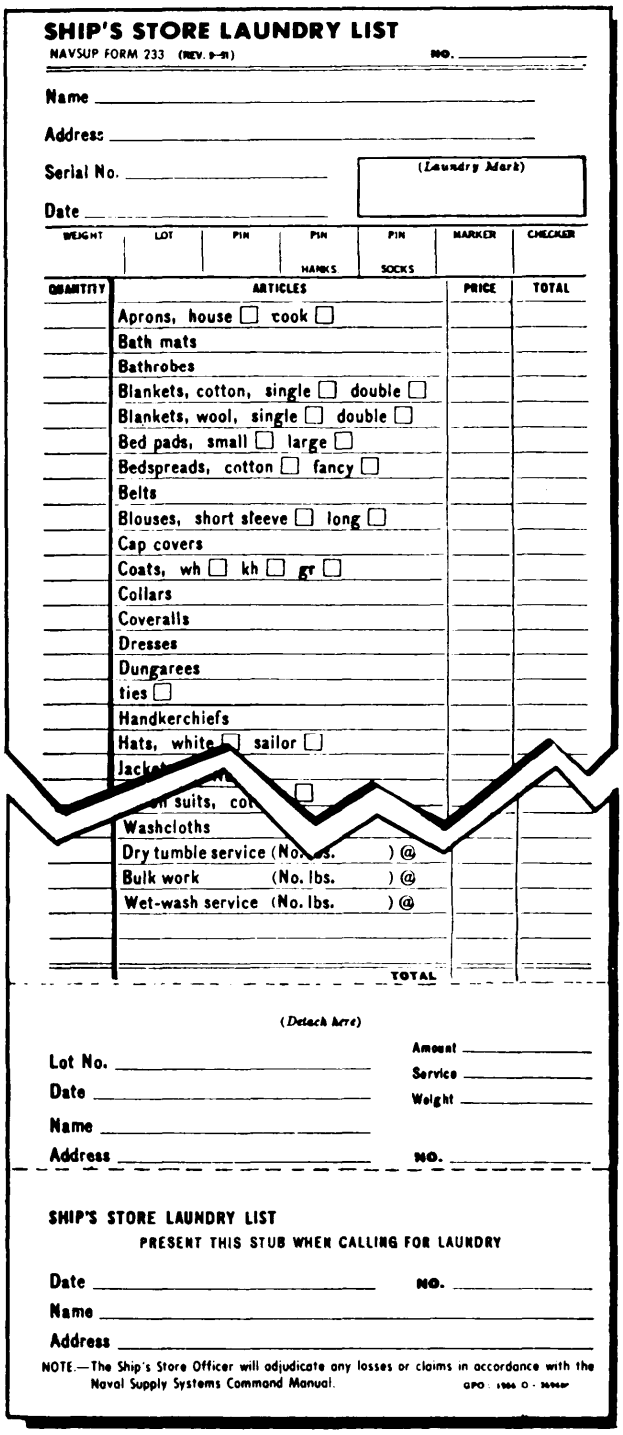
All soiled divisional bulk bags delivered to the laundry should be kept separate from clean laundry. In smaller laundries where space is limited, an effort should be made to have all clean laundry picked up after it is completed.

IDENTIFYING INDIVIDUAL LOTS

Ship's laundries use a Ship's Store Laundry List, NAVSUP Form 233, so officers and CPOs may identify what they have sent to the laundry (fig. 5-7).

Normally, the form contains blanks at the top for the name of the ship, name of customer, rank or rate, social security number, date, and laundry mark. There is usually space for a Customer's-Count column and a Laundry-Count column, aligned with the list of articles.

The customer fills in the lines at the top of the laundry list, enters the number of each article in the appropriate block, puts the laundry list with the laundry, and turns it over to the laundry receiving clerk.



SHIP'S STORE LAUNDRY LIST

NAVSUP FORM 233 (REV. 9-51) NO. _____

Name _____

Address _____

Serial No. _____ (Laundry Mark)

Date _____

WEIGHT	LOT	PIN	PIN HANKS	PIN SOCKS	MARKER	CHECKER

QUANTITY	ARTICLES	PRICE	TOTAL
	Aprons, house ☐ cook ☐		
	Bath mats		
	Bathrobes		
	Blankets, cotton, single ☐ double ☐		
	Blankets, wool, single ☐ double ☐		
	Bed pads, small ☐ large ☐		
	Bedspreads, cotton ☐ fancy ☐		
	Belts		
	Blouses, short sleeve ☐ long ☐		
	Cap covers		
	Coats, wh ☐ kh ☐ gr ☐		
	Collars		
	Coveralls		
	Dresses		
	Dungarees		
	ties ☐		
	Handkerchiefs		
	Hats, white ☐ sailor ☐		
	Jacket		
	suits, co ☐		
	Washcloths		
	Dry tumble service (No. lbs.) @		
	Bulk work (No. lbs.) @		
	Wet-wash service (No. lbs.) @		
	TOTAL		

(Detach here)

Lot No. _____ Amount _____

Date _____ Service _____

Name _____ Weight _____

Address _____ NO. _____

SHIP'S STORE LAUNDRY LIST

PRESENT THIS STUB WHEN CALLING FOR LAUNDRY

Date _____ NO. _____

Name _____

Address _____

NOTE.—The Ship's Store Officer will adjudicate any losses or claims in accordance with the Naval Supply Systems Command Manual.

Figure 5-7.—Ship's Store Laundry List, NAVSUP Form 233.

In conjunction with the laundry list, laundry net bags should be used for the purpose of keeping rough-dry clothing together during the laundry process. They are open-mesh bags made from cotton or nylon in which the clothes are placed

for washing. Nylon nets have generally replaced cotton nets. They resist chemicals better than cotton and thus last longer. They also increase the payload.

You can do effective washing with laundry nets, provided you do not overload them. You must give the water and soap a chance to get to the clothes in order to remove soil.

Nets are especially useful for separating small items such as handkerchiefs or socks from the larger articles. There are two general types of nylon nets—woven and knitted. Woven nets do not stretch and thus retain their size; knitted nets have a tendency to stretch and increase in size. For this reason, the range of knitted nets in capacities is given below:

Size in Inches	Capacity in Pounds
9 by 15 or 10 by 15	2 to 4
24 by 36	8 to 12

Steps in Identifying Individual Lots

The procedure for identifying items in individual bundles described in detail herein has been used successfully in shipboard operation. You may be able to modify this procedure to fit your own needs. The steps in the procedure are as follows:

1. Work on ONLY ONE individual bundle at a time; this prevents mixing of items from several bundles.

2. Remove the laundry list from the bundle and determine from the individual's name and social security number what the laundry mark will be. This mark is made from the first letter of the individual's last name and the last four numbers of the individual's social security number. For example, the laundry mark for SHCM Frederick M. Wishnacht, 123-45-6789, would be W-6789. This is the standard type of laundry mark used throughout the Navy.

3. Set the individual's laundry mark on the marking machine and stamp it across the face of the laundry list. Check the mark for accuracy. This list now denotes ownership of laundry in the bundle.

4. Count every article in the laundry bundle and enter the number in the correct block on the laundry list. If your count does not agree with that of the customer, ask the senior laundry man to recheck it. When the senior laundry man's count is in disagreement with that of the customer, he or she should enter the correct count on the laundry list, circle the customer's count, then initial the circle and notify the customer of the change through whoever brought in the laundry bundle.

5. Check each article for a correct legible mark. If there is not a mark, put ONE ONLY in the proper place (explained later). Do NOT mark such items as bath towels, wet articles, or dark-colored fabrics. Use pronged marking tags on these items. These tags are narrow strips of cloth approximately 1 inch long with metal fasteners in the ends. Push the metal fasteners through the material and press them flat on the other side. Enter the correct identification on the tags.

6. Check the inside of all pockets for any articles such as pens, pencils, lighters, combs, and so forth. If any items are found in the pockets, a notation should be made on the NAVSUP Form 233, Ship's Store Laundry List, and also in the laundry logbook so these items can be returned to the owner.

7. Check all articles of clothing for any tears, stains, missing buttons, and so forth. Any items found to be damaged should be noted on the reverse side of the laundry list and also in the Remarks column of the laundry logbook.

8. Clear the laundry marking machine by setting all type to the neutral position when you finish with one bundle. You are ready to start on another bundle.

Location of the Laundry Mark

There is a standard spot for the laundry mark on each article. If the mark is correctly placed in this location, the receiving clerk can check items in easily and quickly. The clerk can also check and assemble finished articles without unfolding them. The locations of laundry marks are as follows:

- Underwear—On the inside of the waistband, left of center of the label.

- Handkerchiefs—Do NOT mark. Put them in a net and identify with a marked strip tag placed on the inside or pinned on the outside. Some handkerchiefs are made of fine linen and are expensive. A mark would be ugly if used on such articles and exposed to view.

- Shirts—On the front inside shirttail.

• Tropical shorts—On the inside waistband of shorts, right side, in line with the outside leg seam.

• Socks—Socks are NOT marked; instead, marks should be put on a piece of sheeting and then placed inside a standard 10-inch by 15-inch laundry net used for washing socks. The socks should be untied and loose in the net. A separate net should be used for each individual.

• Undershirts—On the inside, 1 inch to the left of the label.

RIBBON-TYPE LAUNDRY MARKING MACHINES

Shipboard laundries use a ribbon-type laundry marking machine to mark all clothing (fig. 5-8). The ribbon-type machine uses a lever principle for setting the mark. The lever is attached directly to the type wheels, each of which contains all numerals and complete alphabet. The procedure for

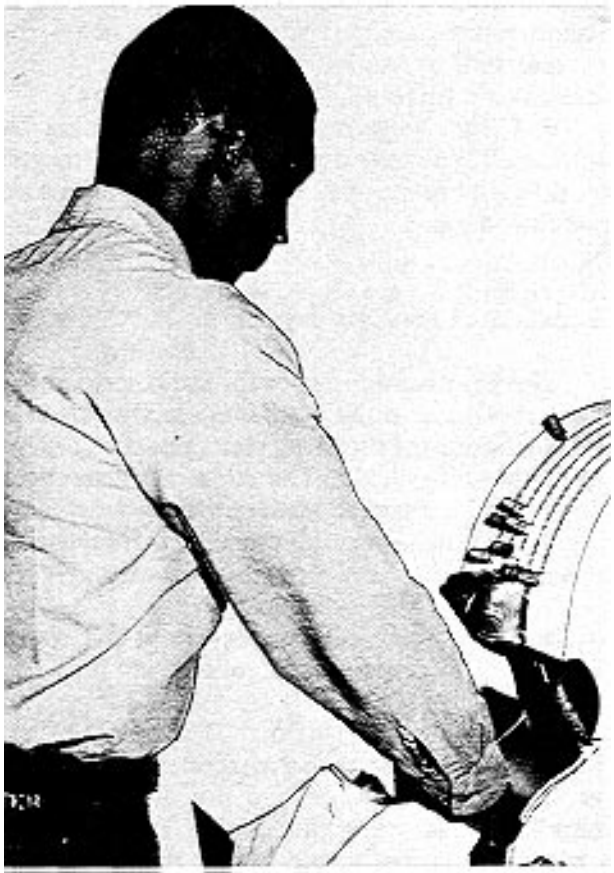


Figure 5-8.-Laundryman using the laundry marking machine.

marking laundry is the same on most types of marking machines:

1. Put the item to be marked underneath the tension plate and over the platen. The tension plate holds the item in place so the laundry mark can be placed exactly where you want it.
2. Raise the printing lever forward with both hands to bring the item to be marked into contact with the type. Use a steady push on the lever for best results.
3. Check the mark for clarity. If it is not clear, repeat the process.

Operating Ribbon-Type Machines

Some things to remember when you are operating a Ribbonrite marking machine are as follows:

1. Keep the printer arm down when you set the type handles. This will prevent wrinkling of the ribbon.
2. Use both hands to operate the machine. Use a complete stroke and make quick, sharp contact with the article being marked.
3. Unfold shirt collars before you mark them.

Care and Maintenance of Laundry Marking Machines

A certain amount of care and maintenance must be given to laundry marking machines to keep them in good working order and to extend their usefulness. Keep all parts of the marking machine clean, type faces in particular. Proceed as follows:

1. Bring the type levers to the full FORWARD position.
2. Depress the clip on the back of the cover (bottom) and unlock it in front.
3. Raise the index handles to bring the type into the most accessible position and clean it with the wire brush provided by the manufacturer for this purpose.

Another way to clean the type assembly is to remove the assembly by first removing the pin inserted through the shaft channels over the shaft and disengaging the spring lock. After the assembly is removed, clean it with a steam gun.

When parts of the machine become worn, they should be replaced with new ones. Keep a supply of the most used repair parts on hand. A

manufacturer's instruction manual is furnished for each laundry marking machine. The mechanic who works on the machine should also have a copy of this instruction book. Do not try to do any mechanical work on the machine unless it is absolutely necessary. Always request that the work be done by a trained person from the engineering department.

Ships Without Laundry Marking Machines

All ships are required to have a laundry marking machine on board. Ships' laundries temporarily without laundry marking machines will have to use laundry marking pens while a machine is being procured or the old one repaired. The laundry supervisor should obtain white and black laundry markers from the bulk storeroom and charge them to cost of operations laundry. These pens will serve the same purpose as the laundry marking machine; however, they will probably slow the work process while marking clothing. For individual lots, the laundry mark has to be handwritten on the Ship's Store Laundry List, NAVSUP Form 233. Care should be taken while marking clothing with marking pens to make sure the mark does not go completely through the fabric. It is best to stencil on a semifirm surface such as cardboard, making sure you do not press too firmly. Be sure the ink from the stencil is completely dry before placing the clothing with the remainder of the lot.

WASHING

The primary goal of the washing process is to remove all soil from the fabrics being washed. This is done through a series of baths in which the soil is loosened from the fabric, suspended in the water, and rinsed away. There are five baths in the washing cycle—the breaksuds, the flush suds, two rinse baths, and the sour bath. During the first two baths, the two-shot detergent (detergent/oxygen bleach) removes and loosens the soil so it may be rinsed away.

Sour is used in the last rinse cycle to neutralize alkalinity and to decompose any remaining traces still in clothing.

FABRICS

The laundry personnel should be familiar with the different kinds of fabrics. In general most fabrics can be safely laundered in the ship's laundry without causing damage provided they are resistant to the laundry chemicals used. Therefore, it is a good laundry practice to first determine what type of fabric you are washing and take every precaution to prevent damage. It is essential that all laundry personnel know the different kinds of fabrics.

To minimize the effects of chemicals on fabrics, classify all clothing according to color, fiber content, and degree of soiling. Wash lightly soiled articles separately from heavily soiled items to minimize redeposition of soil on fabrics, causing them to look gray/dull. Wash colored fabrics separately from whites to avoid color transference.

For maximum washing efficiency, do not exceed load limits of equipment. In the case of synthetics/blends, washer loads should not exceed three-fourths of the rated capacity to provide for maximum mechanical action, cleaning efficiency, and to avoid wrinkling.

Never use hot flushes with supplies before the first bath. In the case of synthetics or synthetic blends, a hot flush with no supplies will soften the fabric and allow soil to penetrate more deeply. Synthetics or synthetic blends do not absorb water, making rinsing easier. The final extract should be consistent with the Navy wash formula. Laundry chemicals should come in contact with fabrics ONLY AFTER appropriate water levels are achieved. The two-shot detergent mentioned earlier is used in washing all shipboard clothing and textile items, including synthetics and synthetic blends, and no other washing chemical should be used in place of them.

TYPES OF SOIL

In general there are four types of soils. Some can be removed during the washing process and some cannot. It is important that you know them so you can decide whether they require special treatment.

CHEMICAL SOLUBLE SOILS

Chemical soluble soils are soluble or readily dissolvable in chemical solvents. Soils of this type include oils, greases, certain waxes, fatty acids (which are mainly body oils), and vegetable, mineral, and animal oils. These soils usually are not soluble in water and may require special treatment.

WATER SOLUBLE SOILS

Water soluble soils are such substances as sugar, starch, gums, salt, flavoring agents, and syrups, as well as a wide variety of substances generally found in such foods and beverages as mustard, catsup, soups, and soft drinks. Perspiration stains are also included in this category. These types of soils are removed during the normal laundering process.

INSOLUBLE SOILS

Insoluble soils, substances that are not soluble or dissolvable in either water or chemical solvents, are the materials most commonly found in fabrics and constitute the bulk of the soils removed in the laundry. Included are earth, concrete dust, sand, carbon, ashes, lint, hair, cosmetics, and dandruff. These types of soils are usually less visible than oils, greases, or food stains, but they contribute greatly to fabric damage due to fiber abrasion.

Most insoluble soils are readily dispersed during the wash cycle, but their complete removal may prove more difficult. Such soils are sometimes redeposited on the garments during the laundry process, a condition that can cause "graying" of the fabric.

SPECIAL SOILS

Special soils are insoluble in either water or laundry chemicals. They may be removed partially or entirely using spotting operations. These soils include nail polish, paint, ink, various kinds of adhesives, and so forth. Spotting operations are discussed in the dry-cleaning chapter.

THE WASH WATER

Water is the most important item used in a laundry. Not only is it needed in quantity, but the quality of water used has an important effect on the washing process.

At sea, where quantities of suitable wash water are always subject to greater limitations than ashore, you may not always have enough soft water available. To conserve fresh water, you may be required to use seawater.

When water comes from clouds as rain or snow, it picks up carbon dioxide gas. As the water seeps through the ground, the carbon dioxide gas dissolves limestone and some other substances, and the water collects calcium and magnesium salts. The salts are in the form of bicarbonates, chlorides, nitrates, and sulfates. The kind and quantity of these substances are determined by the soil the water passes through. Water that contains an appreciable quantity of salts is HARD water. SOFT water is water that has not picked up salts from the earth, or water that has had these substances removed or neutralized. Since seawater contains the concentration of salts, it is the hardest of all wash waters.

TYPES OF HARD WATER

In laundry terminology, hardness in water is the power to kill soap. When soap is added to hard water, the calcium and magnesium salts in the water combine with the soap to form insoluble lime soaps. These soaps then unite (precipitate) in the form of a sticky, insoluble deposit. This reaction kills the soap and makes it useless for washing, and the sticky deposit traps dirt and puts it back on the fabric in the form of scum. If no dirt is present, the scum is white and is seen as a film on the clothes.

There are two types of water hardness:

1. Temporary hardness—Water that contains calcium and magnesium bicarbonates is called temporary hard because these elements can be removed by boiling. Scale on the inside of steam kettles and steam boilers is due to the precipitation of insoluble carbonates as the hard water is boiled.

2. Permanent hardness—Water that contains calcium and magnesium chlorides that are NOT affected by boiling is said to be permanently hard. Permanent hardness requires special treatment with chemicals or by distillation.

WATER SOFTENING METHODS

The methods generally used to soften water are known as the base exchange and distillation. The base exchange method softens water when the compounds of calcium and magnesium in the water are exchanged for compounds of sodium which do not cause hardness.

The distillation method softens the water when it is boiled and the vapor is cooled by running it through pipes immersed in a cold solution to reconvert it to water. The distillation method is used to make seawater usable for a ship's boilers and other shipboard uses. Seawater distillate is not pure water, but it contains only about 1/20,000 of its original concentration of salts.

LAUNDRY DETERGENT

The detergent/oxygen bleach is intended for shipboard laundering of cotton, synthetic, and blended items using fresh water or seawater. It is referred to as the two-shot detergent because it includes a detergent and oxygen-based bleach and is mixed and ready to use. Since it is premixed you won't have to proportion laundry chemicals as in the past. As long as you add the correct amounts to the washer, the chemical proportion will be correct. Figure 5-9 shows the wash sizes and the amounts of two-shot detergent that should be used with fresh water and seawater.

The two-shot detergent uses an oxygen-based bleach that is safe in washing all fabrics, therefore, the problem in damaging colored clothes with bleach is eliminated. The bleach is an integral part of the detergent and will not require special handling as it is not reactive to the other ingredients in the formulation. The detergent/oxygen bleach releases a sharp, unpleasant solvent-type odor into the air while being used. You should not be alarmed by this smell because the smell will not be transferred to the clothing.

WASHING FORMULAS

The Navy recently changed all Navy wash formulas to include the two-shot detergent. The new wash formulas were developed by the Navy to help shipboard personnel produce whiter and brighter washes. The formulas are illustrated in figures 5-10 through 5-12. These formulas have been tested in laundries aboard ship and have been found satisfactory for the type of work indicated. These formulas were developed to conserve energy and to meet environmental regulations while providing quality laundry. These formulas should be posted on the wash deck for laundry personnel to read and follow.

RINSING

Rinsing removes soil and cleaning solutions from the clothes. Poor rinsing results in grayness, disagreeable odors, harsh finish, and generally poor quality work.

The number of rinses used should always be according to the Navy wash formula you are using and should not be modified. Under normal conditions, following the Navy wash formula in regards to the number of rinses, the rinse water levels, water temperature, and time of running will bring desirable results. If clothes that are heavily soiled do not come out clean in the first wash they should be washed again according to the Navy wash formula.

LAUNDRY SOUR

Laundry sour is added to the last rinse to neutralize the remaining alkalies and to dissolve

	Dosage	
Wash Size (Pounds)	Fresh Water (Ounces)	Seawater (Ounces)
16	2.6	3.2
20	3.2	4.0
35	5.6	7.0
60	9.6	12.0
100	16.0	20.0
135	21.6	27.0
150	24.0	30.0
200	32.0	40.0

Figure 5-9.—Two-shot detergent amounts.

NAVY FORMULA I
HIGH TEMPERATURE FORMULA (160°F) WITH OXYGEN BLEACH
CLASSIFICATION: White and Colorfast Cotton, Synthetic, and Blended Fabrics
(White Certified Navy Twill Uniform Items)

Step	Notes	Operation	Cycle Time (Minutes)	Water Temperature (Degrees Fahrenheit)	Water Level (Inches)	Supplies (100-lb Basis)
1	A	Break suds	10	160	4	16 oz detergent/ oxygen bleach
2		Drain	1			
3		Flush suds	6	160	4	
4		Drain	1			
5		Spin	1			
6		Rinse	3	160	4	
7		Drain	1			
8		Rinse	3	160	4	
9		Drain	1			
10	B	Sour	4	130	4	2.0 oz sour bacteriostat 12 oz instant starch
11		Drain	1			
12		Final Spin	4			

A. Detergent may be added directly to the wash once water level has been reached.

B. Add starch and run for 10 minutes in the manual mode when starch is required.

FOR SEAWATER WASHING

1. Use seawater in steps 1 and 3. Detergent bleach should be increased to 20 ounces.

2. Use fresh water in steps 6, 8, and 10.

Figure 5-10.—Navy wash formula I.

NAVY FORMULA II
HOT FORMULA (140°F) WITH OXYGEN BLEACH
CLASSIFICATION: Colored Cotton, Synthetic and Blended Fabrics - (Khaki Cotton, Certified Navy Twill & Blend Dungarees)

Step	Notes	Operation	Cycle Time (Minutes)	Water Temperature (Degrees Fahrenheit)	Water Level (Inches)	Supplies (100-lb Basis)
1	A	Break suds	10	140	4	16 oz detergent/ oxygen bleach
2		Drain	1			
3		Flush suds	6	140	4	
4		Drain	1			
5		Spin	1			
6		Rinse	3	140	4	
7		Drain	1			
8		Rinse	3	140	4	
9		Drain	1			
10	B	Sour	4	120	4	2.0 oz sour bacteriostat 12 oz instant starch
11		Drain	1			
12		Final Spin	4			

A. Detergent may be added directly to the wash once water level has been reached.

B. Add starch and run for 10 minutes in the manual mode when starch is required.

FOR SEAWATER WASHING

1. Use seawater in steps 1 and 3. Detergent bleach should be increased to 20 ounces.

2. Use fresh water in steps 6, 8, and 10.

Figure 5-11.-Navy wash formula II.

NAVY WASH FORMULA III
LOW TEMPERATURE FORMULA
CLASSIFICATION: WOOLENS, SYNTHETIC, COTTON BLENDS, AND NONFAST COLORS

Step	Operation	Cycle Time (Minutes)	Water Temperature (Degrees Fahrenheit)	Water Level (Inches)	Supplies (100-lb Basis)	Notes
1	Break/suds	5	100 to 120	9	14 to 16 oz detergent oxygen bleach	A
2	Drain	1				
3	Flush/suds	5	100	9	4 oz detergent if required	
4	Drain	1				
5	Spin	1				
6	Rinse	3	90	9		
7	Drain	1				
8	Rinse	3	90	8		
9	Drain	1				
10	Sour	4	90	8	1.0 oz sour	
11	Drain	1				
12	Final Spin	4				

A. Detergent/bleach may be added to the wash wheel once the water level has been reached. Detergent amounts are based on a 100-lb basis and must be adjusted according to the size of the washer extractor used.

FOR SEAWATER WASHING

1. Use seawater in steps 1 and 3. Detergent bleach should be increased to 20 oz.

2. Use fresh water in steps 6, 8, and 10.

Figure 5-12.—Navy wash formula III.

iron and other metallic salts that cause rust or a yellow discoloration. If left in fabrics these chemicals cause odors and discoloration after drying.

Another reason for using a sour in the last rinse is that it removes sodium bicarbonate, which is normally in the rinse water. Even though other chemicals may have rinsed out, sodium bicarbonate remains. It is not injurious to fabrics in itself, but when subjected to the heat of flatwork ironers, presses, or hand ironers, it is converted to sodium carbonate which is quite alkaline and in sufficient concentration can cause injury to fabrics.

Souring also decomposes any oxidizing bleach left in a load, prevents discoloration, and helps to sterilize the clothes. In addition, sour sets acid dyes often used in bright-colored fabrics and preserves the tensile strength of fibers. Laundry sour also removes rust stains.

There are many different laundry sours of varying strengths, including acetic acid, fluorosilic acid, hydrofluoric acid, and several types of fluoride (ammonium, sodium acid, and sodium silico). Fluoride is generally used. The sour required for use is combined in the powdered form with powdered blue (NSN 7930-00-205-2882).

STARCH

Starch is applied to wearing apparel and other linens to give them body, smoothness, and an improved appearance. Only cotton fabrics should be starched in the ship's laundry. DO NOT starch synthetic and synthetic blend fabrics or work clothes. The amount of starch used should be the amount indicated on the formula.

Starching should only be done in the automatic mode; however, when you have to do it manually, follow these steps:

1. Do not drain the sour/blue bath. Reduce water to a low level with the water at temperature indicated on the formula. Add the proper amount of starch.
2. Run the machine for 4 minutes, long enough to allow the starch to penetrate the shirts.
3. Drain the starch from the machine while it is running to prevent the starch from settling on the load.

WASHER EXTRACTORS

Washer extractors installed aboard ship differ mainly in load capacity. The Naval Sea Systems Command (NAVSEA) publishes the *Navy Laundry and Dry-Cleaning Equipment Catalog* (Tech Manual #S6152-B1-CAT-010). This catalog is used by the Navy to obtain information for identification, selection, and procurement of standard naval shipboard laundry and dry-cleaning equipment. The washer extractors used by the Navy are listed in figure 5-13. This catalog includes several different types and sizes of washer extractors, however, the Edro (Dyna Wash) and the Pellerin Milnor washers are the ones most widely used by the Navy.

Washer extractors are basically made up into two parts, the outer shell and the cylinder. The shell holds the water and cleaning ingredients, while the cylinder hold the clothes.

The cylinder is perforated to allow water and suds in the bottom of the shell to enter and clean the clothes during the wash cycle. The washer extractor then extracts the water from the cylinder by using centrifugal force. A separate extract motor spins the cylinder at a high speed to do this.

OPERATION OF THE WASHER EXTRACTOR (EDRO MODEL)

The washer extractor manufactured by the Edro Corporation, better known as the Dyna Wash, is procured in three sizes—200-, 100-, or 60-pound sizes. The 100-pound Dyna Wash (including basic parts) is illustrated in figure 5-14. This washer extractor was designed to provide an easy and safe method of washing clothes, therefore, training personnel to operate the machine is easy. Since the washer extractor is automatic, the only thing the operator will have to do is load, add supplies, and unload.

WASHER EXTRACTOR CONTROLS

The Dyna Wash control system consists of two parts, the control panel and the programmer. The control panel is illustrated in figure 5-15. This panel may look slightly different on some models; however, the purpose of the basic controls on this panel is the same.

The control switch energizes all electricity to the control panel and programmer. This control switch must be energized before you can use any of the basic controls. The basic controls on the control panel are used when loading and unloading the washer. By depressing the jog switch simultaneously with the reverse or forward switch, the washer cylinder will rotate in that

ITEM SEQ NO.	FUNCTIONAL DESCRIPTION	SPECIFICATION PROCUREMENT REQ'MTS	MANUFACTURE AND MODEL NO.
WASHER/EXTRACTORS			
1	200-pound washer/ extractor	MIL-W-19044C	Edro Corporation Model DW 2000MNSWE
2	100-pound washer/ extractor	MIL-W-19044C	Edro Corporation Model DW 1000C
3	60-pound washer/ extractor	MIL-W-19044C	Edro Corporation Model DW 600 B
4	200-pound washer/ extractor	MIL-W-19044C	Pellerin Milnor Corp Model 4244CM3
5	135-pound washer/ extractor		Pellerin Milnor Corp Model 4231CM3
6	60-pound washer/ extractor	MIL-W-19044C	Pellerin Milnor Corp Model 36021CME
7	35-pound washer/ extractor		Pellerin Milnor Corp Model 36016CME
8	60-pound washer/ extractor	MIL-W-19044C	A-A Laundry Machinery Corp Model 38 × 19
9	20-pound washer/ extractor	MIL-W-23554, except for capacity	Hoyt Corporation Model HD 2000
10	16-pound washer/ extractor (Submarine use only)	MIL-W-23554, Type I	Wascomat Corp. Model WASCONAUTIC

Figure 5-13.—List of washer extractors used.

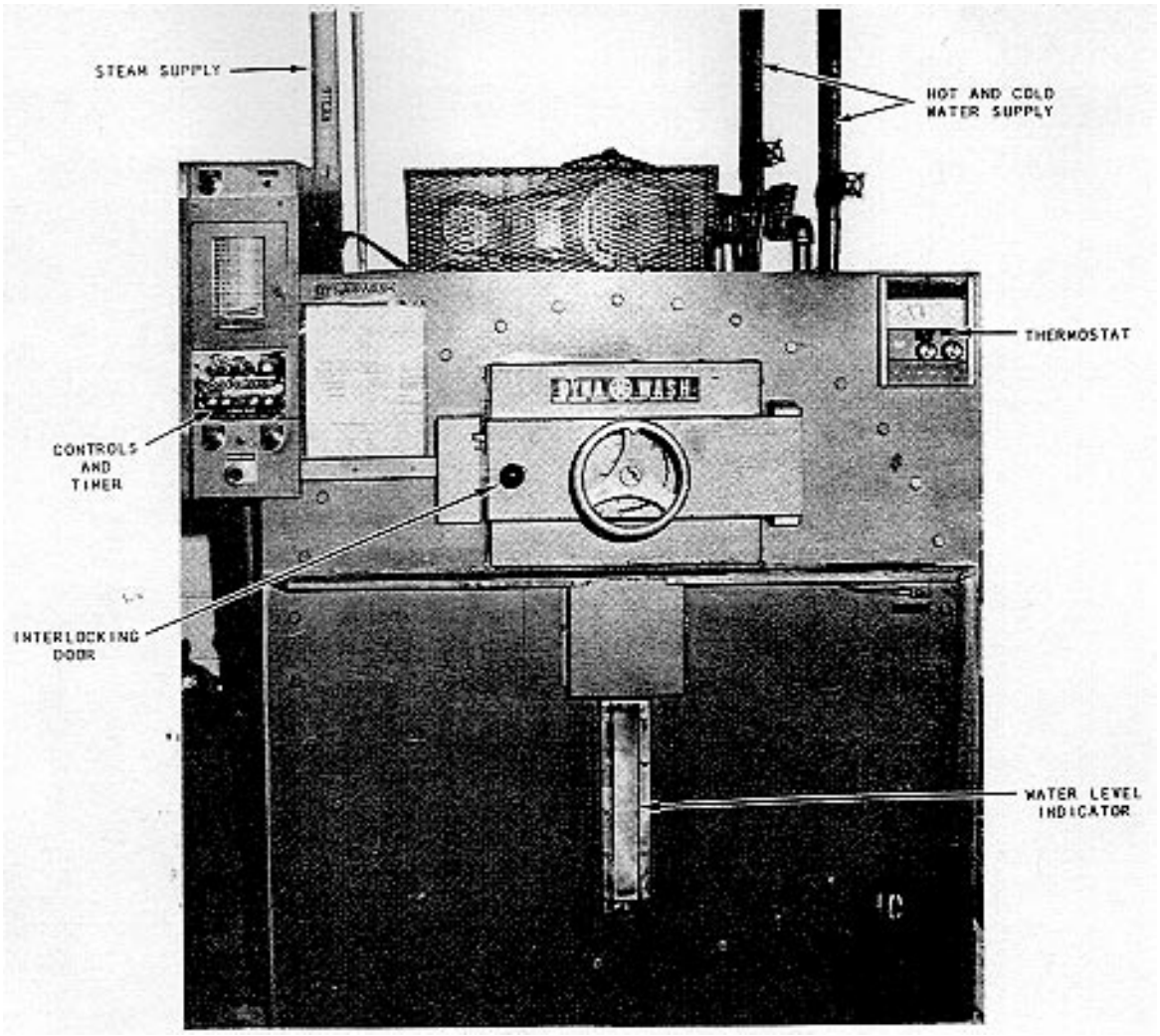


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Figure 5-14.-100 pound washer extractor basic parts.

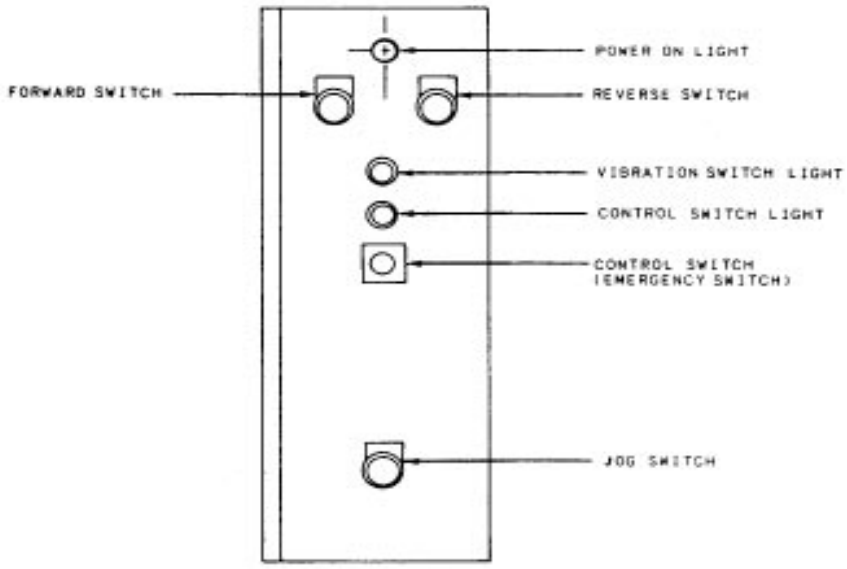

Figure 5-15.-Layout of a washer extractor control panel.

direction until the cylinder door is lined up with the outer shell door.

The programmer is illustrated in figure 5-16 and lists all major controls and indicators. The drain indicator and switch open or close the drain and indicate when it is in use. Depress the cold or hot water indicators and switches to add cold or hot water. A light on the panel indicates when the programmer is in use. The master and timer indicator lights are used in conjunction with the operation of the timer. Once these two switches are energized, the timer wheel begins to move. The wash indicator light is also used in conjunction with the master switch for operating the machine in the manual mode. The steam indicator and switch are used to emit steam to the machine in the manual mode or indicate steam is being added by the light being lit during the automatic mode. The signal indicator light and switch light up and sound a bell when the automatic cycle is complete to alert laundry personnel. The extract indicator light and switch are used to energize the extract motor during the manual mode and light up when extract is being used during the automatic mode.

A microswitch is installed inside the programmer to protect the user. Once the door to the programmer is opened, the microswitch pops out and de-energizes the circuit to prevent electrical shock. The drum control disk is used to manually turn the program wheel around.

As you can see there are several controls, however, if you run the machine automatically the way it was intended, you will never have to use most of them.

DESCRIPTION OF THE PROGRAMMER

The operation of the programmer is controlled by energizing the control switch on the control panel and then energizing the master and timer switch on the programmer. (See fig. 5-16.)

A program chart is cut to conform with Navy wash formulas and is installed on the control disk wheel inside the programmer. Also inside the programmer are fingers that drop into grooves that were cut in the program chart. Once these fingers come in contact with the metal on the disk, they energize that particular operation. The disk

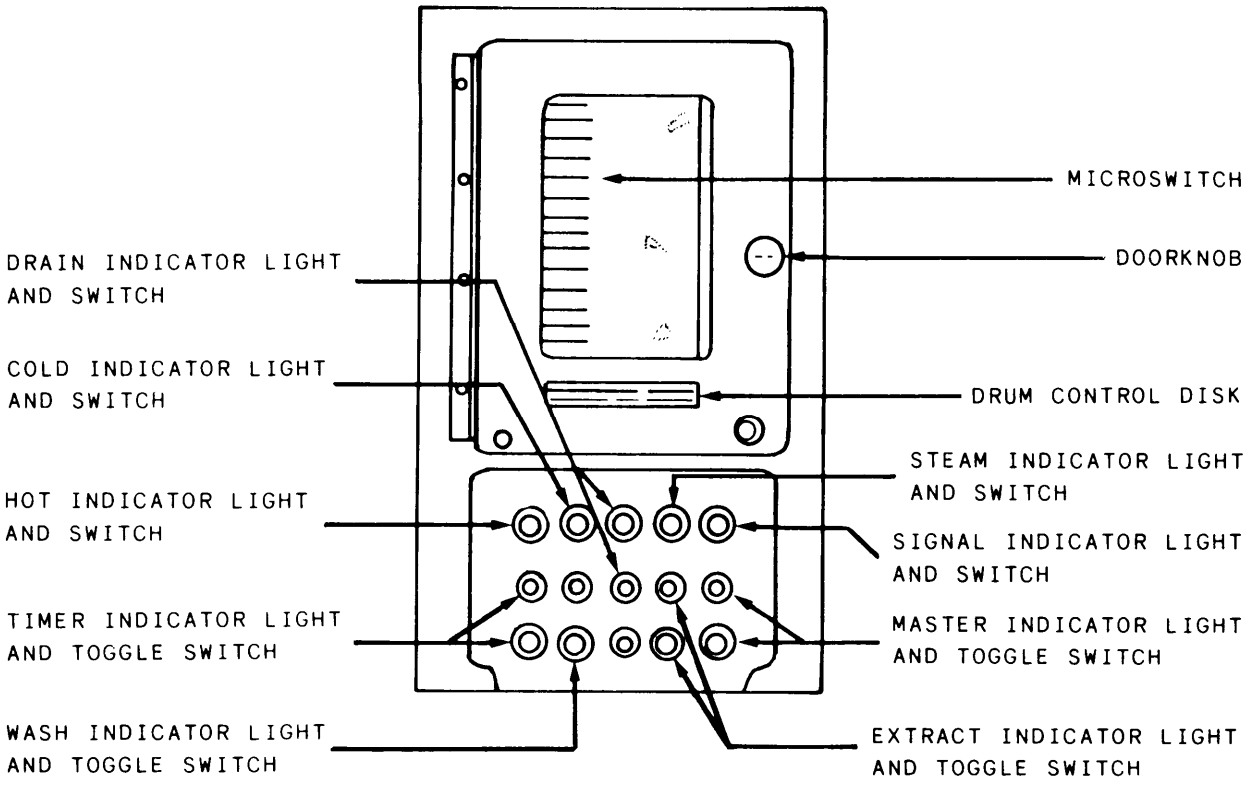

Figure 5-16.—Layout of washer extractor programmer.

continues to rotate until the timer switch is off or when one of the following occur:

- The disk stops until proper water levels are reached.
- The disk stops until correct water temperatures are acquired during steam injection.
- The disk stops while adding supplies from the automatic dispenser.
- The disk stops when the signal goes on.

After the completion of the cycle and when the signal alarm goes off, the timer switch should be de-energized to prevent the chart from advancing again.

PROGRAM CHART

In conjunction with the wash formula, a program chart is cut according to the Navy wash formula. These charts, available through the supply system, are used with the automatic programmer on the washer extractor to make sure the Navy wash formula is followed to the letter. Your local fleet assistance team is available to provide assistance in cutting the chart. A sample program chart is illustrated in figure 5-17. Keep in mind this is a sample chart only and should not be referenced in cutting your own chart.

Temperature Control

This control on the program chart regulates the temperature of the water. The desired temperature of the water in the washer extractor is controlled by a thermostat located on the

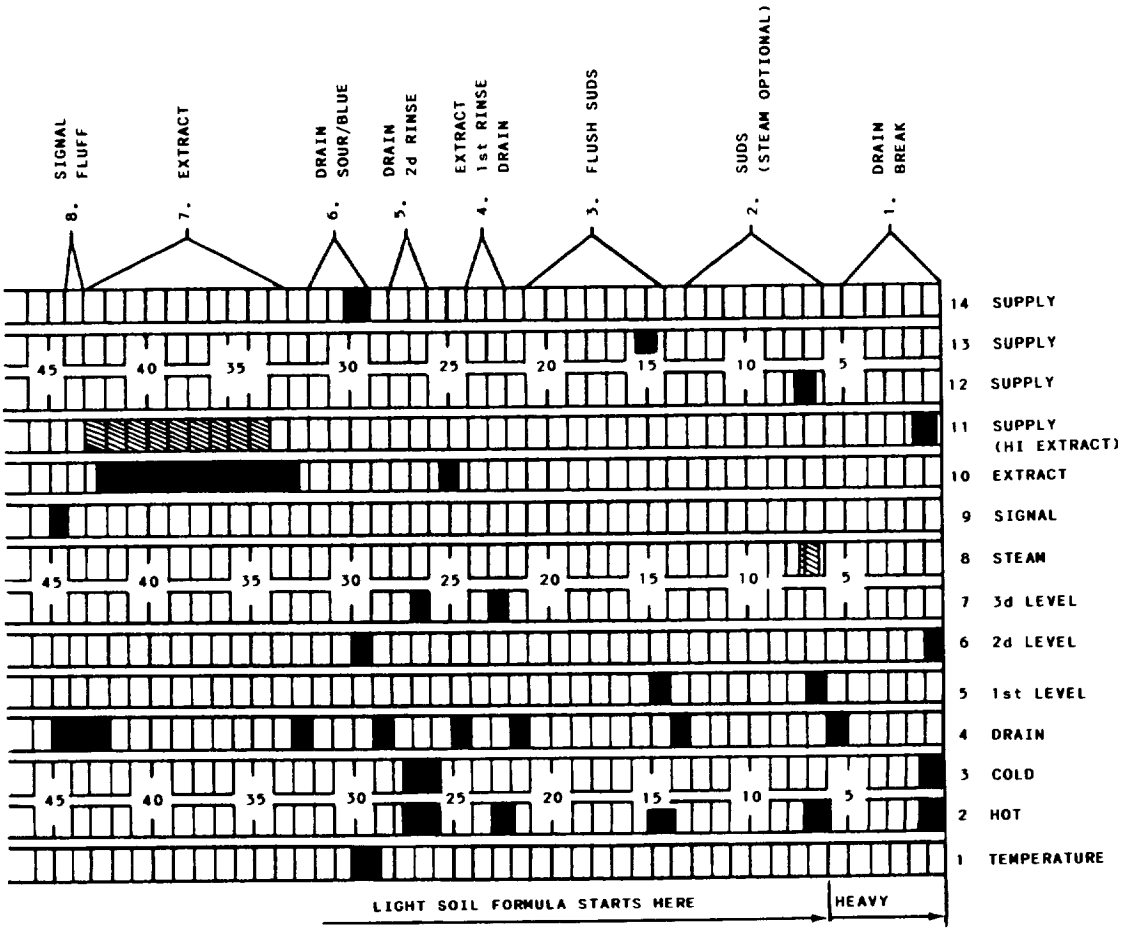

Figure 5-17.—Sample program chart.

washer itself (fig. 5-18). This thermostat can control two temperature settings, the high temperature for washing and the low temperature for sour. The low temperature is controlled by turning the black pointer on the thermostat to the desired temperature setting. Once the temperature control slot is reached on the program chart, hot water is added to the washer and tempered with cold water to reach the desired temperature you set on the thermostat. The desired temperature will always be the lower temperature on the Navy wash formula.

To set the high temperature, move the red pointer on the thermostat to the high temperature setting on the wash formula. During the break suds, hot water is admitted into the washer. The hot water stops when water levels are reached and then steam is admitted until the high temperature is reached. The third pointer in the thermostat indicates the actual temperature in the washer.

Water Levels

Water levels in the washer are controlled by slots 5 through 7 on your program chart (fig. 5-17). Wash formulas are based on certain amounts of water. If the amounts are other than indicated, your concentration of supplies will not be correct. Water levels are preset at the factory; however, they may have to be adjusted to conform to Navy wash formulas. Water levels should be reached before steam is admitted into the washer. If you notice steam being admitted into the washer before water levels are reached, the cutting of the program chart should be rechecked.

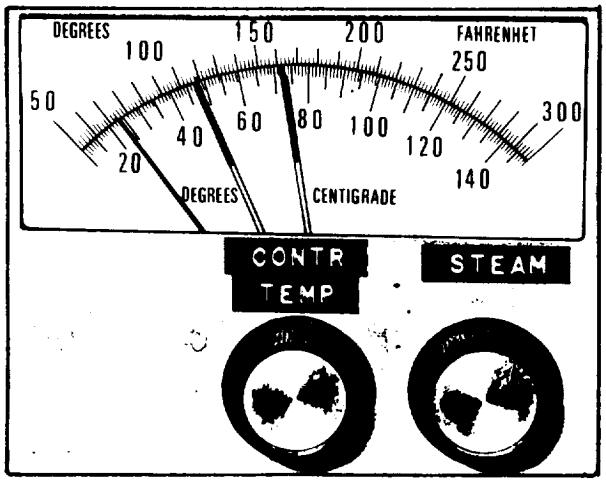

Figure 5-18.—Washer extractor temperature control.

Automatic Supply

The automatic injection of supplies into the water is done by slots 11 and 12. The automatic supply bins that are located on the right side of the washer extractor contain four bins. Navy wash formulas I and II require three supplies and Navy wash formula III requires two supplies. Therefore, you will only use two bins because sour and starch can be added together. This means only two of the four slots on the program chart will be cut to allow these supplies into the washer drum.

SAFETY FEATURES

All laundry personnel should be familiar with washer extractor safety features to prevent personal injury and/or damage to equipment. The laundry supervisor should prepare a locally prepared document that covers all safety features noted in the equipment technical manual. The safety features listed below are generally true for all models; however, check your technical manual for any additional safety features.

1. During the wash cycle the washer extractor will cut off if the outer shell door is opened.
2. The outer shell door of the washer extractor will not open during the extract cycle because of an interlock switch.
3. Both hands must be used to operate the jog switches on the control panel.
4. The control switch on the control panel or the master switch on the programmer can be used as emergency stops.
5. The vibration switch is installed to stop incorrectly loaded machines during extract.
6. The air pressure switch will not allow the machine to operate on less than 50 pounds of air pressure for the wash cycle and 80 pounds of air pressure for extract.
7. The automatic brake engages during power loss or emergency stop.
8. The positioning interlock switch is installed to eliminate the possibility of having the wash motor activate while the outer shell door is open.

PREOPERATIONAL CHECKS

Before actually operating the washer extractor, be sure you are ready by doing the following:

- Check your steam supply (100 pounds is ideal).

- Check to make sure you have fresh water.
- Check your air pressure (the washer extractor will not operate if less than 50 pounds).
- Make sure all other switches are off when you energize the control and master switches so nothing else will energize.
- Turn equipment on; check for response (lights, dump closed, and so forth).
- Check the cylinder door; make sure it is secured.
- Check the thermostat for proper temperature settings.

AUTOMATIC OPERATION

Figure 5-19 shows a laundryman loading a Dyna Wash. Except for loading, unloading, and adding supplies all functions in the automatic mode are done for you. When loading the Dyna Wash, you should divide the wash load into three equal piles. There should be no more than a 10 percent difference in the weight of each pile. Overloading a washing machine is one of the chief causes of breakdowns because greater strain than the manufacturer intended is placed on all moving parts, particularly the motor. Overloading also results in poor washing because the water and cleaning solution do not have adequate space and sufficient agitation to remove soil. Underloading, on the other hand, results in a waste of water and cleaning supplies. You should, therefore, weigh every load of clothes for each compartment in the

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Figure 5-19.-Loading the washer extractor.

cylinder. Once you have done your preoperational checks, you are ready to operate the washer extractor using the following procedures:

1. Open the shell door.
2. Energize the control switch; make sure all other switches are in the OFF position before doing this function.
3. Rotate the cylinder with the jog switch, used simultaneously with the reverse or forward switch until the cylinder door is opposite the shell door opening.
4. Turn off the control switch.
5. Open the cylinder door. CAUTION: NEVER place hands inside the shell or cylinder while the control switch is energized.
6. Load washer to rated capacity.
7. Mark on the washer with chalk what is in each pocket (each cylinder door is numbered 1, 2, or 3).
8. Close the door to each cylinder; latch it securely.
9. Close the outer shell door.
10. Add required supplies to the automatic dispenser; make sure you place them in the correct bin.
11. Use the drum control disk to set the programmer chart to the beginning; make sure the master switch to the programmer is off while doing this.
12. Energize the control switch, master switch, and timer switch (in that order).

From this time on, the operator normally will not have to return until the signal sounds. The bell to this signal can be silenced by securing power or depressing the button.

MANUAL OPERATION

If the automatic timer is inoperative, you will have to operate the machine manually. Manual mode should not be used when the washer timer is operating properly. The controls and switches as mentioned earlier when used properly allow the operator to use the manual mode. Looking back at automatic operation you should follow all steps up to and including step 9 and then follow these instructions:

10. Turn the control switch on.
11. Start the wash motor by energizing the wash and master switches.
12. Make sure all other switches are off and the drain switch is closed.
13. Add water to the proper level and at the proper temperature, as indicated on the wash formula. If the water is not hot enough, use steam to bring it to the desired temperature.
14. Add chemicals as prescribed by the washing formula, through the supply door when the cylinder is passing the supply door in the downward direction.
15. Start timing the bath (follow formula).
16. Open the drain switch and drain the water when time for each cycle elapses.
17. Permit sufficient time for the water to drain from the shell after the water level reads zero, and then close the dump valve.
18. Repeat steps 14 through 17 until the wash formula reaches the extract cycle of the formula.
19. Leave the valve open for more complete drainage after the last bath.
20. Start the extraction cycle. Move the switch to extract position. When extraction is completed, move the switch to WASH or INCH position as desired.
21. Secure the power, loosen the handwheel, and open the outer shell door only after the washer cylinder comes to a complete stop. Use the jog switch to align the cylinder doors, then open and unload each pocket.

LOADING AND UNLOADING

Before the wash in the washer extractor is done, attending laundry personnel should have three piles of sorted and weighed soiled laundry ready for loading. The unloading process is just the opposite of the loading process. Make sure when you open the outer shell door that the cylinder has come to a complete stop and all switches are de-energized. You are now ready to line up the cylinder doors with the outer shell door for unloading purposes. CAUTION: NEVER stick any part of your hand or arm inside the shell door if any of the washer extractor controls are energized. After unloading the freshly laundered clothing, it should be routed to the next processing station and the presorted and weighed soiled laundry loaded. The clean laundry should be routed swiftly to prevent it getting mixed up with other laundry. It is either routed to the press deck for processing on the presses or flatwork ironer or placed in the dryer for drying.

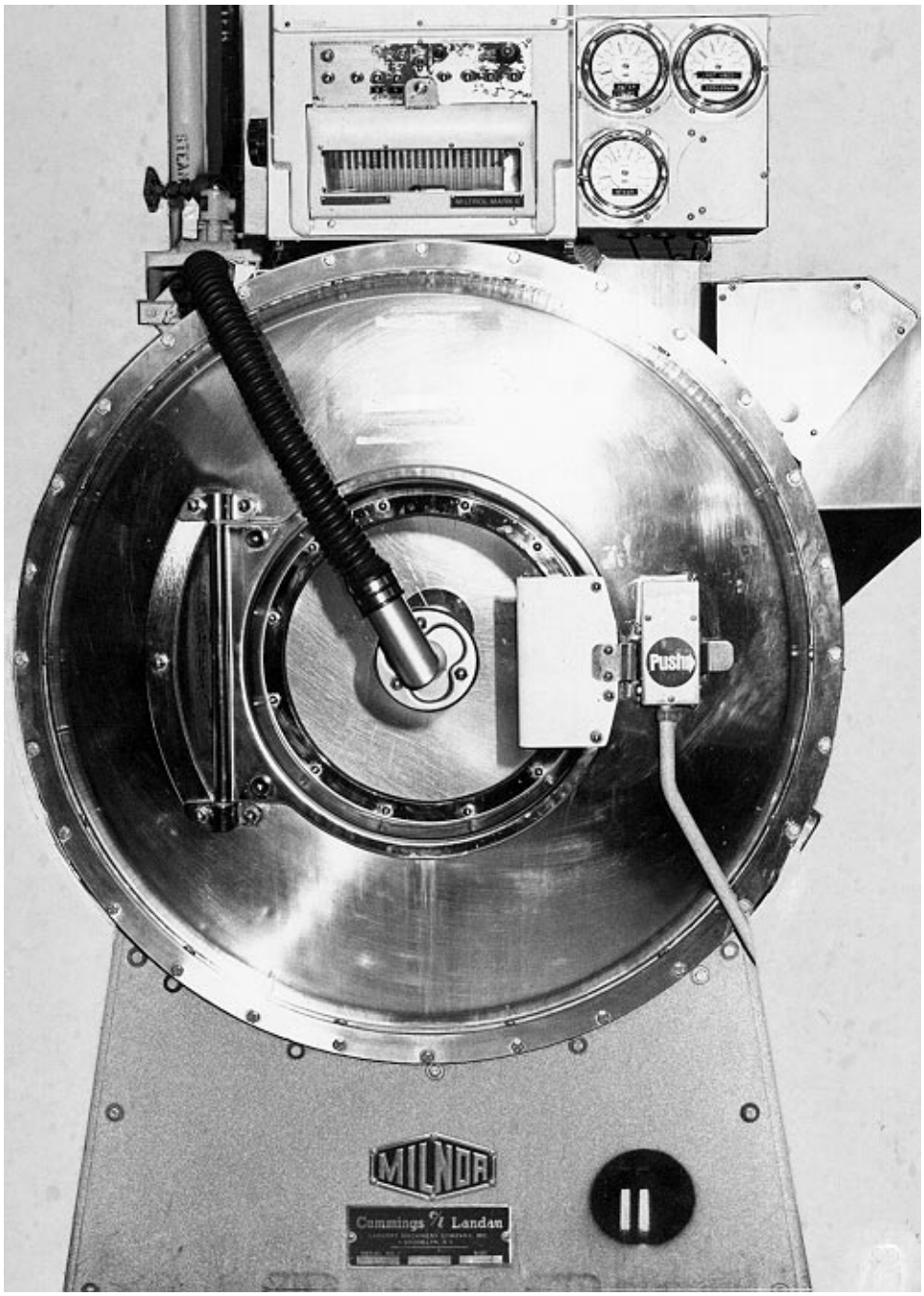

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Figure 5-20.-Milnor washer extractor, 60 pound.

OPERATION OF THE PELLERIN MILNOR WASHER EXTRACTOR

A 60-pound Milnor washer extractor is illustrated in figure 5-20. Like the Dyna Wash it is fully automatic, saving the operator the trouble of manual operation. The operating procedures are different from the Dyna Wash and you should be familiar with them.

MILNOR CONTROLS AND INDICATORS

The control system on the Milner looks complicated; however, it is quite simple and easy

to understand. The programmer controls and indicators are shown in figure 5-21. The door to the programmer is open so you can see the controls on the inside. Machine controls are located near the supply injector; as we discuss the controls, follow along on the illustration.

1. Master switch—This switch (No. 1) controls power to the machine and has three positions:

MANUAL—machine functions controlled by switch settings

OFF—power off

FORMULA—machine operations controlled by timer and precut program chart

2. Motor switch—The motor switch (No. 2) controls power to wash, drain, and extract motors. It also has three settings:

WASH formula-washer operates in either auto or manual mode

EXTRACT—this powers extract motor in manual mode

OFF—power to wash, drain, and extract motors de-energized

3. Temperature control switches (Nos. 3 and 4)—These switches control water temperature. They have three settings for each switch:

ON—used during manual mode to control preset temperature

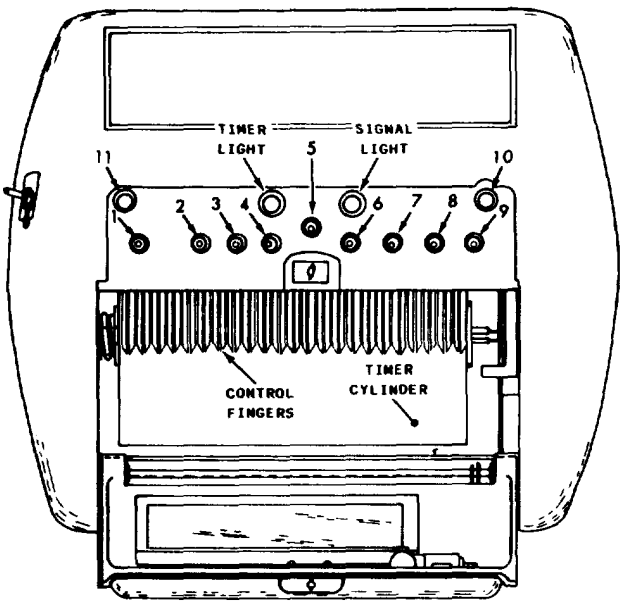
OFF—no temperature control

FORMULA—temperature automatically maintained according to the program chart

4. Signal switch (No. 5)—This switch is used to cancel and signal what has been called for on the program chart and allow the Milnor motor to resume operation.

5. Drain (No. 6)—The drain has three positions: OPEN, SHUT, or FORMULA. In the FORMULA position the drain opens or closes according to the formula.

6. Water level switch (No. 7)—This switch has three positions: HIGH, LOW, or AUTO. The



1 MASTER SWITCH
2 MOTOR SWITCH
3 TEMPERATURE NO. 1 SWITCH
4 TEMPERATURE NO. 2 SWITCH
5 SIGNAL SWITCH
6 DRAIN SWITCH
7 WATER LEVEL SWITCH
8 HOT WATER SWITCH
9 COLD WATER SWITCH
10 START BUTTON
11 STOP BUTTON

Figure 5-21.—Milnor controls and indicators.

HIGH and LOW positions are used in manual mode while the AUTO position admits water according to the program chart.

7. Hot and cold water switches (Nos. 8 and 9)—These switches control opening and closing of hot and cold water. Both switches have three positions:

IN—opens hot or cold in manual mode

OFF—closes hot or cold in manual mode

AUTO—opens and closes either valve according to the program chart.

8. Signal and timer lights—Signal light is lit when machine requires operator attention. The timer light is lit when the timer is in operation.

9. Thermometer—The thermometer automatically controls preset water temperatures

within the machine. The thermostat indicators include a:

black pointer—indicates actual water temperature,

green pointer—controls your lower temperature, and

yellow pointer—controls your higher temperature.

Your start (No. 10) and stop (No. 11) buttons are self-explanatory. The stop button can be used to shut down the machine quickly if necessary.

SAFETY FEATURES

The Milnor has many safety devices that you should become familiar with. These safety features should be listed on a locally prepared document and posted near the machine. The door to the washer has an interlock that prevents the door from opening during operation. The machine will also cut off automatically if the air pressure is too low. The air pressure should be a minimum of 80 pounds for extract or a brake air pressure switch will prevent the machine from entering extract.

AUTOMATIC OPERATIONS

Before you operate the Milnor, perform the preoperational checks as outlined for the Dyna Wash and load the machine to the rated capacity.

1. Turn cylinder knob until formula chart fingers approach start.
2. Close and lock the door, add supplies to automatic dispenser.
3. Place all switches in the AUTO or FORMULA position.
4. Turn cylinder knob until interior light goes on in the formula chart.
5. Push start button.
6. After cycles complete a signal will sound, push stop button, open door.
7. Unload machine.

MANUAL OPERATION

Manual operation should only be used when the automatic timer is inoperative. Manual operation slows down workflow, causes less than desirable washing results, and ties up laundry personnel as they will be busy attending machine controls. The following steps should be followed:

1. Load machine to rated capacity.

2. Turn formula chart to uncut position.

3. Close and lock the door.

4. Set your switches to the following positions:

Master switch—MANUAL setting

Motor switch—WASH-FORMULA setting

Temperature control—for first cycle put temperature 2 switch to ON and temperature 1 switch to OFF

Drain switch—shut

Hot water switch—in

Cold water switch—in

5. Push start button and washer will fill with water of selected temperature. You can fill washer to desired water level and shut off the water by placing the hot and cold water switches to OFF.

6. Add supplies following applicable wash formula.

7. Switch drain to open and allow water to empty at the end of each cycle.

8. Energize the extract motor by switching the motor switch to EXTRACT after draining the water from the flush suds cycle. Leave drain open for this procedure.

9. Shut off extract, close drain after 1 minute.

10. Complete the next two rinse cycles.

11. Switch temperature 1 to ON and temperature 2 to OFF on the third rinse.

12. Turn water switches on, fill washer to desired level, and shut water switches off.

13. Add sour and starch as required.

14. Open drain at end of final rinse. Allow water to empty and energize extract.

15. Push the off button and turn all switches off at the end of the extract. Allow the cylinder

to stop and unload. Figure 5-22 shows a laundryman unloading a Milnor.

MAINTENANCE OF THE SHIPBOARD WASHER EXTRACTORS

The washer extractor is a very important and expensive piece of equipment. If it breaks down, time and money are consumed, perhaps unnecessarily, and the ship's company may be subjected to inconveniences and unsanitary living conditions. Therefore, too much emphasis cannot be placed on the proper care and maintenance of the washing machine.

The senior laundry petty officer and all operators are responsible for the care of washer extractors. The washer should be kept as clean inside and outside as possible. Soap solutions and hot water help to keep the inside clean and sanitary, but scum and other accumulations should be removed daily from the exterior.

An oxalic acid solution made by dissolving 1/2 pound of oxalic acid crystals in a gallon of water can be used to keep the outside of the tub clean and bright. Use a rag or brush to apply the solution. Rub vigorously and then rinse with clean water. A fine abrasive powder, such as pumice

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Figure 5-22.-Laundryman unloading the Milnor washer extractor.

stone, sprinkled on the damp cloth helps to remove grease and film from the tub. Scouring powder and a brush vigorously applied also work quite well.

As an operator, be alert for mechanical problems that may occur between maintenance checks such as the following:

- Loose latches on cylinder doors
- Leaky valves
- Extractor brake working improperly
- Thermostat working improperly
- Switches inoperative
- Timer operating improperly
- Extract engages roughly
- Water levels incorrect
- Safety features inoperative

Laundry personnel should not attempt mechanical or electrical maintenance. Remember, hands off electrical wiring in the electrical box. All mechanical or electrical maintenance must be done by qualified shipboard maintenance personnel.

TUMBLER DRYER

Figure 5-23 illustrates a group of tumbler dryers. The Navy mainly uses the 50-pound

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Figure 5-23.-Battery of tumble dryers.

Cissel-type dryer. In figure 5-24 the door of the tumbler dryer is open and part of the perforated basket can be seen inside, while a laundryman loads the tumbler dryer. Each drying tumbler has an exhaust fan enclosed in the bottom of the machine. This fan exhausts air from the tumbler enclosure, and outside air then rushes through the open sides of the heat coil box, where it is heated by the steam coils. The air then enters the basket through the perforations and dries the clothes. The exhaust fan removes the air from the basket and forces it out through an exhaust duct.

CONTROLS AND INDICATORS

Figure 5-25 illustrates the controls and indicators on the tumbler dryer. Most of these controls are self-explanatory; however, check the

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Figure 5-24.-Laundryman loading the tumbler dryer.

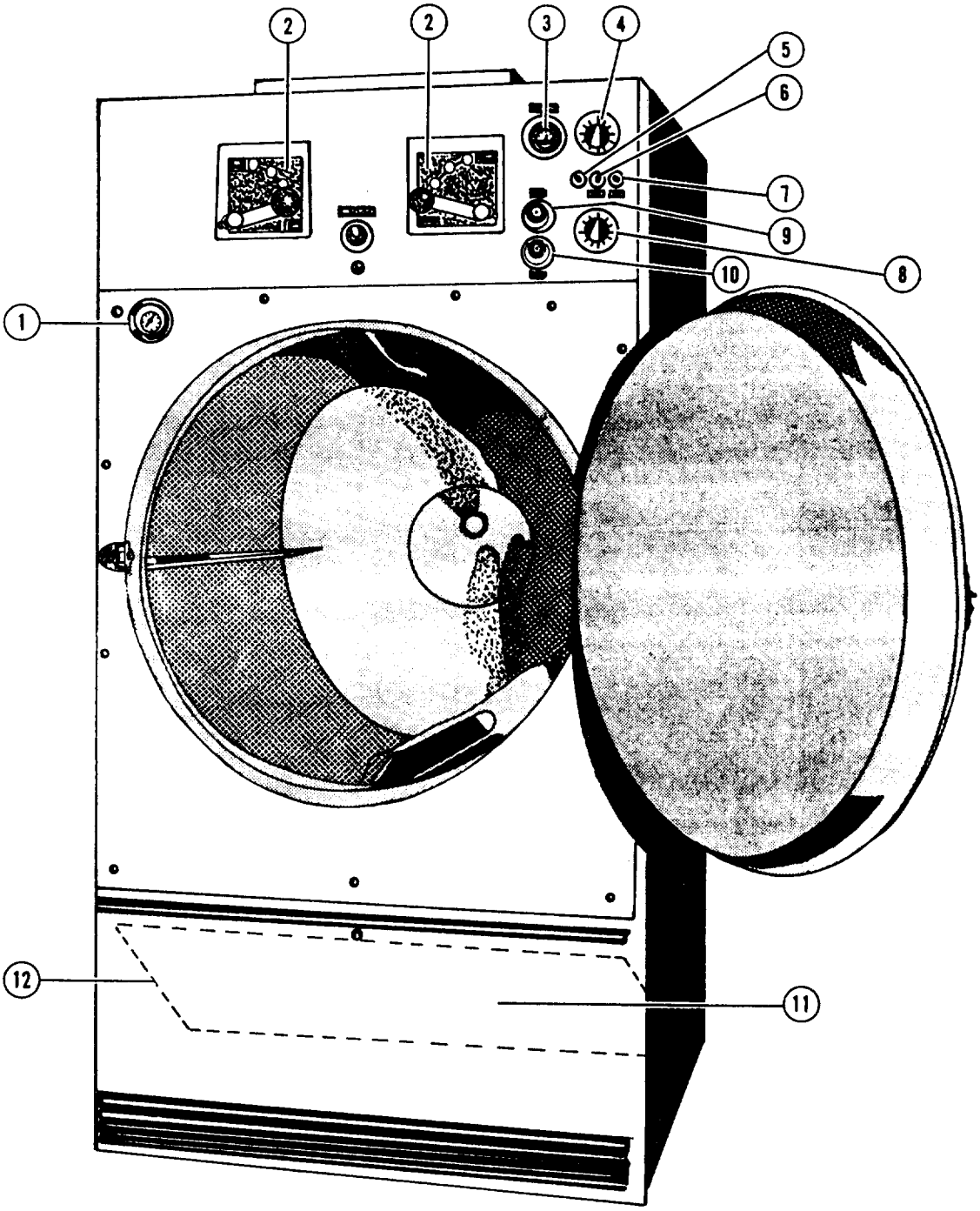

Figure 5-25.—Tumbler dryer controls and indicators.

ITEM NUMBER	NAME	DESCRIPTION
1	Thermometer	Designates basket outlet temperature
2	Dampers	Regulates basket inlet temperature
3	Temperature regulator	Regulates basket outlet temperature
4	Cooling timer	Regulates cool-down time 0 to 15 minutes
5	Temperature light	Glows when steam is on
6	Cooling light	Glows during cool-down cycle
7	Drying light	Glows during drying cycle
8	Drying timer	Regulates drying time
9	Start button (black)	Starts dryer
10	Stop button (red)	Stops dryer
11	Lint trapdoor	Access to lint screen
12	Lint screen	Collects lint

Figure 5-26.—Tumbler dryer controls and indicator chart.

chart in figure 5-26 for the name of each control or indicator and its function.

PRIMARY LINT TRAPS

The primary lint trap is located in the front of the machine inside the lower lint trapdoor. Figure 5-27 illustrates a laundryman cleaning the lint trap and lower casing. Cleaning the primary lint trap and lower casing should be done once every 2 hours. Proper cleaning of the lint trap eliminates airflow restrictions which increase the time for drying each load and create possible fire hazards.

SECONDARY LINT TRAPS

Secondary lint traps help to cut down the buildup of lint in ducting. Air that has gone through the primary lint trap and left the dryer still may have lint in it. This lint and debris build up in the ducting blocking airflow. Ducts that have long runs and elbows attract lint that gets stuck and builds up creating back pressure and a possible fire hazard. Inspection and cleaning of these vents and ducts should be done monthly. Secondary lint traps can be installed by procuring dryer lint trap bags and installing them as indicated in figure 5-28. Lint bags are available

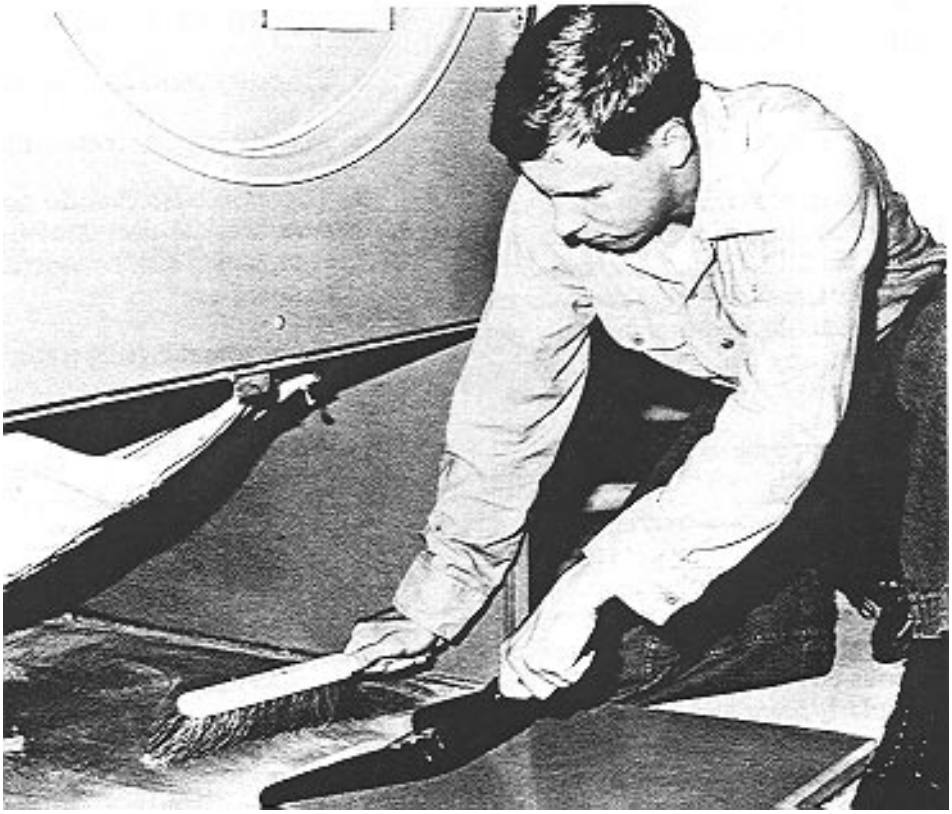

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Figure 5-27.-Laundryman cleaning the primary lint trap.

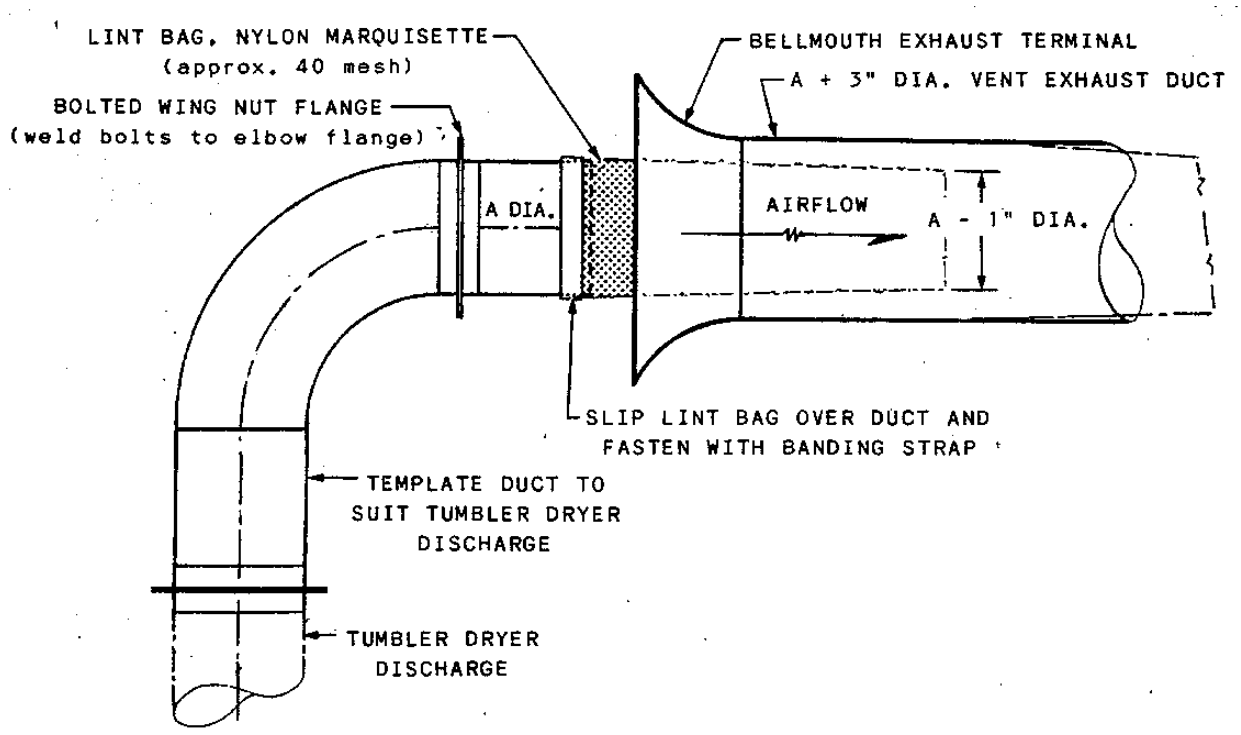

Figure 5-28.-Secondary lint trap installation.

through sources contained in the *Ship's Store Contract Bulletin.* These bags are easy to install and remove and should be cleaned once every 4 hours.

STEAM COILS

Steam coils are located at the top of the dryer. The configuration of steam coils as heat exchangers makes them collectors of lint and dirt, which slows down the transfer of heat and reduces airflow. Steam coils should be examined daily for the presence of lint; any lint present must be removed.

TUMBLER DRYER FIRES

Before we get into the actual operation of the tumbler dryer, let's discuss the potential fire hazards involved in drying clothing and other textile materials in standard shipboard tumbler dryers. The principal cause of shipboard laundry fires is spontaneous combustion of residual soil in clothing (particularly paint and drying or edible oils) and/or polymeric elastic waistband materials. Most laundry dryer fires are caused by human error or negligence. Many of the causes are listed below:

- Leaving clothing or linen unattended in the dryer
- Not properly washing, rinsing, or extracting clothes
- Overdrying because of imbalance in loading (heavy items included with light items)
- Placing divisional laundry bags in the dryer
- Not cooling down dryer loads for 10 minutes with dampers set to deliver room temperature after drying
- Improper cleaning of primary and secondary lint traps
- Improper use of the timer on the dryer
- Unclean steam coils on the dryer

In addition, operators must be familiar with safety devices and report faulty equipment to maintenance personnel. Investigations of shipboard fires have revealed the following conditions in laundry tumbler dryer safety devices:

- Clogged, damaged, or missing lint traps
- Missing or inoperative thermometers
- Thermometers that do not indicate temperatures above 220°F, although the equipment can be operated above this temperature
- No automatic temperature control
- No automatic timing device to control drying time
- No automatic cool-down cycle
- No fire sensing and smothering device

When the above conditions exist on board your ship, be extra careful when operating the tumbler dryer.

A Prevent Laundry Dryer and Hamper Fires placard (fig. 5-29) should be posted on the front of each dryer. Placards are available through the supply system and should be mounted on the door of every dryer.

OPERATING THE TUMBLER DRYER

The procedures for operation of the dryer are as follows:

1. Load the dryer, not exceeding rated capacity.
2. Set dampers to the desired position. Most loads can run in the HOT position.
3. Set thermometer regulator to desired temperature (140°-160°F). The actual dryer temperature will be indicated on the thermometer.
4. Set drying time for approximately 20 minutes.
5. Set the cool-down timer for 10 minutes to cool the load to approximately 120°F during the cool-down cycle.
6. Push the start button. Drying time depends upon steam condition, weight and texture of load, and the amount of moisture left in the load after it was extracted. Standard tumbler performance should not exceed 1 minute per pound (dry weight). NOTE: During the cool-down cycle, move dampers to the cool position.

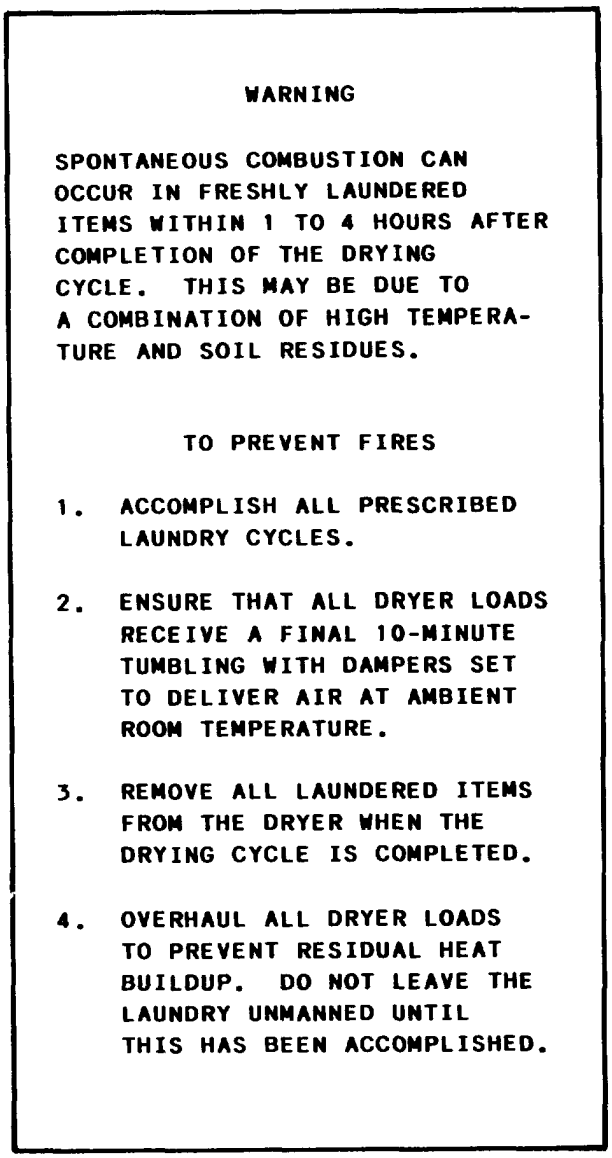

Figure 5-29.—Prevent Laundry Dryer and Hamper Fires placard.

7. Remove clothes from the dryer.

Never allow laundered items to remain in the dryer after completion of the drying cycle. Laundry personnel should store freshly dried clothing loosely and remain in the laundry after the last dryer load to make sure there is no residual buildup of heat in the clothing.

DRYING TECHNIQUES

To avoid loss of items and production, perform all drying operations by lot. Keep each lot in its proper sequence and maintain an identification marker with each lot during the tumbling operation. Exercise the greatest care to prevent any mixing of lots. Items requiring approximately the same drying time should be processed together, when possible.

Do not overload tumbler dryers as tumblers are more sensitive to overloading than any other type of equipment used in the Navy laundry. Overloading retards drying time, produces wrinkled work, and accelerates wear on the equipment. No set time can be prescribed for drying a load in a tumbler because drying time is dependent upon steam conditions, weight of the load, texture and type of material, and the amount of moisture left in the work after extraction. However, the maximum drying time for an average load of cotton items in a 50-pound tumbler dryer is approximately 20 to 25 minutes. Under ideal conditions, the drying time required for the same load may even be less. Very heavy cottons require a slightly longer drying time. Drying times used should be checked frequently, and, if longer periods are required, the dryer may have to be checked by maintenance personnel to make sure there are no problems. Tumble drying of washed synthetic or synthetic blend clothes and linens properly carried out can minimize and/or eliminate the need for pressing of the items. When drying linen or this type of clothing do the following:

1. In all instances the tumbler dryer must not be overloaded in order to allow adequate tumbling action for wrinkle removal. Three-quarters of the rated dryer capacity is recommended.

2. Hot tumble drying temperatures should not be used. Exhaust-air temperature should be set at a medium setting (between 140° to 160°F). Drying time varies with the nature and size of the load, but items containing a synthetic or high percentages of synthetics in blends dry much faster than similar 100 percent cotton items. Items should not remain in the tumbler when it is not in motion.

3. Permanent press, synthetic, and synthetic blend wearing apparel and linens, when removed from the dryer immediately after cool down and either placed on a hanger or folded, should be suitable for use without ironing. Processing of linens in this manner can help cut down the workload for flatwork ironers.

Heavy items scheduled for pressing must be preconditioned (partially dried) in tumblers for

approximately 5 to 8 minutes before being pressed. This will make pressing easier; however, preconditioned items should not be overdried before being removed from tumblers. When overdrying takes place, the difficulty of pressing these items is increased and the quality of the finished item is impaired.

Remove tumbled laundry from tumblers by hand, place in trucks or baskets provided for this purpose, and deliver to the next processing section. Care must be taken that lots are not mixed and that they are delivered in the sequence in which received. It is important that processed workloads be delivered to the next processing section as soon as possible. This is of particular importance to preconditioned workloads since delays will cause the work to dry excessively and will affect the efficiency of the pressing operation. Preconditioned workloads should be covered with dampened cloths or nets to help preserve their moisture content. Unload all tumblers when the laundry is shut down for the day. Check for heat content of all unfolded rough-dry work that is to remain in the laundry overnight. Spread items out for airing if they are still hot.

GENERAL MAINTENANCE

The majority of all dryer maintenance is done by the engineering department. You should always keep your tumbler dryer free of lint. Lint is a fire hazard, besides, clothes will not dry properly unless the lint screen is clean enough to allow free passage of air through the machine. If dryer lint traps become worn or torn you should replace them. Always clean the lint screen casing when you clean the lint screen.

Use a vacuum cleaner or a compressed air jet to remove lint deposits from heater chambers and air passages in the dryer. If lint is left to accumulate, spontaneous heating may result, or the flow of air will be restricted.

Other maintenance you can perform on the drying tumbler includes the following:

- Checking switches and dampers to determine how well they work
- Keeping nuts and screws tight
- Reporting maintenance requirements to your supervisor promptly
- Checking the tension of drive belts

Screws, nails, pins, and melted plastic that have solidified will occasionally clog the perforations in the basket mesh creating operating hazards. Baskets should be checked and cleaned daily.

The engineering department should check the tumbler dryer at regular intervals for accumulations of lint in air passages and the lint box, faulty opening and closing of the dampers, leaks in the steam valves or lines, and the general condition of the machine. Engineering personnel should lubricate the tumbler and make major overhauls according to the recommendations of the manufacturer.

FLATWORK IRONER

The main items in the laundry processed through the flatwork ironer aboard ship are bed linens and tablecloths. The flatwork ironer is installed on ships that have sufficient requirement for this piece of equipment. On this ironer (sometimes called a mangle) the flatwork is ironed damp just as it comes from the washer extractor. Such things as handkerchiefs, hand towels, aprons, undershirts, and white trousers can also be finished on the flatwork ironer.

Items of laundry flatwork are currently being manufactured from synthetic, synthetic blend, and cotton blend fabrics. These items can be successfully finished without pressing in a tumbler dryer. Use of dryers in this connection can reduce the press deck load where an ironer is not available. Where an ironer is available, its use reduces the drying tumbler workload and produces a better finish than rough drying.

On ships without flatwork ironers, some of the flatwork, such as table linen, is pressed on a laundry press of the type described in the next section. The rest of the work is rough dried.

You will probably serve at some time on a ship that has a flatwork ironer and, therefore, will be expected to know how to operate one correctly.

IRONER CONTROLS

Currently flatwork ironers used on Navy ships have either 60-inch or 85-inch cylinders. The flatwork ironer consists of a steam-heated cylinder against which the flatwork is pressed by means of three padded pressure rolls. The work is carried into the ironer on feed ribbons that lead the work over the cylinder. At the rear an apron or ribbon presses the work against the underside of the

cylinder and returns it to the front. Steam to heat the cylinder is provided by the ship's steam line, and the motor is electrically driven.

The ironer parts that you are mainly concerned with are shown in figure 5-30. The one part not shown that is very important is the emergency stop button located in the right-hand rear of the machine. We will briefly describe the main parts so you can get a broad understanding of the flatwork ironer.

- The return ribbons hold flatwork in contact with the heated cylinder until discharge.
- The delivery table catches all discharged material.
- The finger guard prevents the hands of the operator from getting near the padded pressure rolls.
- The padded rolls smooth and flatten fabric to the heated cylinder.
- The feed ribbons feed flatwork.
- The feed ribbon drive roll turns the feed ribbons.
- The speed control lever controls the speed in which flatwork is passed through the ironer.
- The foot pedal engages the compression roll.

SAFETY PRECAUTIONS

Before discussing operation of the flatwork ironer, we need to discuss safety precautions that apply to this equipment. Do not try to remove jammed linen or material while the machine is running. Serious injury to the operator or damage to the ironer can occur if you attempt to reposition or unjam linen or service the ironer while it is running. If something is jammed, shut the ironer off at the power source before trying to remove it. If the ironer has compression roll levers, learn how these levers work and always use them to

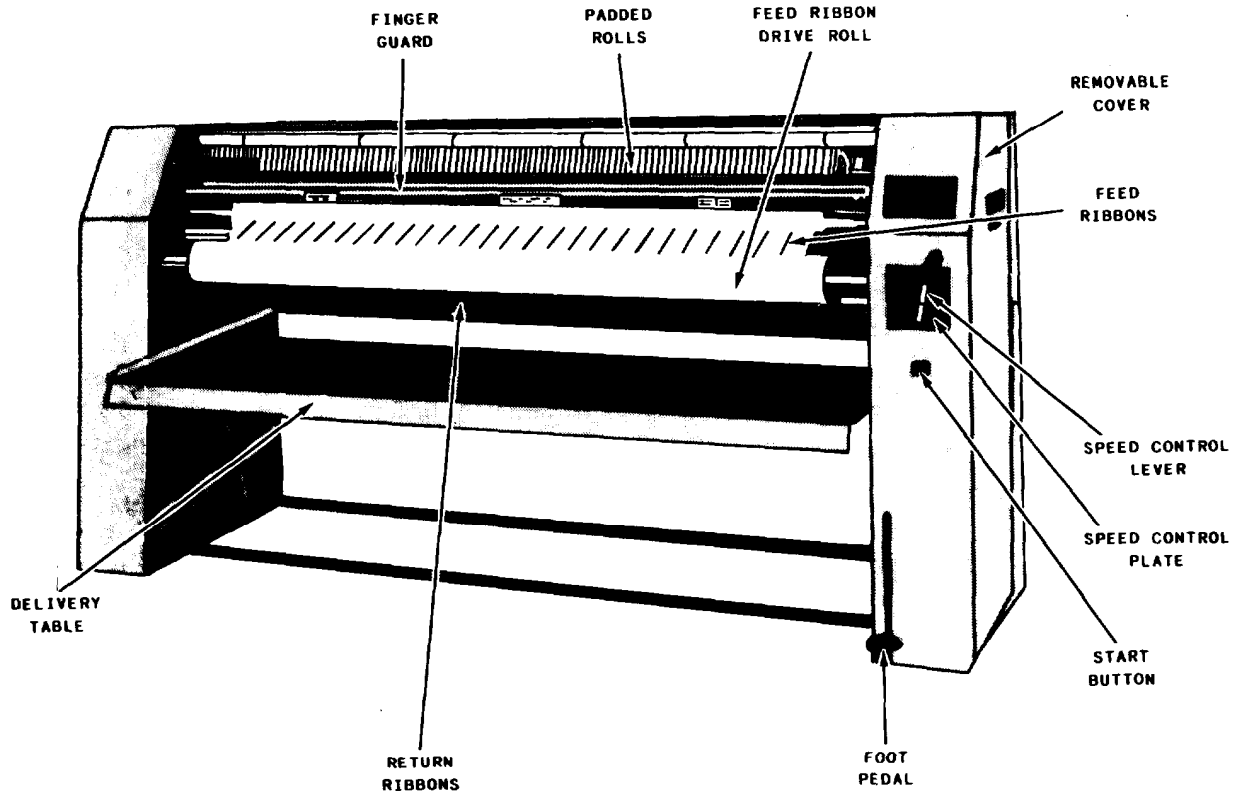

Figure 5-30.—Flatwork ironer basic parts.

fully raise padded rolls before you shut off the power, allow the ironer to cool, and try to remove jammed linen or service the ironer. Always avoid contact with heated parts.

Never reach over, under, or behind the safety finger guard or into any area near the heated roll or moving parts without first shutting off the ironer at the power source. If you break this rule, you are taking the chance of getting caught in the rolls or ribbons and possibly incurring serious injury from the ironer's heat or pressure. This rule should be followed whether you are working at the front, side, or rear of the ironer.

Check the operation of the safety finger guard at the beginning of every shift. Touching the safety finger guard should activate a switch that will stop the ironer. If this safety feature is not working properly, shut off the ironer at the power source and notify your laundry supervisor.

Do not try to operate the ironer until the safety finger guard is repaired and working properly. Always make sure that all other safety guards and end panels are in place before operating the ironer.

ALWAYS make sure that all ribbons and tapes are in place and working properly. They are designed to hold linen so it is properly ironed and to prevent jamming. Never relace or adjust tapes, ribbons, or padding while ironer is running. Keeping the ironer well waxed also helps to prevent jams. DO NOT iron anything except flatwork because damage to the ironer or injury can result. The ironer is designed for processing flatwork only. DO NOT stand, sit, or kneel on any shelf at the front or rear of the ironer. These are not designed to support a person's weight.

PROTECT yourself and your fellow workers by making sure that everyone follows these simple rules. Read and follow all safety labels. Learn which parts are hot and how the ironer works—including how to shut it off in an emergency. Do not get close to heated or moving parts or wear loose clothing or jewelry when near the ironer. If you see people breaking these rules, help them prevent serious injury to themselves or others by reminding them to follow the rules and shut the ironer off first. When in doubt contact the engineering department. Do not try to make mechanical repairs on this equipment. Only qualified personnel should service this equipment.

OPERATION OF THE FLATWORK IRONER

Before you start and operate the flatwork ironer, make sure you fully understand the use of each control and the equipment safety precautions. The compression roll should be disengaged (top position) and flatwork ready to be fed into the machine. Follow these steps:

1. Start ironer by pressing the green button.
2. Set to the lowest speed by adjusting the speed control handle. NOTE: NEVER change the speed of the ironer when the ironer is on or you may damage the variable speed mechanism.
3. Open the steam supply valve slowly. Open the valve one-half a turn at first and gradually allow steam to enter the cylinder. Continue to open the valve slowly until opened all the way. The steam pressure for the ironer should be about 100 psi. It normally takes about 30 minutes to fully heat the cylinder.
4. Engage the compression roll and wax the ironer (see waxing the ironer).
5. Start feeding the flatwork. You may increase speed to meet your particular need. During normal operation there are two locations in which the ironer maybe stopped, the red finger safety guard and red emergency stop button.
6. To stop the ironer at the end of your work, close the steam supply, raise the compression roll, and allow the machine to run without steam for 20 to 30 minutes. This procedure allows all components to properly cool before the power is shut off. This cool-down procedure also prevents damage to return ribbons and protects the compression roll padding from being flattened.

FEEDING THE FLATWORK IRONER

The flatwork ironer was designed to finish all cotton or blended flatwork such as tablecloths, napkins, towels, and linen. It is not designed to process nylon or rubberized fabrics. Do not try to process these items as it may result in fire or damage to ribbons or cylinder surface. When leaving the ironer for more than 5 minutes, always raise the compression roll.

To help ease feeding, you should shake a quantity of work out and lay it over the edge of the laundry basket or on a table within easy reach.

Check on the amount of dampness in the pieces before feeding. The piece should come out of the ironer dry, and to accomplish this, some adjustment of the extracting time may be necessary. If the pieces are not extracted long enough they will come out of the ironer still damp; and if extracted too long they will come out with a rough, dry appearance. Do not let flatwork sit around in the laundry baskets after it is removed

from the extractor. Iron flatwork immediately while it is at the proper stage of dampness, or cover it with plastic or other material to retain a proper amount of moisture. Feed flatwork into the ironer WRONG SIDE UP, so that the smooth or "right" side comes into contact with the cylinder. This gives a smooth finish to the outside of the flatwork. Fold the smooth side out as the work comes from the machine.

Large Items

Two persons should feed large items as shown in figure 5-31. To start the piece through the ironer, each person grasps a top corner with the hand nearest the ironer, stretching the forward edge between them so that it enters the machine straight and smooth. Each person uses the other hand to straighten the front edge as it enters the ironer. After the feed roll ribbons pick up the spread, they use both hands to hold the spread firm and straight as it passes through the ironer. As the spread comes out, the personnel take it by the edges again and fold it.

Small Items

When you feed small articles into the flatwork ironer, use the entire length of the cylinder, If you continually feed small items into the ironer at one or two spots, the padding on the pressure rolls wears more at these points and your work comes out unsatisfactory. The only way to correct this difficulty is to repad the rolls.

CARE AND MAINTENANCE

Maintenance of the flatwork ironer is the responsibility of engineering personnel. ONLY trained maintenance personnel should do any work on the ironer. Instructions for changing

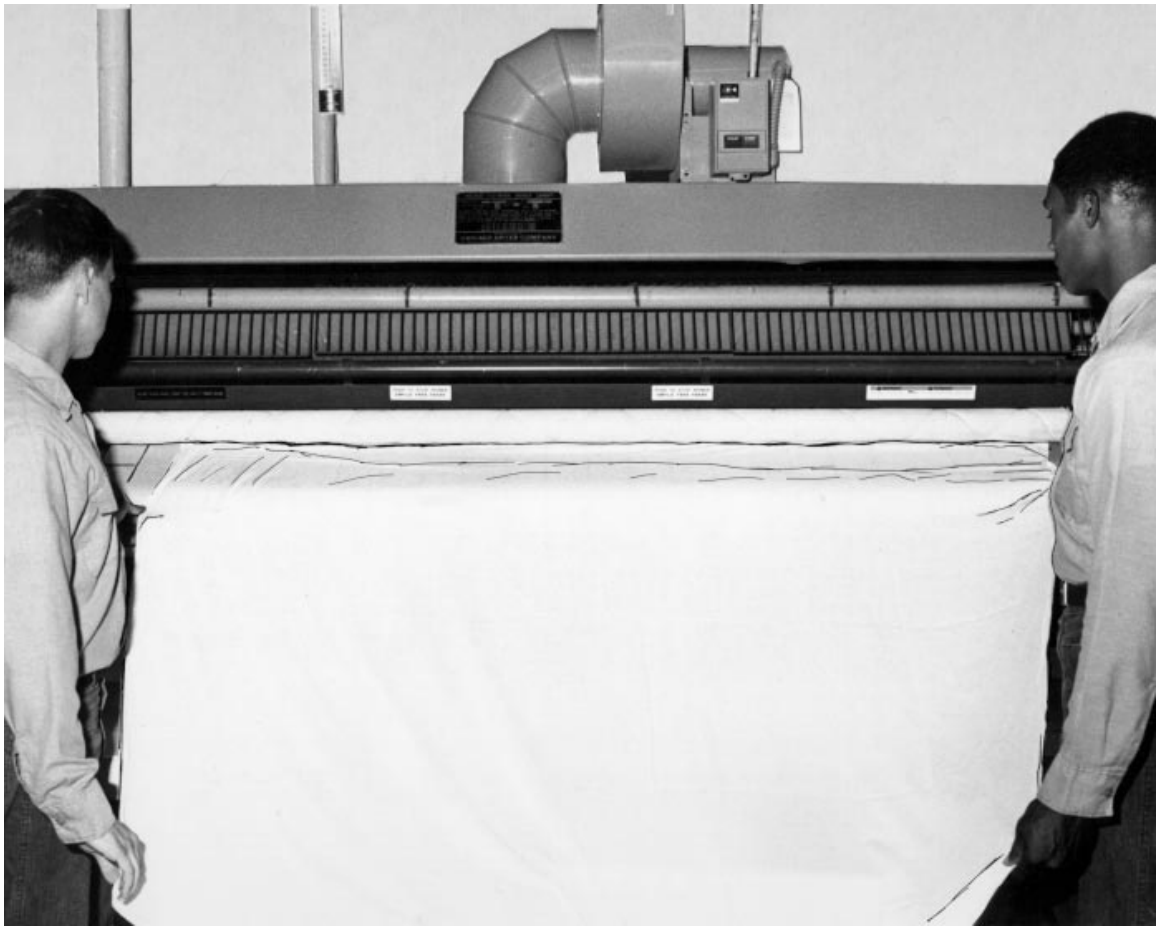

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Figure 5-31.-Laundry personnel using the flatwork ironer.

ribbons, aprons, friction material on ribbon drive rolls, pads, and covers are contained in the manufacturer's technical manual. Laundry personnel should do this maintenance ONLY after being properly trained in the correct procedures for performing this work.

Waxing the Ironer

To produce a smooth finish on flatwork, prolong ribbon life, and prevent linen from sticking to the heated cylinder, laundry personnel need to wax the ironer each morning or after every 6 to 8 hours of use. You should use the wax recommended by the manufacturer. Cut a strip of cloth about 3 feet wide and as long as the cylinder. Sprinkle half of the strip evenly with wax (paraffin) and fold the other half over it. Hold the cloth tight and feed the closed or folded end into the ironer. Run the paraffined cloth through the ironer several times. Use caution when doing this as the wax may become very hot. Also, be careful not to overwax as this causes the return ribbon and drive material to deteriorate. This cloth may be reused as long as the wax lasts. Never sprinkle wax directly onto the ironer.

Ironer Ribbons

Ironer ribbons need to be replaced when they become worn, discolored, or torn. After they have been replaced by trained maintenance personnel, laundry personnel should thoroughly wax the ironer as this aids the newer ribbons in their initial action against the heated rolls.

Friction Material on Return Ribbon Drive Roll

The return ribbon drive roll drives the ironer return ribbons. This return ribbon drive roll is located at the front of the ironer underneath the white canvas feed ribbons. For the ironer return ribbons to be driven properly, the ribbon drive roll must be properly covered with friction material. Special 6-inch-wide friction material wound around the drive roll is used for this purpose. When this material becomes smooth or if it should become worn off the roll, it must be replaced with new material. If this material is not replaced, the ironer return ribbons will not be driven at the proper speed and wrinkling and other problems can result. Return ribbons normally run faster than the heated roll and the padded compression roll. If linens should have a tendency to jam and wrinkle while under the return ribbons, that is usually an indication that the ribbons are not running at the proper speed and the friction material may need replacement. You should contact maintenance personnel to check and replace this friction material if necessary.

Changing Combination Pads and Covers

When the padding on the ironer pressure rolls becomes scorched, burned, or when resiliency is lost they should be changed. It is very dangerous to install new padding to the ironer and must be done with a great deal of care because your hands come close to moving rolls. Only experienced maintenance personnel should install the padding. After the padding is installed, the operator should make sure all safety guards are reinstalled by maintenance personnel and work properly. You should also run a wax cloth through the ironer two or three times.

If the padding at one end of an ironer is slightly larger in size than the other end, pass some heavy bath towels or other thick work through at that end. This should compress the padding sufficiently so that the padding is the same diameter across the entire width of the roll. There should be a minimum of pressure on the padding, This allows maximum padding life. Do not try to maximize pressure that is put on the padding. The ironer will not dry better because of extra pressure. It simply wears out the padding faster, As the padding gets older, it compresses slightly.

LAUNDRY PRESSING AND FINISHING

The press deck area of the laundry processes all clothing received from washing or tumbling operations that cannot be processed through the flatwork ironer.

Uniform items made of synthetic or synthetic blends may be successfully finished by tumble drying if the procedures outlined in the washing and drying sections are followed. Other cotton uniform coats, shirts, and trousers must be pressed before they are worn. Laundry personnel working on the press deck must know how to operate a press and press clothing correctly. This requires practice and repetition of standard press lays for shirts and trousers. It also requires knowing the basics of the laundry press operation and following all safety precautions.

LAUNDRY PRESSES

A laundry press is shown in figure 5-32. A laundry press consists of a stationary padded buck fastened to a rigid metal frame. The head of the press is made of polished metal and is lowered by a system operated by compressed air. Live steam is admitted to the head to heat it, and the condensed steam is carried away by a drainpipe. A steam trap prevents live steam from entering the drainage system. A table for holding a garment undergoing pressing is secured to the frame of the press beneath the buck.

The buck of a press is your worktable. The size and shape of the buck may vary according to the function for which it was designed. The buck is padded in a specific way for satisfactory pressing. This padding must be in good condition at all times and must be changed when scorched, uneven, or worn. The amount and condition of padding affect head pressure, and you must readjust this pressure to get the amount required for good pressing.

TYPES OF LAUNDRY PRESSES

Figure 5-33 shows the many presses used afloat. There are several models used afloat; however, the operation of them is basically the same. The following are the basic types of presses installed aboard ship:

1. Tapered head—for general pressing of wearing apparel
2. Rectangular head—for general pressing of wearing apparel and flatwork items
3. Triple head—for pressing shirt collars and cuffs simultaneously
4. Sleeve press—for pressing sleeves of shirts

In addition to presses you have your spray guns attached to press units. A spray gun is essential for dampening garments that are too dry for good pressing. Cold water is used to dampen the garments. A small amount of water sprayed on the last part of a garment being pressed is necessary to compensate for the moisture lost while the other parts of the garment were pressed on the hot press.

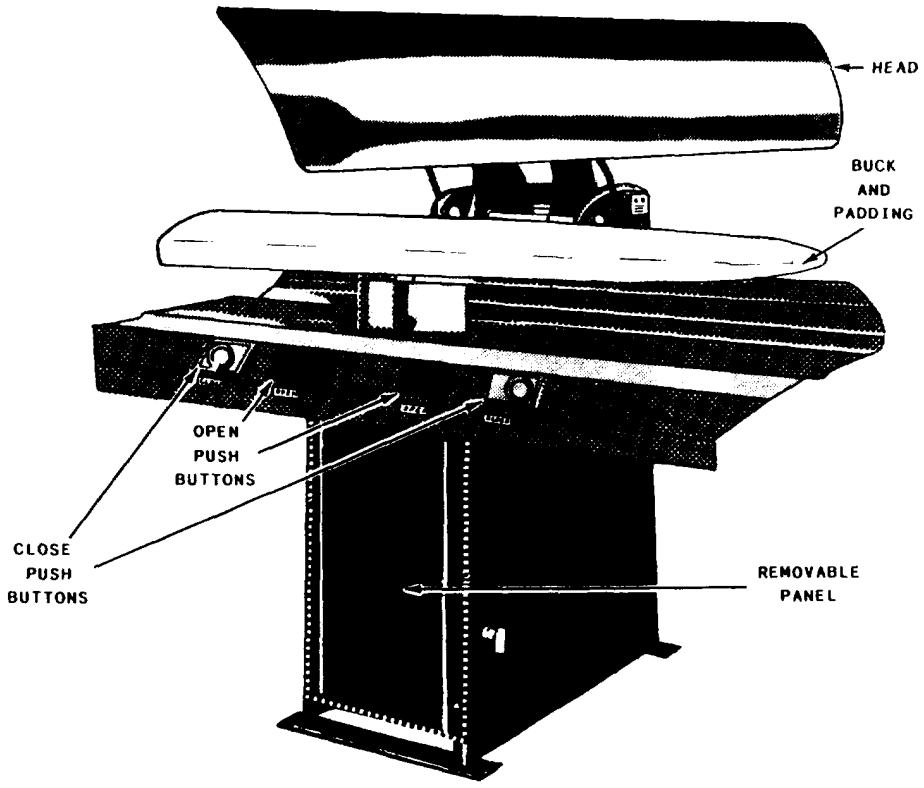


Figure 5-32.—Utility laundry press basic parts.

ITEM SEQ NO.	FUNCTIONAL DESCRIPTION	SPECIFICATION PROCUREMENT REQ'MTS	MANUFACTURE AND MODEL NO.
		LAUNDRY PRESSES	
15	Utility Press, 54-inch	MIL-L-19493 Type I, Class C	Ajax Model 554-C
16	Linen Press, 54-inch	MIL-L-19493 Type I, Class D	Ajax Model 1854-C
17	Pants Topper Press, 36-inch	MIL-L-19493 Type I, Class B	Ajax Model 3612-C
18	Collar/Cuff/Yoke Press	MIL-L-19493 Type I, Class G	Ajax Model SCY
19	Utility Press, 54-inch	MIL-L-19493 Type I, Class C	Forenta Model 53 VAN
20	Collar/Cuff/Yoke Press	MIL-L-19493 Type I, Class G	Forenta Model 27 VCY
21	Sleeve Press (Noncabinet Type)		Forenta Model 450 MIL
22	Utility Press, Small, 37-inch	MIL-L-19493 Type I, Class A	Forenta Model 37 VAN
23	Pants Topper Press, 36-inch	MIL-L-19493 Type I, Class B	Forenta Model 3516 VSN

Figure 5-33.—Laundry press listed for use aboard ship.

PRESS LAYOUTS

When two or more presses are placed together so that garments may be alternately pressed on each machine by one operator, the group of presses is called a unit.

The placement of presses within a unit, or the placement of units in the laundry, is called the layout of equipment. The layout of all laundry equipment in Navy ships is done by the Naval Sea Systems Command, and changes should not be made without prior approval.

Figure 5-34 illustrates a single operator station consisting of two utility presses and one pants topper press. On a large ship there maybe several of these stations as shown in figure 5-35.

47.81

Figure 5-34.-Laundry press single operator station.

43.82

Figure 5-35.-Several single operator stations.

OPERATION OF THE LAUNDRY PRESS

Presses are air operated and controlled by push buttons mounted flush with the front of the press table. The air buttons located on the front of the table are used for lowering, locking, and releasing the head. The two outside red buttons lower and lock the head. Both hands must be used to press both buttons at the same time. The release buttons are the two inside green buttons. The head can be released by depressing either the right or left inside release button.

Before you operate the press, examine the cover and padding before heating it. Then check the head pressure by inserting a bedding sheet leaving a portion exposed and trying to pull it out after the press is closed. The bedding sheet will resist all efforts to remove it and remain in place in all areas.

If the padding is bad, do not use the press until it is repadded. If the cover is unsatisfactory, replace it with a new one.

When you heat the laundry press, do it gradually. Turn the steam valve partially open for 20 minutes and then open it completely. The press is then ready for use.

The time required to press and dry a garment satisfactorily is dependent upon the following:

1. Type of material
2. Moisture in the material
3. Steam pressure (less than 100 psi will require longer time)
4. Effectiveness of the steam trap in carrying away the condensed steam to allow unrestricted flow of live steam into the head chamber
5. Head pressure

An article with a rough, dry appearance usually requires more than normal pressing time. Be certain, of course, that the article is damp enough when you start to press it. If the article lacks sufficient moisture for good pressing, spray it with the spray gun. For normal pressing, keep the head down for about 15 seconds. Experience in pressing enables you to tell when to add dampness to a garment before you press it, and how long it will take to press that particular type of material.

SAFETY FEATURES

The laundry press head will not close unless you use both hands to push the two red buttons. This prevents getting your hand caught under the press head. Opening the press head requires pushing only one of the green buttons. This is done to allow easy release in an emergency. Also, press heads will not close and lock if an object too thick is between the press head and pad. This safety feature can be tested by taking a bed sheet, rolling it up in a tubular fashion, placing it under the press head, and then trying to close the press head. If the press head is adjusted properly, the head of the press will not lock shut.

Many incidents have occurred where laundry personnel have caught their hands between the press head and the pad. If you follow a few simple safety precautions, this should never happen.

- Never operate the press if any control buttons are sticking.
- Never plug one of the buttons with any device to increase speed.
- Do not allow anyone to stand near the press while operating it.
- Only one operator should be working at a press station at a time.
- Know the location of the main steam valve to the laundry in case of an emergency such as a broken steam line or steam leak.

MAINTENANCE OF PRESSES

The laundry supervisor and operators should not only perform minor maintenance on presses, but also should see that repairs to presses are recorded properly in the equipment maintenance log.

The steam pressure to the presses should be 100 pounds per square inch. Some of the presses have pressure gauges. The air pressure on air-operated presses should be 75 to 95 pounds per square inch. In addition, engineering personnel should give the presses a hydrostatic test once a year. This test should be for 150 pounds per square inch for 1 minute.

Laundry personnel should not get into the mechanics of the laundry press; however, they should perform the following operator maintenance:

1. Thoroughly clean presses (daily).
2. Clean and wax press heads (as required).
3. Change pads and covers (as required).

Early in the morning and just before pressing, you should use a foxtail to dust off the entire press table of the laundry press. Then take some hot, soapy water and completely wash off the press table and dry it. Always be careful not to bring your arms into contact with any of the heated surfaces of the press.

CLEANING PRESS HEADS

Press heads must be clean at all times to prevent clothing from picking up stains that may be on the press head. To clean the press properly, you need press head cleaner, press head wax, and press head mitts. These products are available for procurement through the *Ship's Store Contract Bulletin.*

The main purpose of the press head mitt is to prevent laundry personnel from being burned. The press head mitt has two different sides, one side is smooth, while the other side is made of steel wool material. You use the smooth side to apply press head cleaner to the press head evenly. Then scrub the whole press head with the steel wool side of the press mitt.

Use clean rags to wipe the press clean and always keep the press head mitt on to prevent bums to your hand. CAUTION: NEVER use rags that may have flammable substances on them. After you remove all excess press head cleaner, do the final touch by applying wax to the press head. Use a wax cloth to sprinkle wax on one side of the cloth and then fold it together. Use the press head mitt and wipe the cloth evenly against the press head until all surfaces have been waxed. Use a clean rag to wipe off any excess wax. Use an old bed linen to test the press head for excess cleaner or wax by lowering the press head on the sheet. If no stains are noticed you are ready for regular pressing.

CHANGING PADS

Presses must be properly padded at all times. Packed down pads produce poor quality work and break buttons, and clothing articles pick up burn odors when pressed on burned-out padding. Change these pads as required.

Figure 5-36 illustrates the materials you will need to change pads which includes the following:

- One steel wool pad
- Two flannel pads
- One press cover

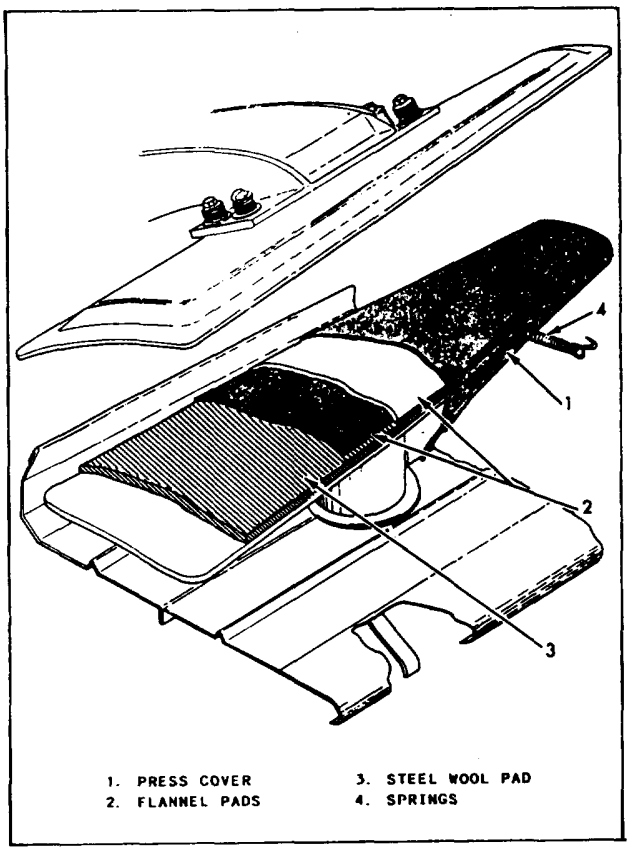


Figure 5-36.—Changing laundry press padding.

The procedure for padding the buck is simple. Unclamp or unhook the cover beneath the buck and remove all the old padding.

The steel wool pad on the bottom is very expensive and needs to be changed only when worn or rusted (about once a year). On the top of your steel wool pad, place the two flannel pads and then the press cover on top of them. Then pull the drawstring tight and tie it off. Connect all tension springs and clamps under the buck of the press and you are done.

Synthetic covers last longer than cotton covers. The drawstring in the cover helps to hold the padding in place, but the tension springs on the clamps or hooks beneath the buck hold the padding firmly in place. They give an even pull all around the cover. Change covers when they become soiled or badly scorched.

Always use two layers of flannel on the press. One flannel pad does not cushion the garment well enough and buttons may be broken. When two

layers of flannel are used, change one layer each week. Place the new layer on the bottom and the used layer on top. You can wash double-faced flannel and reuse it. If the flannel shrinks, use it on a smaller buck. If the flannel becomes hard, apply steam to the surface and work it with the hand until the flannel becomes pliable. Tumbling also makes the flannel pliable.

Change the knitted padding when it becomes scorched or burned. No set time can be given for changing the knitted padding, but under normal operating conditions it should be changed about once a month.

PRESS LAYS

In machine pressing, each garment is finished by a series of LAYS. Each lay is a position of the garment on the buck, and the series should cover the entire garment. Out-of-the-way places that cannot be pressed with the machine should be smoothed out with a hand iron.

Sequences of lays for shirts and trousers are described on the following pages. The ones given are considered the minimum for each article when good quality pressing is desired. The lays, however, are not standard with all pressers. For example, some laundry personnel use two lays for pressing the front of shirts, one with the pocket flap up and the other with the flap down. Other pressers use one lay with the flap down and get accept able work.

When determining the proper sequence of lays for a garment, take into consideration the following:

1. Minimum number of lays required to do the work satisfactorily
2. Logical sequence of lays, for easier and quick handling
3. Part of the garment to be pressed last to prevent damage to the finish of the most conspicuous parts of the garment

The lays given for different articles below are now used in ships' laundries. The following lays for shirts and trousers do not include the use of a hand iron for touch-up work on places difficult to reach with the press. When available, use these irons as necessary to get good quality work. A garment that is nearly finished should not be handled too much in doing touch-up.

PRESS LAYS FOR SHIRTS

Figures 5-37 through 5-39 give the sequence of lays for pressing a shirt on presses available in shipboard laundries. The press lays shown are considered the minimum required in pressing a shirt properly. The first lay shows the pressing of a shirt collar on a standard press; it may be done on a collar/cuff press if available.

Laundries with a sleeve press may use it to press sleeves in place of a conventional press. The pressing of the inside of the pocket should be done as shown in figures 5-37 through 5-39; however, on synthetic uniforms it is not necessary and pockets will normally not fold back. Synthetic and synthetic blend uniforms should be finished in the dryer when possible as outlined in the drying section. Spray guns should be used when necessary to keep shirts damp during pressing. This also improves the finished appearance of the shirt, Any wrinkles that cannot be removed using the conventional press should be done by a hand iron.

PRESS LAYS FOR TROUSERS

Figures 5-40 and 5-41 illustrate the press lays that are used for a pair of trousers.

Remove the trousers from the damp box. (Keep a wet net over the damp box at all times.) Straighten out the trouser pockets as shown in the first two lays of figure 5-40. Shape the trousers with your hand and dampen, if necessary. Then continue with the lays as shown.

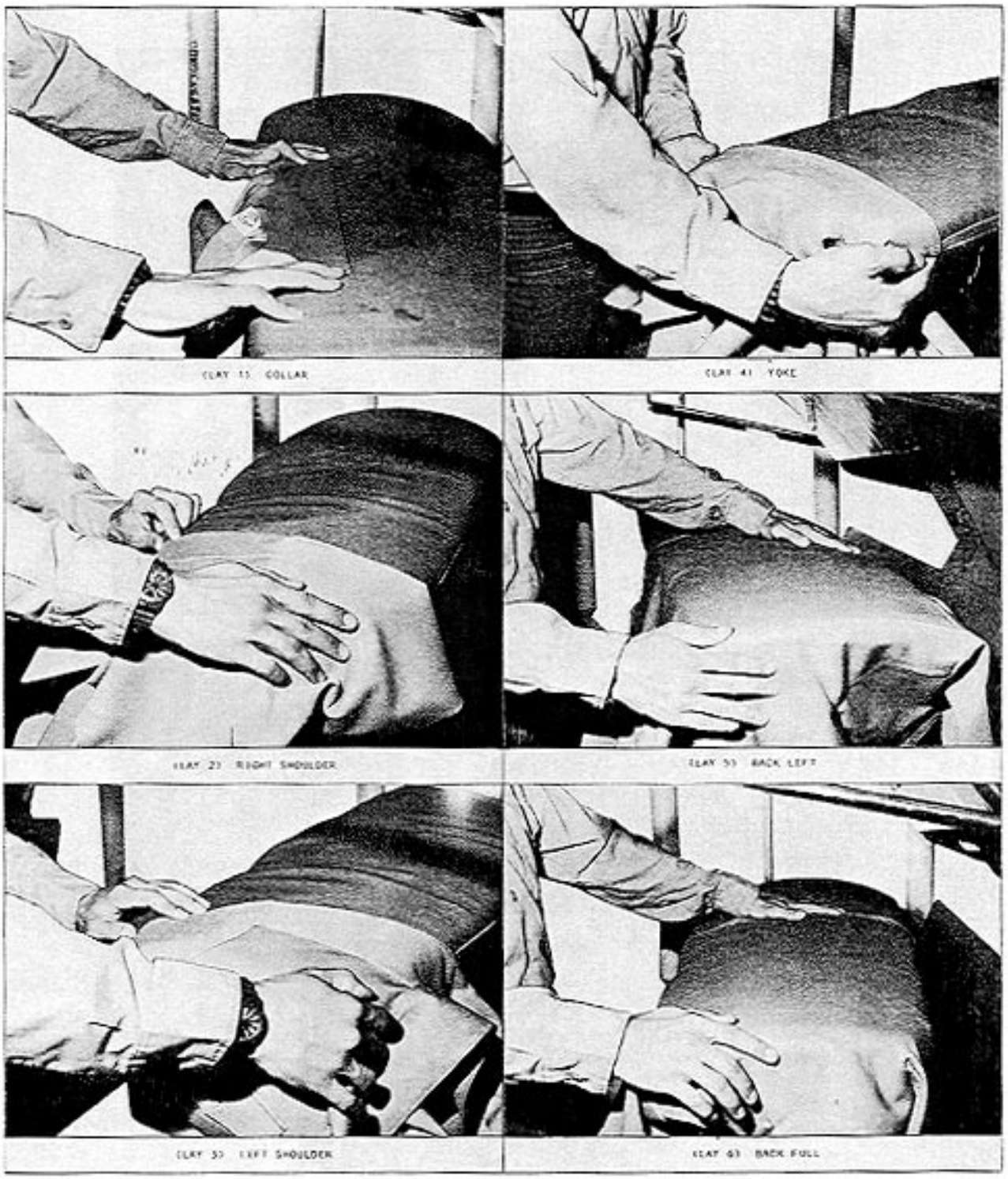
If the steam pressure in the laundry is below 100 pounds of pressure, you may have to press the trousers a bit longer to make sure all dampness is gone, especially for the inside pockets. When matching the inseams be sure the outer seam matches the inner seam on both legs. If they are not matched properly, the line will run uneven on the trousers. When you complete the press lays, hang the trousers on a hanger equipped with a trouser guard to prevent lines from setting in the legs of the trousers during stowage.

FINISHING OTHER ARTICLES

To finish cap covers you should use a regular iron and press the band on the small end of a press.

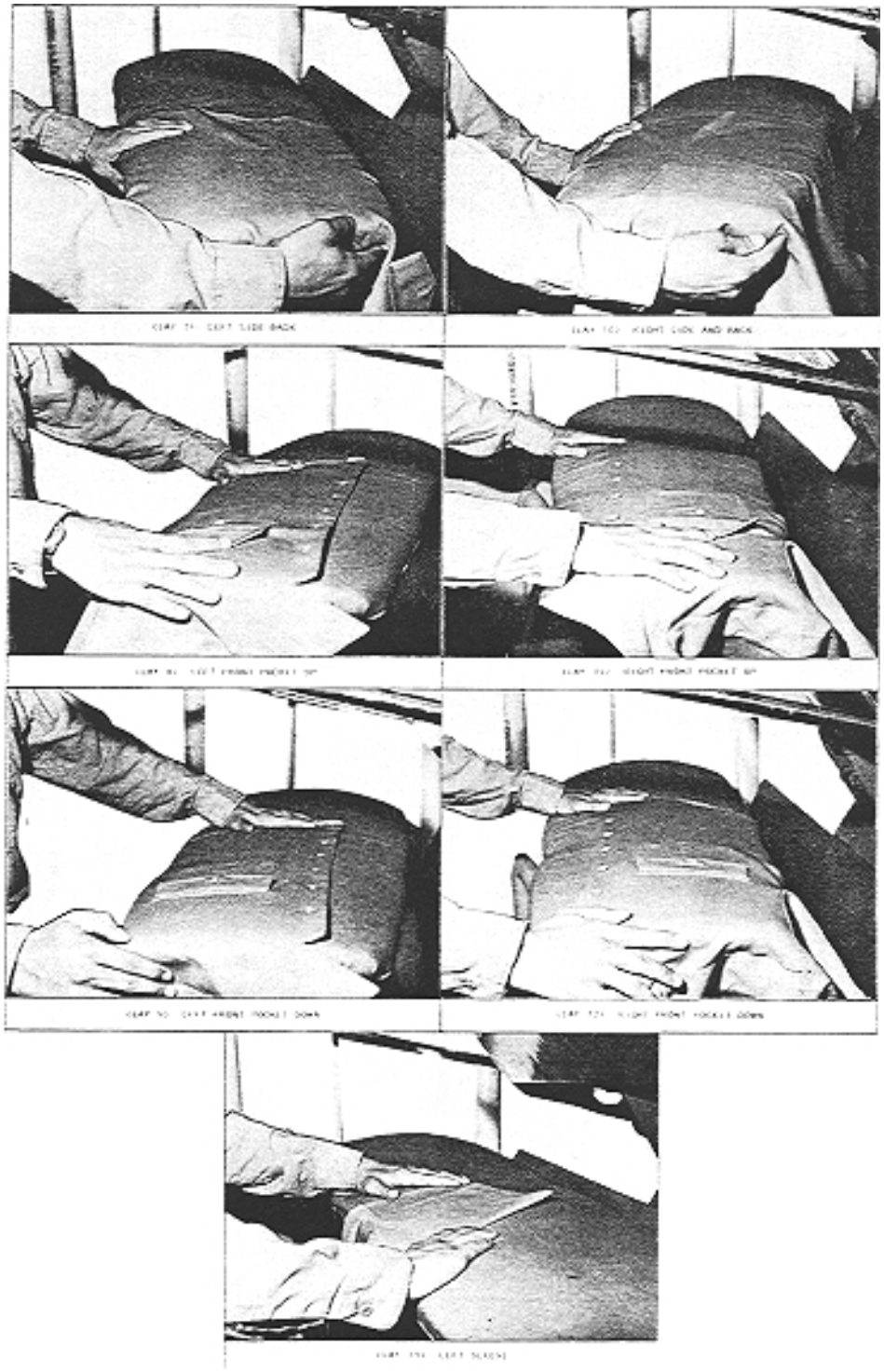
Press garrison caps in two lays on any type of press. Use one lay for each side. Do NOT press caps with leather bands on a laundry press, The leather will not withstand the temperature of the hot head.

When you press ties, cut a cardboard form that will fit inside to hold them straight. Then press with two lays, one for each side. Do not press wool worsted ties on a laundry press. Use



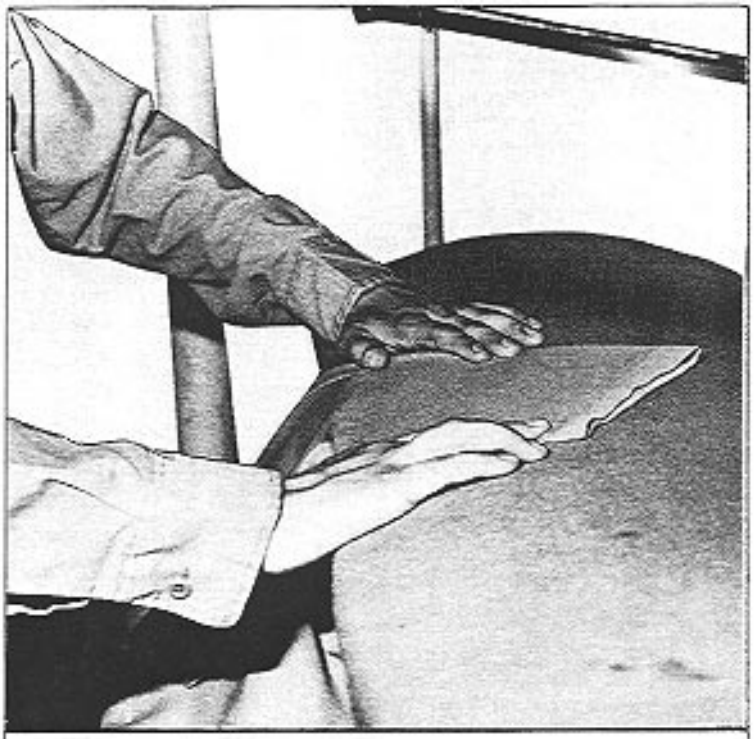
43.84

Figure 5-37.-Lays for pressing shirts (lays 1 through 6).



43.85

Figure 5-38.-Lays for shirts (lays 7 through 13).

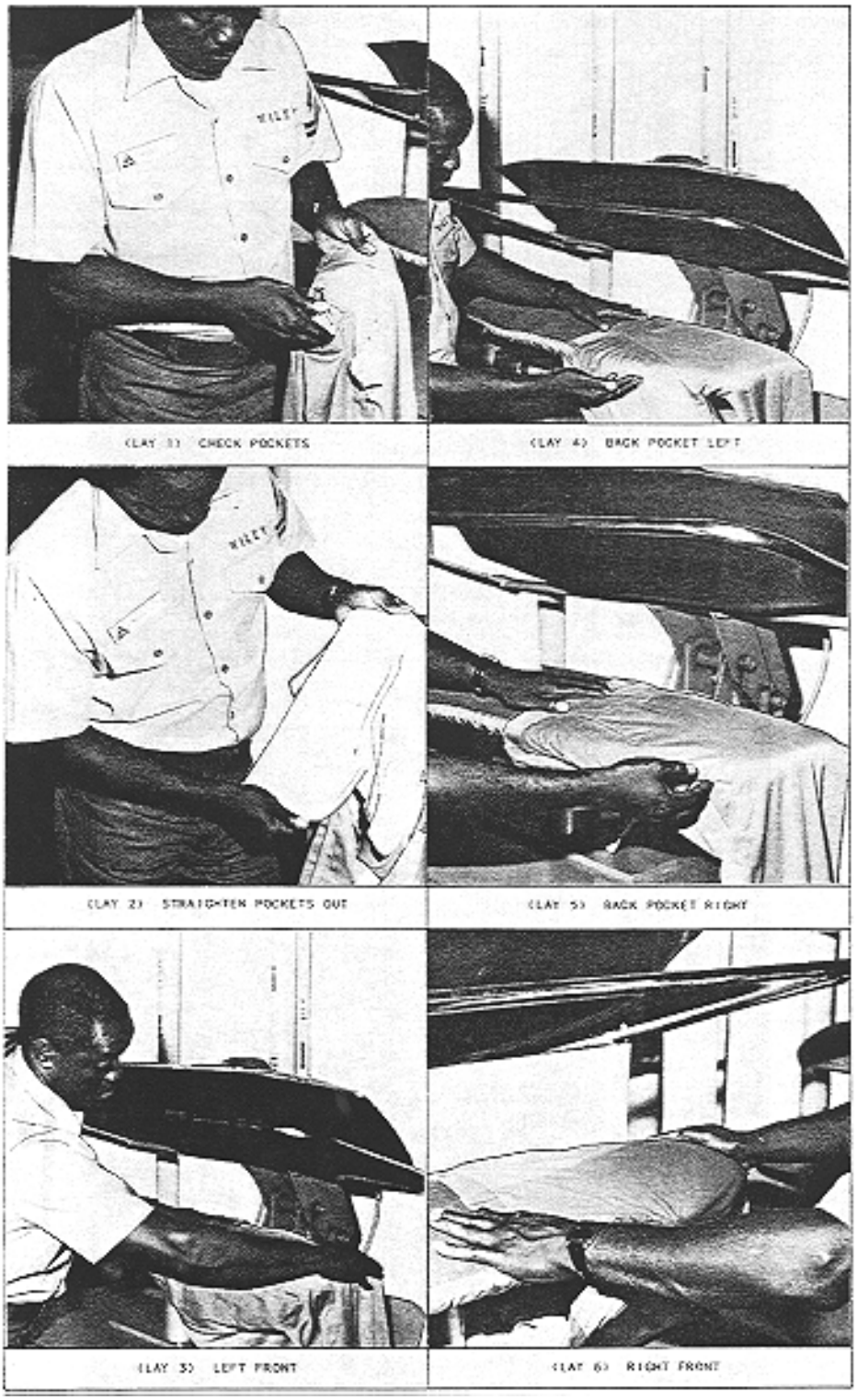


(LAY 14) RIGHT SLEEVE

(LAY 15) FINISHED PRODUCT

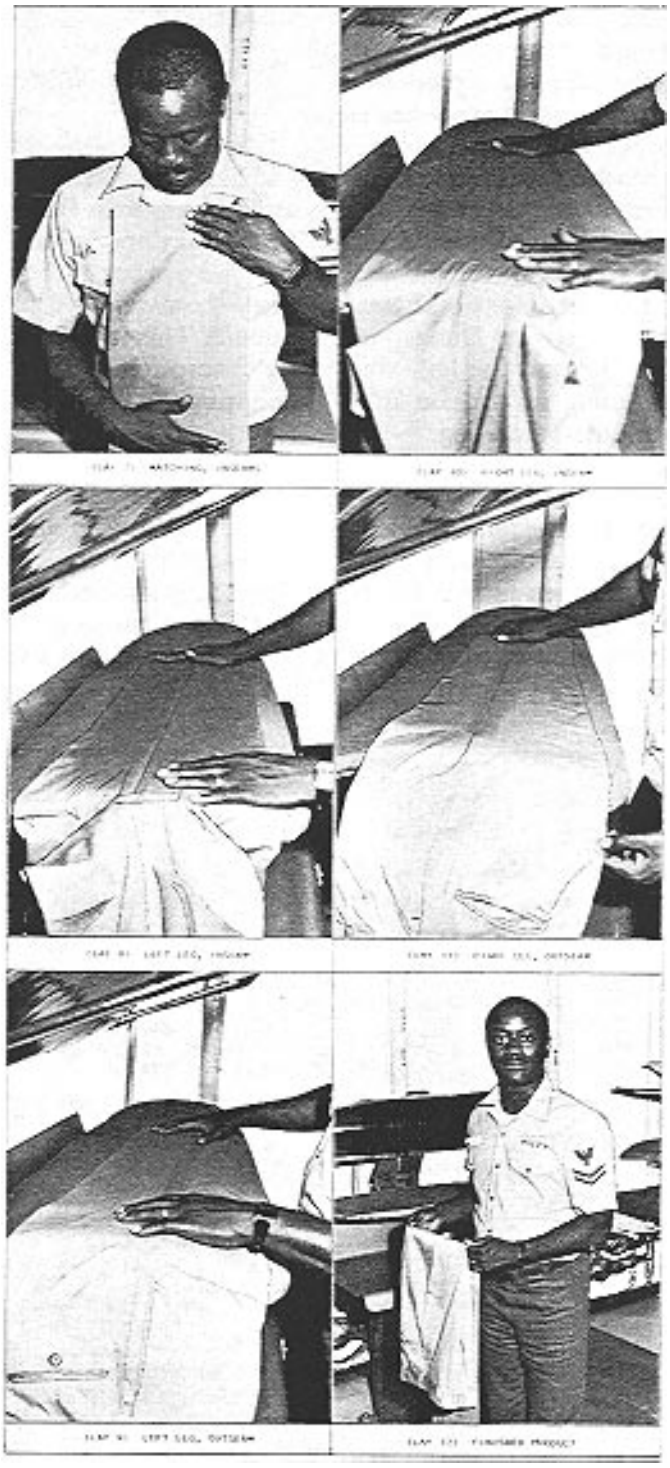
43.86

Figure 5-39.-Lays for shirts (lays 14 through 15).



43.87

Figure 5-40.-Press lays for trousers (lays 1 through 6).



43.88

Figure 5-41.-Lays for trousers (lays 7 through 12).

a press in the dry-cleaning plant, with a covered head.

Pressing dungaree shirts is done in the same manner as shown in shirt pressing; however, care should be taken when pressing the sleeve with the petty officer crow. This petty officer crow may cause a stain on the press head or press cover. To avoid this problem, you should place a piece of cardboard between the crow and the press head or cover. This prevents the petty officer crow from imprinting on the press head or press cover.

Precondition dungarees in the dryer before pressing as discussed in the drying section. This is done because they hold a lot of water and on newer dungarees the blue color may fade onto the press cover, thus ruining the cover. Dungaree trousers are pressed inside out and the legs are pressed flat with creases going inward on the seams instead of in the middle of the leg.

Care should be taken when pressing tablecloths or napkins. When a flatwork ironer is not available, these items will have to be pressed on a conventional press. The tablecloths and napkins should be preconditioned in the dryer before pressing (do not overdry). If the tablecloths and napkins are not preconditioned before pressing, they may scorch. On the other hand, if they are pressed too dry, they will not be finished properly. Tablecloths should be stored with a wet cloth over them until you are ready to press them or they will dry out.

ASSEMBLY AND ISSUE

In this section we are concerned with assembly and handling of articles both in individual bundles and in bulk lots. Bulk lots that are tumbled can be loaded directly into the laundry bags in which they were brought to the laundry. Such is not the case, however, with items in an individual's bundle. This is a matter of (1) careful handling, (2) thorough inspections, and (3) accurate counting.

ASSEMBLY OF INDIVIDUAL LOTS

Before the individual lots are received in the assembly area, the individual's ticket (NAVSUP Form 233) should be placed in the assembly bins in alphabetical order. Then you will place finished articles as marked in the proper bin. Figure 5-42

43.89

Figure 5-42.-Assembly room.

shows laundry personnel doing this procedure in the assembly room. After all the articles in an individual bundle have been binned, it is best to remove the articles from the net bag. Fold and return them to the net bag as you check off the items on the laundry list.

Pin the net bag with a large laundry pin and attach the separate sock bag to this net bag using a small laundry pin. MAKE SURE you attach the correct laundry sock bag to the correct net bag. To make issuing individual bundles easier, always make sure that the name or laundry mark of the person owning the articles is shown clearly on the net after you wrap and pin the bundle.

Once you have done this, check the laundry list and make sure you have all the finished press work (shirts, trousers, and so forth). Cover the press work with a suit wrapper and attach the laundry list to the wrapper using glue or tape.

ASSEMBLY OF BULK LOTS

Bulk lots are normally tumble dryed and placed back in the divisional laundry bags. Items that you receive in bulk, such as tablecloths, should be returned in bulk bags in even stacks tied together with a string after pressing. Flatwork lots including sheets, towels, and so forth, should be folded and tied in bundles and returned in laundry bags. When tying these articles in bundles, always keep similar items together. The following system should be used when handling bulk lots.

1. The division petty officer delivers bulk laundry to the laundry receiving room.
2. The laundry bag is weighed and the weight is noted in the bulk lot laundry log. The Received By and Delivered By columns of the bulkwork log are signed by the laundry petty officer and the division petty officer to acknowledge the delivery weight.
3. After the work is completed and when the laundry is picked up, the bag is again weighed with the post-processing weight noted in the log. Both petty officers sign the log on issuance of the finished work.

Refer to the log when a division brings its laundry back to the laundry issue room claiming unacceptable losses of clothing. Receipt and issue of bulk laundry can be compared. A 1-pound loss in weight, for instance on a 50-pound bag of laundry, would indicate that the loss problem may be occurring in the living compartment rather than the laundry.

HANDLING FINISHED LAUNDRY

Handle finished laundry with care. Collect it promptly and place it in the proper bin. Do not allow unfolded clothes from the net bags to pile up around the laundry on the worktables or shelves. Be careful not to allow clothing to fall to the deck. When finished work is soiled or wrinkled by rough or careless handling, reworking is the usual result.

No articles should be returned to the owner unless it represents the best quality of work and care your laundry can give it. Streaks, stains, broken buttons, or any blemishes on finished work are usually inexcusable and should be corrected before the article is returned to its owner.

QUALITY ASSURANCE

As you know, every individual expects the return of all articles from the laundry done in a professional manner. When you receive finished work in the assembly room, check each piece for cleanliness, stains, scratches, marks, or any other type of blemish. The pressing and finishing section gives the standards of quality for finished work. These are the things you must look for when inspecting laundry. A shirt, for example, should have a QUALITY LOOK; that is, it should be thoroughly clean, free of blemishes, smoothly ironed, and have the proper creases. What applies to the inspection of shirts, of course, applies to every article. Remember that you have the ultimate responsibility of approving laundry before it is returned to its owner.

ISSUING LAUNDRY

Issue finished laundry according to the schedule. Provide space for laundry that is ready for issue. You need shelves or tables for wrapped bundles and space for laundry bags. In case you have a special room for receiving and issuing, put finished bundles neatly on shelves in alphabetical order.

Hang shirts, trousers, and coats on hangers and cover them with suit wrappers.

Issue laundry to authorized persons only, those designated on the schedule, or to individual owners. Make sure that proper signatures are obtained and that the count reflected is accurate. This is necessary to establish validity in laundry claims. Any problems encountered in issuing laundry to officers, chiefs, Mess Management

Specialists, or other personnel should be reported to your immediate supervisor.

HANDLING SENDBACKS

Sendbacks are articles in individual bundles and bulk lots that must be sent back for reprocessing. Place an article sent back for reprocessing in a net so that it can be reworked immediately. Because sendbacks hold up delivery of laundry, they should receive special attention so that you can make delivery on schedule. Recheck on them occasionally to make certain the desired work is being done.

CLAIMS FOR DAMAGED OR LOST CLOTHING

Claims by crew members arising from loss of or damage to personal clothing in the ship's laundry should be handled as shown in the NAVSUP P-487.

The goal for laundry claims during any given accounting period is zero; however, very seldom is this goal obtained. Mistakes are made and claims are submitted usually because of the following:

- Errors made during marking or assembly
- Delivery to the wrong division or officer/CPO
- Weak security controls in the laundry
- Clothing damaged during processing

Loss or damage to clothing can only be corrected through the use of proper laundering procedures. The primary factor attributed to loss of clothing in the laundry is poor lot control. If the laundry has good lot control it will avoid delays, confusion, and loss of clothing articles. To minimize laundry claims due to lost or damaged clothing, laundry processing as discussed in this chapter should be followed.

SECURING FITTINGS AND EQUIPMENT

Yoke is one of the damage control material conditions that is set each day aboard ship just after working hours.

Once the laundry is secured for the day, the Ship's Serviceman working as damage control petty officer should make sure the material condition of yoke is set properly in the laundry. Normally these yoke fittings are logged closed in damage control central at this time. If the laundry is going to operate past normal working hours, any yoke fittings that are required to be opened should be logged opened in damage control central.

Every day electricity to equipment is secured by turning off the switch on each piece of equipment that controls the power. The electricity to any equipment should be secured when that piece of equipment is not in use.

Steam to laundry presses should be secured daily by closing the valve to the steam line connected to the press. Care should be taken to prevent burning yourself. The steam valve to the laundry presses should be reopened the next workday. Never leave loads of laundry in the equipment or hang clothes near steam lines or presses. All laundry cleaned for that day should be picked up by the responsible division/ department before securing for the day.

CHAPTER 6

THE DRY-CLEANING OPERATION

The dry-cleaning operation is another service activity of the supply department. The supply officer is responsible for providing dry-cleaning service on ships where dry-cleaning equipment is installed. The responsibility for providing this service is normally assigned to a junior Supply Corps officer.

Since water damages certain fabrics, some clothing must be dry cleaned. Dry cleaning is the process by which you immerse soiled and stained garments in dry-cleaning solvent in a dry-cleaning machine. Normally, dry-cleaning equipment is installed on ships with over 500 personnel; however, provisions for dry-cleaning equipment on ships with 100 to 500 personnel are considered on a case-by-case basis.

DRY-CLEANING PERSONNEL

The number of Ship's Servicemen and strikers assigned to the dry-cleaning operation depends on the workload and the equipment. On carriers and tenders where the plant is much larger than on other ships, there may be a supervisor, an assistant supervisor, and 6 to 10 additional personnel.

The petty officer assigned as supervisor is responsible for preparing the dry-cleaning schedule, procuring supplies, training personnel, operating the plant, and cooperating with engineering personnel in maintaining the equipment. The supervisor assigns personnel to do the work as efficiently as possible and rotates them so they can get experience in all the tasks performed in the plant.

DRY-CLEANING SECURITY

All dry-cleaning personnel are responsible for maintaining security in the dry-cleaning plant. Security prevents loss of dry-cleaning articles, damage to equipment, injury to untrained personnel, and unauthorized use of equipment and facilities. The dry-cleaning plant is considered a Group IV space. Keys should be handled as outlined in chapter 1 of this manual under Group IV spaces. Any work done in the dry-cleaning plant after normal work hours should have the final approval of the ship's store officer.

DRY-CLEANING SCHEDULE

As in the laundry, a schedule is necessary for controlling the delivery, processing, and issuing of dry cleaning. To prepare such a schedule, start with a flow chart of all operations through which articles must pass from the time they are received until they are ready for issue (fig. 6-1). Then

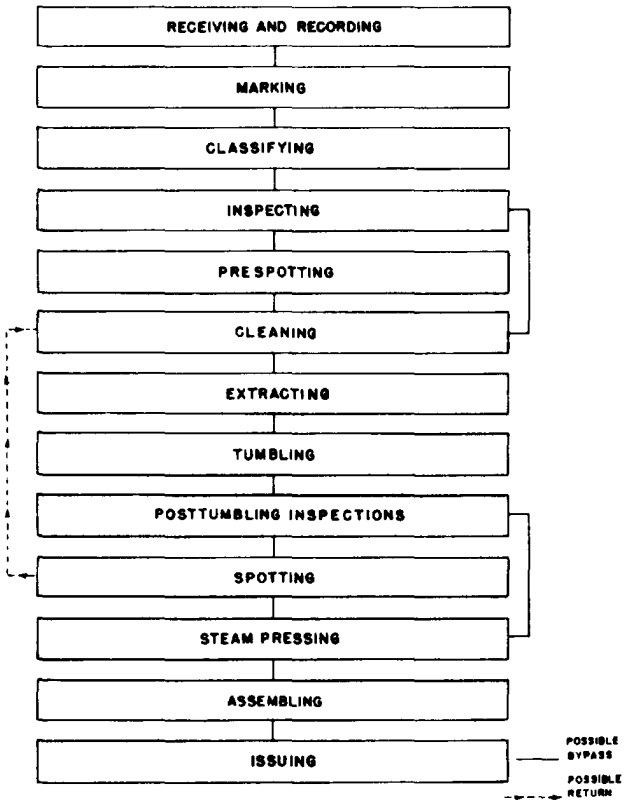


Figure 6-1.—Dry-cleaning flow chart.

review each stage to determine time, space, equipment, and operating personnel required, and any other factors that will affect your schedule.

DRY-CLEANING STANDARDS

Dry-cleaning standards are based on a 96-hour workweek and apply only to those ships that have a dry-cleaning capability. These standards are included in the *Shipboard Habitability Program,* OPNAVINST 9640.1. Your dry-cleaning plant should have dry-cleaning equipment and press capability sufficient to clean and finish press one dress uniform per person per month. This works out to about 1 pound of dry cleaning per person per week. Any troops that are embarked aboard your ship should not be included in dry-cleaning considerations. If your ship has between 100 to 500 personnel, you should have a minimum of a spotting board and press capability to finish press one dress uniform per person per month. Ships with 100 to 500 personnel desiring dry-cleaning equipment instead of a spotting board will be considered on a case basis. If the capabilities of your dry-cleaning plant permit, you may also provide service to ships near your ship. That is, in the case of tenders or repair ships, your ship should provide dry-cleaning service to ships tended in addition to your own.

DRY-CLEANING EQUIPMENT CAPABILITIES

Like the laundry, your equipment capabilities need to be considered when scheduling dry-cleaning operations. Based on observations, information data, and review of past records the following can be expected of your dry-cleaning equipment.

- Dry cleaning—dry to dry—one load rated capacity per 50 minutes
- Dry-cleaning press utility—20 pieces per operator hour (POH)

These equipment capabilities are dependent on training, ability of personnel, arrangement of equipment, and hotel utilities available for your equipment.

SPACE

You should consider the space in the dry-cleaning plant when making your schedule. Normally, dry-cleaning plants do not have as much space as the ship's laundry and you must have rigid control of the schedule from the standpoint of receiving and issuing so that the section can handle the maximum amount of work in the space available. Do not receive more dry weight than can be processed in 1 normal working day, except under very unusual conditions.

TYPES OF SERVICES

Any services provided in the dry-cleaning plant should be completed in a period between 24 to 72 hours. Services provided for items other than regular uniforms should be clearly defined in your schedule including the days and times these services are available. You should be flexible in scheduling these additional services especially just before a personnel inspection or on a tender or a repair ship that may be offering services to ships alongside while in port. For instance, you should not be doing a large load of civilian clothes at the time of a personnel inspection when your work-load will be extra heavy and you won't be able to get the work done on time. Modify the schedule around this time to make sure you get all uniform items done before the inspection,

Normally, officer and CPO clothing can be processed on an individual basis; however, enlisted personnel uniforms may provide too large a demand to do them in this manner. In a situation like this, you may want to handle enlisted personnel uniforms as a bulk (division/group) load. If you do this, make sure each enlisted person marks his or her uniform according to the *U.S Navy Regulations,* 1973, so you know who owns the clothing.

DEADLINE FOR RECEIPT

To eliminate any problems in receipt or pickup of dry-cleaning items, you should make sure you clearly define on your schedule who is responsible for these tasks. It is advisable to set a deadline for receiving articles no later than 0900 daily. By requiring delivery before 0900, the dry-cleaning personnel can easily sort the articles into proper loads and keep the washer operating to capacity without having to wait for sufficient articles of one type to make a load.

GROUP OR CLASS SCHEDULING

Schedule similar uniform items together because washer loads must be of similar material.

Your material groups are broken down into three categories: (1) officer and CPO uniform items, (2) enlisted uniform items, and (3) miscellaneous items such as flags, foul weather jackets, civilian clothes, and any other items not included in category 1 or 2.

You should do officer and CPO items one day and enlisted uniform items another. Any items other than uniform items can be scheduled out over the week. Thus, on any given day you would have either category 1 or 2 scheduled with two smaller groups of clothing out of category 3. Unless it is necessary, don't ever have more than three different types of material scheduled on any given day. On large ships such as carriers or tenders, the officer and CPO laundry is scheduled on separate days.

ADJUSTING THE SCHEDULE

Unlike the ship's laundry, the schedule in the dry-cleaning plant may have to be adjusted more often to meet specific conditions. As stated earlier, you can expect a synthetic dry-cleaning unit to produce one clean load approximately every 50 minutes. You can also expect to dry clean about 1 pound of laundry per person per week. If you take these two factors into consideration you should be able to determine the number of persons you can serve in a 1-day schedule and adjust the schedule accordingly.

RECEIVING AND IDENTIFYING

The proper receiving and identifying of dry-cleaning articles is essential in preventing items from being misplaced. There are two methods for receiving and identifying dry-cleaning articles. Use the method that best fulfills your needs.

Method A—Each piece of dry-cleaning work is logged in and out using a dry-cleaning work log. The log is maintained by the receiving clerk in a standard ruled book or lined pad of paper. If dry-cleaning tags are used as stated in method B below, this logbook does not need to be used. If your dry-cleaning plant is using dry-cleaning lists without tags, use this log in conjunction with the dry-cleaning list.

Method B—Each patron fills out the list, removes the receipt stub at the bottom, and attaches the list to the bundle. The receiving clerk then tags each article in the bundle with a section of the premarked tag and staples the master(s) of the tag set and unused tags to the patron's dry-cleaning list.

DRY-CLEANING LIST AND TAGS

A dry-cleaning list is a record of dry cleaning processed for an individual. Such a list saves time and work in receiving and issuing and also reduces the probability of misplacing articles. These lists may be bought commercially or ordered through the *Ship's Store Contract Bulletin.* You may use it to check off finished work returned to the assembly room. The list provides for plant control, customer receipt, financial control, and furnishes eight tags for identifying the items that are going to be dry cleaned. The procedure for using the marking tags that are part of the dry-cleaning list is as follows:

1. Detach and safety pin or staple one tag to each article. If a customer has three articles, fasten a detachable tag to each item and leave the remaining tags attached to the master dry-cleaning list.

2. When you assemble the items that have been dry cleaned, the count of the remaining tags confirms the number of articles that belongs to one customer. Thus if five tags remain, the customer brought in three articles.

Cost columns that are located on the right side of the list are necessary only when a charge is made for dry cleaning.

INSPECTION

Inspect each article for detachable uniform insignia and for items in pockets. Removal of ball-point pens, crayons, lipsticks, and other foreign objects at this point eliminates sources of damage to loads of clothing being cleaned. Put such items in an envelope and attach it to the customer's dry-cleaning list. Return pockets to proper position before cleaning. If you find spots on an article, send it to the spotter. Spots should be removed from the article before it is cleaned.

If time permits, determine whether any buttons or buckles are missing or loose and note tears or any other marks. Note whether the article has a belt. Care in preliminary examination avoids trouble later.

CLASSIFYING

The two most important things to consider when items are classified for dry cleaning are (1) color and (2) lint quality of the material. In general, virtually all fibers or fabrics can be safely dry cleaned provided they are resistant to the dry-cleaning solvent, frictional activity involved in the dry-cleaning machine, and the stress of steam pressing and finishing. Standard military uniforms can be successfully dry cleaned aboard ship with virtually no problems as long as the equipment is used properly and the correct solvent is used. The solvent used should be tetrachloroethylene (perchlorethylene), NSN 6810-00-270-9982 and NSN 6810-00-819-1128. Always remember to classify similar items together for washing purposes. If your dry-cleaning plant is washing civilian clothes, it would be a good dry-cleaning practice to first determine the type of fiber or fabric to be cleaned and then carefully check the permanent care label for manufacturer's recommendations or instructions for cleaning. On occasions you may also dry clean Marine uniforms. Sort them together but dry clean them separately.

Classify table covers, drapes, flags, and so on, according to color, material, and lint quality. (Put ties into separate bags and clean them with the blue uniform.)

Foul weather jackets, face masks, winter helmets, and winter trousers may be cleaned together.

Although they have many different colors, signal flags may be cleaned in the same group. Transfer of lint among flags is not detrimental to their use.

Do NOT dry clean impregnated, rubberized, or oiled articles, or articles manufactured wholly or in part from leather. Dry-cleaning solvents damage such materials beyond repair or use.

When articles are classified, divide them into equal units for loading into the dry-cleaning machine. The weight units should be based on the manufacturer's recommendations for machine capacity.

A record of pounds cleaned and the number of loads cleaned daily is kept to determine the numbers of pounds cleaned per gallon of solvent and the cost per pound cleaned. The use of 1 gallon of dry-cleaning solvent to clean 200 pounds of clothes is considered good usage.

PRESPOTTING

All articles should be examined for spots before they are cleaned. Analyze all spots to determine what substance caused them and what methods should be used to remove them. Sometimes treating the spot may not remove it entirely but usually it will come out completely during the cleaning process.

Note that the flow chart (fig. 6-1) shows both prespotting and postspotting steps. The latter step is necessary in case a spot was missed earlier. If, however, it is necessary to postspot an article, it must go back to be cleaned again to remove the chemical used in spotting. Spotting is discussed in detail later in this chapter.

DRY-CLEANING SOLVENT

The dry-cleaning process centers around the dry-cleaning solvent which distinguishes dry cleaning from simple wet cleaning or laundering. The removal of stains and soils is dependent upon volubility, age and extent of soil, size of wash load, type of fabric, the amount of water and detergent in solution, and the level and temperature of the solvent.

Only the synthetic solvents discussed in this chapter are authorized on board Navy ships for use in dry-cleaning plants. Tetrachloroethylene/ perchloroethylene are the most commonly used solvents and the brands are available through supply. The solvents already contain detergent which eliminates adding it to the inventory of supplies.

Check the amounts of solvent in the storage tank from time to time and make sure that it is refilled as necessary. This prevents the solvent from getting too low for operation. If it is necessary, remind the sales office when the quantity of solvent is reaching a low level so they can order a new supply.

SAFE HANDLING AND USE OF DRY-CLEANING SOLVENT

Although dry-cleaning solvent has been used safely for many years, it is a toxic substance. It must, like other chlorinated solvents, be regarded as a potentially hazardous material, which, if misused or improperly handled, can cause serious injury or even death. It is essential, therefore, that perchloroethylene be handled only by knowledgeable and experienced individuals who are familiar

with the hazards associated with its use. The safety hazards of perchloroethylene are contained in BUMEDINST 6260.12.

Many incidents have been reported where Ship's Servicemen were overcome by fumes from dry-cleaning solvent. To prevent and minimize the hazards of handling dry-cleaning solvent, you must follow these precautions:

- Use solvent only in well-ventilated spaces.
- Avoid prolonged or repeated breathing of vapors.
- Ventilate stowage areas well.
- Free exhaust ducts, fans, and ventilation shafts of dirt, lint, or other debris.
- Vent vapor recovery units to the outside air.

In addition to the above precautions you should inspect your equipment daily for loose or leaky joints, couplings, connections, valves, covers, or doors and report all discrepancies promptly to maintenance personnel. Do not eat, drink, or smoke in areas where the dry-cleaning solvent is handled.

Any liquid solvent, even a trickle that comes in contact with the atmosphere, presents a potential hazard to personnel. If spills occur, they should be cleaned up promptly. Personnel who clean spills should wear rubber gloves and an approved respiratory protection device that is equipped with a canister or filter suitable for use with chlorinated vapors. Personnel not wearing rubber gloves or respirators should remain clear of areas where spills have occurred. Open all doors and turn on exhaust fans to ventilate the area.

You should use a sorbent to clean up small spills. Allow the sorbent to stay in place until it has completely absorbed the solvent and then shovel the solvent-laden material into an airtight container and dispose of it properly. If a large spill occurs, it should be drained and then pumped into an airtight container for disposal. The dry-cleaning solvent should not be dumped into sewers, placed near water supplies, nor should it be drained into the bilges. It should be placed in a suitable container and disposed of in one of the following ways:

- Released to a licensed reclaimer
- Incinerated in an approved incinerator
- Evaporated in very small quantities
- Buried in landfills in compliance with local, state, and federal regulations

Dumping the solvent into any body of water is strongly discouraged and may be illegal. No personnel should be allowed to return to any areas where spills have occurred until all evidence of excessive vapors is gone.

HEALTH HAZARDS

Perchloroethylene can be used safely when proper precautions are observed; however, the user must guard against certain hazardous properties of the solvent. Users should guard against inhalation of excessive perchloroethylene vapor, prolonged or repeated contact of the liquid with the skin, swallowing the liquid, and splashing into the eyes. Manufacturers of dry-cleaning equipment design and build their dry-cleaning systems with these points in mind. When such equipment is operated and maintained in an appropriate manner, dry-cleaning solvent should not become a health hazard.

Dry-cleaning supervisors should make sure a buddy system is adopted in the dry-cleaning operation. All dry-cleaning personnel should be alert for the signs of overexposure or illness caused by the dry-cleaning solvent including the following:

- Loss of inhibitions, lightheadedness, giddiness, or drunkenness
- Loss of coordination
- Stinging sensation in the eyes, nose, or throat
- Headache, nausea, or dizziness

FIRST AID

All personnel who work in areas where over-exposure to perchloroethylene could occur should be thoroughly trained in administering appropriate emergency first aid. Experience has shown that promptly administering such aid can help to reduce the possible adverse effects of accidental exposure. You must realize, however, that first aid is for emergency treatment only and medical attention should be obtained promptly.

Inhalation

The initial effects of overexposure due to inhaling the solvent will be nose and eye irritation, lightheadedness, dizziness, mental dullness, and uncoordination. If these symptoms are present, the affected person should be removed from the contaminated area to fresh air. Once the person is removed to an area where there is fresh air, recovery is usually rapid, If recovery is not rapid, symptoms worsen, or breathing has stopped, start artificial respiration and obtain medical attention at once.

Skin Contact

Perchloroethylene is an excellent solvent and because of this it removes natural oils from the skin. Prolonged and/or repeated contact with the liquid may produce rough and dry skin which is more susceptible to infections. Exposures that are infrequent or of short duration should have no adverse effects; however, in some persons a mild irritation, consisting of a mild temporary redness, may occur.

There is little practical hazard from the standpoint of skin absorption. Although perchloroethylene can penetrate the human skin in toxic quantities following massive or prolonged exposure, there is little absorption through the skin under normal conditions of use. Personnel whose skin comes in contact with the solvent should wash the affected area with large amounts of warm water and soap. Any contaminated clothes should be removed and dry cleaned.

Eye Contact

While the danger of serious injury is little or none if perchloroethylene is splashed into the eyes, a great deal of pain and redness may result. The eyes should always be flushed or rinsed with cool water immediately after contact and immediate medical attention sought.

STOWAGE OF THE DRY-CLEANING SOLVENT

NSTM S9086-WK-STM-010 of Sept 87 contains stowage requirements for chlorinated cleaning solvents. Chapter 670 includes the stowage, handling, and disposal of hazardous general-use consumables. Do not stow tetrachloroethylene (perchloroethylene) near heat sources, or allow contact with hot surfaces. Do

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Figure 6-2.-Multimatic dry-cleaning machine.

not smoke in areas where dry-cleaning solvent is stowed or used. All stowage areas should be well ventilated and checked regularly by the gas-free engineer. Do not stow dry-cleaning solvent near any substance that the solvent is not compatible with including strong alkalies such as sodium hydroxide, oxidizers such as calcium hypochlorite and sodium nitrate, or powdered metals such as aluminum.

SANITATION

To protect themselves, personnel working in the dry-cleaning plant where they are exposed to dry-cleaning solvents should receive a physical examination on a schedule determined by the medical officer. Dry-cleaning personnel should wear clean uniforms, maintain good personal hygiene, and wash hands frequently, especially after visiting head facilities or handling soiled clothing.

Dry-cleaning facilities should be kept in a clean and sanitary condition at all times. The medical officer should provide the dry-cleaning plant with sanitation instructions and inspect the dry-cleaning areas frequently. The medical officer should also provide a copy of the sanitation instructions to be posted in plain view in the dry-cleaning area.

DRY-CLEANING EQUIPMENT

Dry cleaning, in spite of its name, is a washing process. Steps in the process are roughly similar to those for washing with water, but the differences are important. The equipment used in dry-cleaning fabrics is listed in the Naval Sea Systems Command's *Navy Laundry and Dry-Cleaning Equipment Catalog* and is currently used in shipboard dry-cleaning plants.

DRY-CLEANING MACHINE

The dry-cleaning machines shown in figures 6-2 and 6-3 are generally used on most Navy ships.

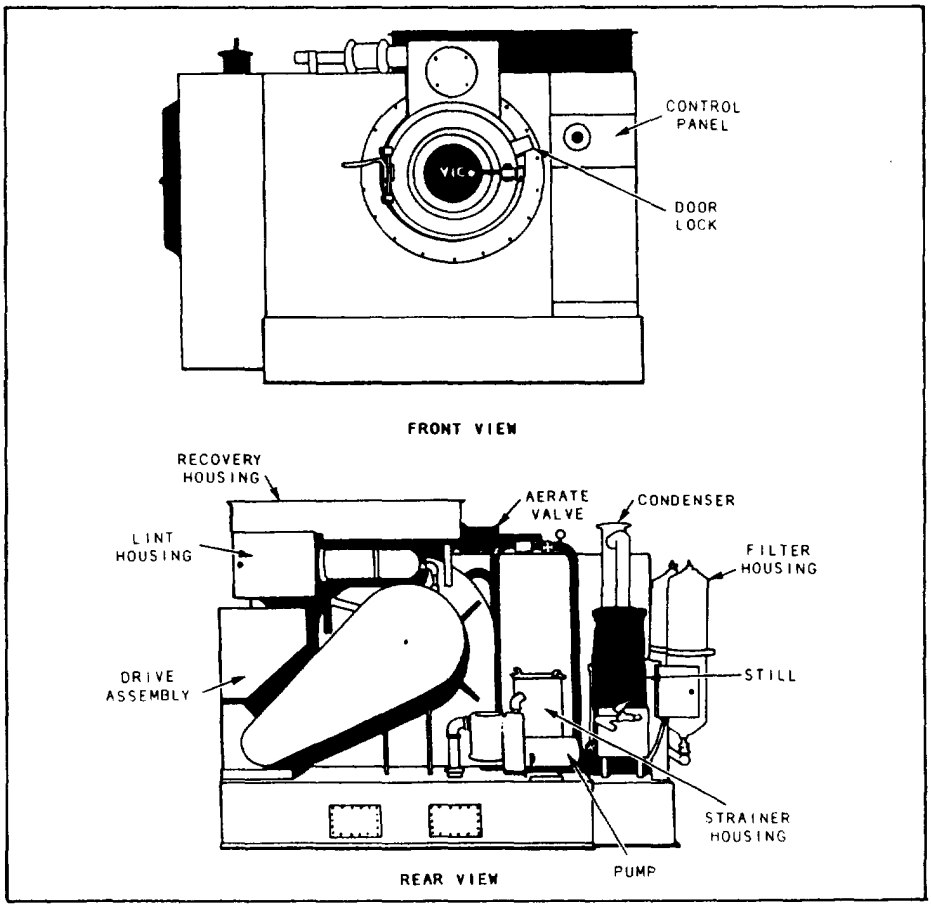


Figure 6-3.—VIC dry-cleaning machine.

Although they look different, they basically operate on the same principles. The dry-cleaning machine shown in figure 6-2 is commonly called the multimatic (Model Solo) and has a load capacity of 30 pounds. The dry-cleaning machine shown in figure 6-3 is the VIC model manufactured by the VIC Manufacturing Company and the components are shown for your reference.

The dry-cleaning units used today are much easier and safer to operate than machines used in the past. They eliminate the job of moving solvent-ladened clothes from one machine to another. You simply load the machine and when the cycle is complete clothes are dry and ready to press. This lowers the risk of solvent exposure. Listed below is basically what happens to a load during a complete cycle:

1. The load is placed in the washer basket, where solvent and soap, with the motion of the machine, carry on the initial washing process.

2. The solvent travels in a cycle through the washing basket into the filter-where much of the dirt it has collected is removed—and back into the washer, where the load is rinsed.

3. A portion of the solvent is drained off after it passes through the filter. This solvent enters the distilling unit, where it is completely purified. This is done by heating the solvent until it vaporizes. The vapor is then run over cold pipes to lower its temperature rapidly and return it to a liquid state. After distilling, the solvent again enters the washing cycle. By this means the total amount of solvent in the machine is kept at an acceptable level of purity for a long time.

4. At the end of the washing-rinsing period, the flow of solvent is automatically shut off and the machine spins to extract the solvent from the load.

5. After extraction, any remaining solvent is reclaimed during the drying process. This is done by tumbling the garments in a stream of warm air that vaporizes the solvent. The solvent-ladened air is passed over a cooling coil, condensed into liquid solvent, and returned to the stowage tank for reuse. The length of the drying cycle depends

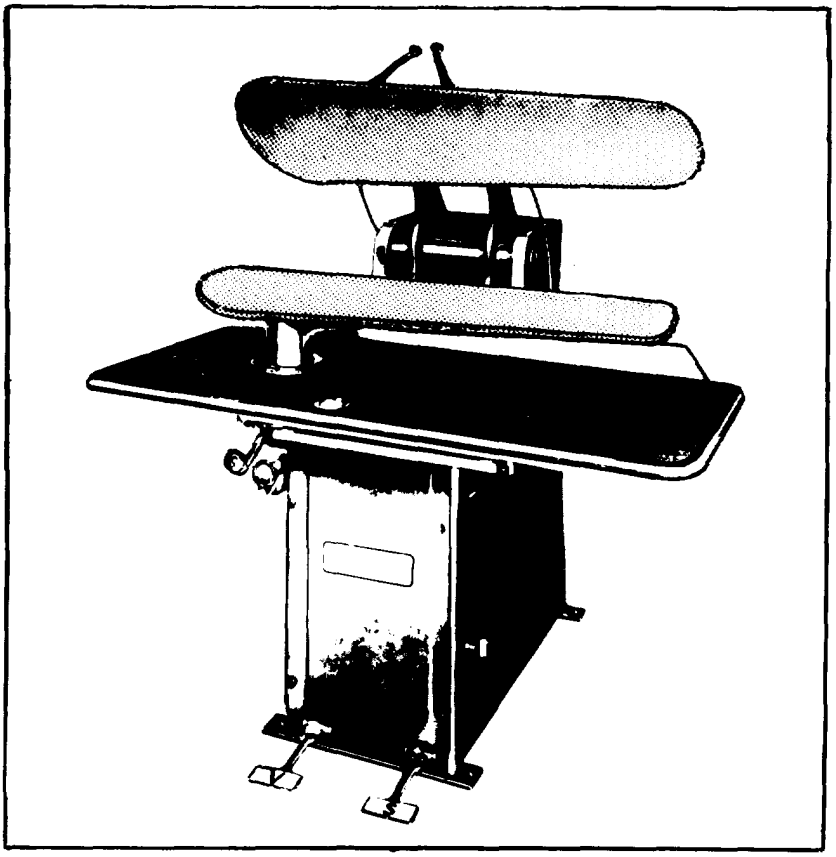


Figure 6-4.—Dry-cleaning press.

on the setting of the temperature on the thermostat. Until the temperature setting is reached, the drying cycle continues (normally about 12 minutes). The temperature setting, depending on the garment, should be set between 140° to 150°F.

6. Once the desired temperature is reached and the bulk of the solvent reclaimed, the clothes are treated with a stream of fresh air. This portion of the dry-cleaning process is the deodorizing cycle that strips away any remaining odor or solvent vapor that may still be left in the clothes.

DRY-CLEANING PRESSES

Dry-cleaning presses have perforated metal heads and bucks through which steam is admitted by the operator. The heads are normally covered with a perforated, thin, metal mask, which is sometimes also covered with a moleskin type of fabric to prevent a gloss on pressed articles. The bucks are usually padded and are then covered with a perforated metal mask and a cloth covering.

Presses used for dry cleaning aboard ship are listed in the *Navy Laundry and Dry-cleaning Catalog,* NAVSEA S6152-B1-CAT-010. There are two general utility dry-cleaning presses listed, one made by Ajax and the other by Florenta. The Ajax model is shown in figure 6-4. This model is very easy to operate. After dressing an article on the buck, the operator raises the head closing bar to close the head. Then, pressing the head locking handle with the other hand, the operator locks the head in the pressing position. Simply pressing the table-mounted release button will open the head at anytime. Steam can be provided to the head by pressing the steam handle located on the head, and buck steam and vacuum are supplied by depressing the two foot pedals.

The Florenta dry-cleaning press uses the hand control buttons in conjunction with the safety control bar. The operator pushes the black buttons on each side of the worktable facing with both hands. This will close the pressing head unless the safety control bar contacts an object or the buttons are released before the head is closed. To open the press head, the operator simply lifts up on the safety control bar and the press head will open to the full position. The two control buttons on the worktable facing are not used in the opening of the pressing head. The head steam and buck steam and vacuum are operated in the same manner as previously described.

Synthetic uniforms should not be pressed on HOT HEAD presses (uncovered polished steel). Synthetics cannot withstand high temperatures and, therefore, should be done on a dry-cleaning press.

Steam lines under no more than 75 to 80 pounds per square inch pressure should be connected to dry-cleaning presses. At this pressure the proper amount of moisture and heat is available to properly press the item of apparel.

CAUTION is required in pressing fabrics containing high percentages of either Dacron polyester fibers or Orion acrylic fibers because control of temperature, pressure, and time is important. For best results 100 percent Dacron and Orlon fabrics should be pressed at temperatures around 275°F with low mechanical pressure and short intervals of time. In blends of Dacron with wool, higher temperatures may be used provided the mechanical pressure and contact time are kept at a minimum. Improper pressing techniques may result in a shiny, watered, clouded, or frosted appearance, needle holes, and difficulty in altering the finished garment at some later date. If high steam pressures are used, it is doubtful that pressed seams can subsequently be altered. Permanent damage results from the defects discussed above because they cannot be removed by sponging or other treatment.

PRESS LAYS

In machine pressing, each garment is finished by a series of lays. Each lay is a position of the garment on the buck, and the series should cover the entire garment. Places on the garment that cannot be pressed with the machine should be smoothed out by inserting a puff (pad) and pressing the spot against the head of the press or by using a hand iron.

All pressers do not follow the same pattern for pressing the same article. Generally there is not much variation in different lays. Sequences of lays for trousers tops and legs, jumpers, and uniform coats are described in the following pages. The ones given are considered the minimum for each article when high-quality pressing is desired.

Trouser Tops

Figure 6-5 gives the sequence of lays for pressing trouser tops. With the fly open (lay No. 1), draw the left trouser top over the small end of the buck, having the fly front almost even with the front edge of the buck. Steam by using the head and applying light pressure, then dry thoroughly with the vacuum.

Again place the left trouser top on the small end of the buck as shown in lay No. 2. The pocket should be in the center of the buck. Straighten the pocket and make certain that the outer edge is even and drawn together. Steam, press, and dry the lay.

In lay No. 3, the left side pocket is even with the front edge of the machine and the back center seam is even with the rear edge of the buck. The left hip pocket lies in the center of the buck. Steam the material lightly and pull the pocket together.

In making lay No. 4, draw the trouser top over the small end of the buck so that the end of the buck fits well down into the seat of the trousers and the back seam is directly in the center of the buck. Apply steam and light pressure and vacuum dry.

In making lay Nos. 5, 6, and 7, continue on around the trouser top, pressing the right side. These lays are not shown as they correspond closely to lays 3, 2, and 1.

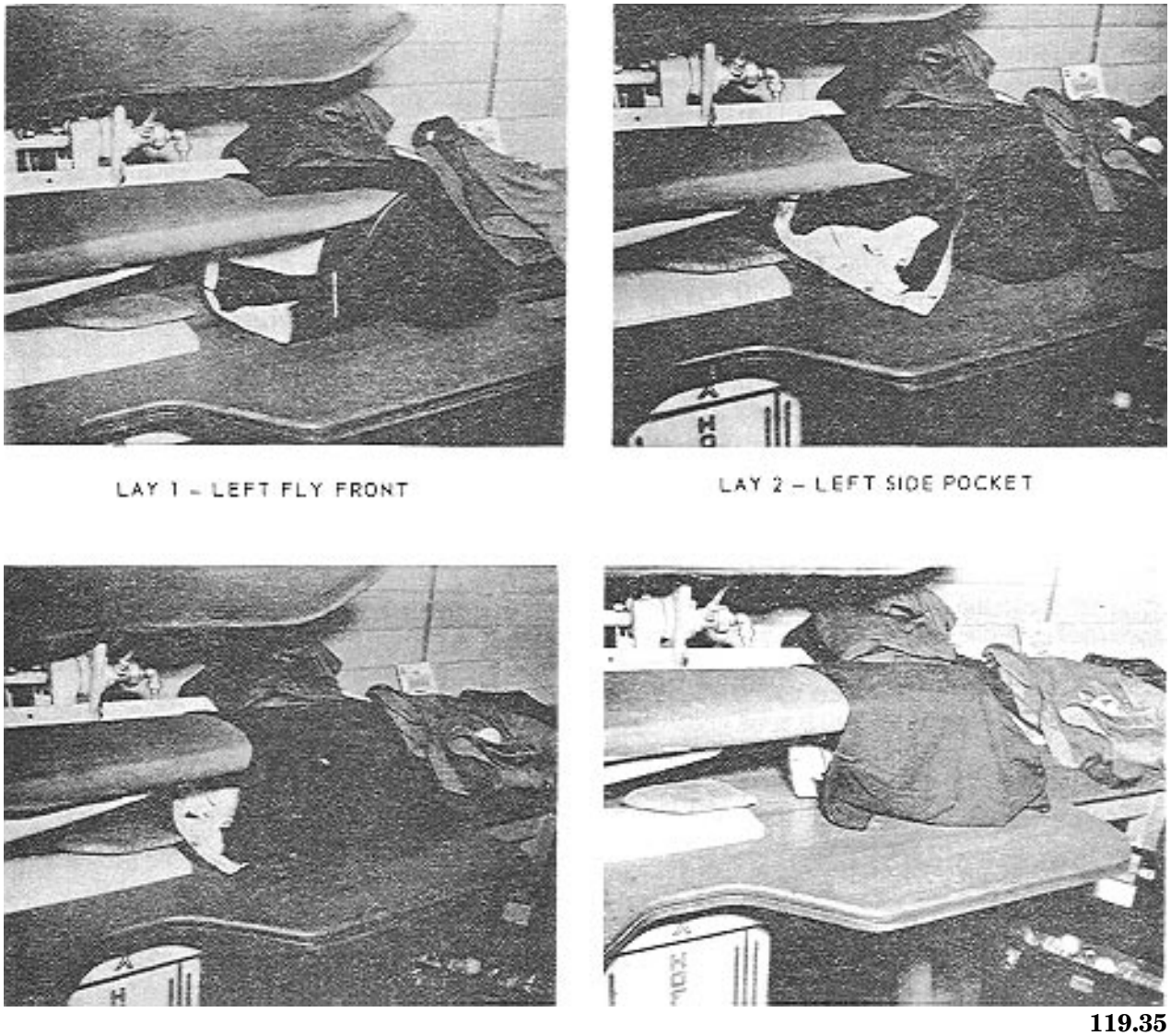


Figure 6-5.-Lays for pressing trouser tops.

When available, the automatic topper press may be used to press trouser tops. The topper press eliminates the need for lays discussed above and also speeds up production. This type of press is discussed later.

Trouser Legs

Lays for pressing trouser legs are given in figure 6-6. The first step is to place the front portion of the left leg on the buck—crotch at the large end, the inside of the leg facing upward, the seams lying on the center of the buck (see lay No. 1). Make sure that one seam rests upon the other for the entire length of the leg. Apply steam to soften the material and straighten the knee.

Lay the left leg, as shown in lay No. 2, on the front of the buck so that the front crease is in the center of the buck and the top of the trouser is at the large end of the buck in a line with the second or third button of the fly (or, if zippered, 2 or 3 inches from the bottom) in position so the crease will extend upward as far as possible.

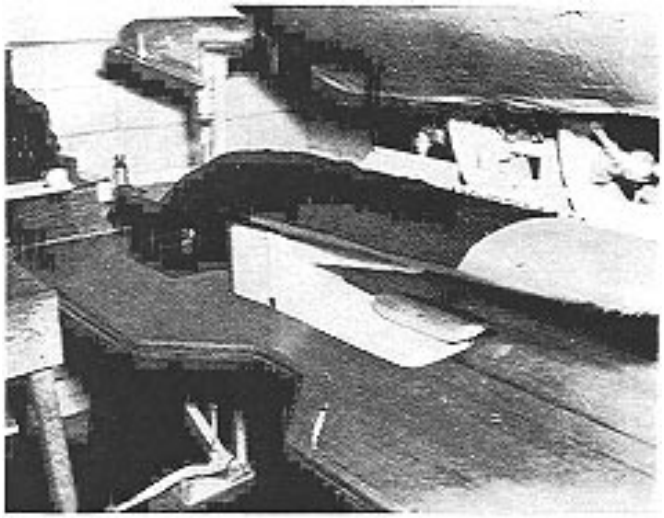
In lay No. 3, move the trouser leg to the rear of the buck so that the back crease is lying on the center of the buck. The leg should be placed so that at least 4 inches of the seat will be creased. Extend the crease as high as possible without wrinkling the crotch.

Lay Nos. 4 (right leg, front portion), 5 (right leg front crease), and 6 (right leg rear crease) are substantially the same as lays 1, 2, and 3 of figure 6-6.

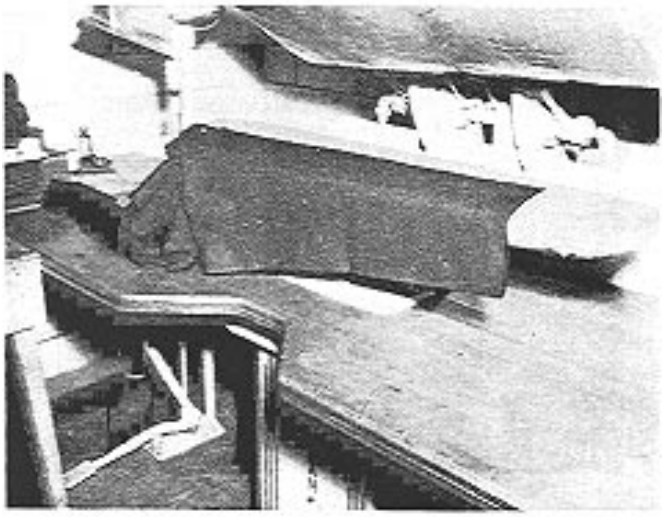
Uniform Coats

Check figure 6-7 (lays 1 through 6) and figure 6-8 (lays 7, 11, and 13) for the lays used in pressing uniforms coats. Place the left side of the coat collar and the left lapel on the rear of the large end of the buck and press as shown in lay No. 1. This operation shrinks the collar at the gorge seam, restoring the shape of the garment where it tends to stretch, from the seam at the shoulder down to about 5 inches below the gorge seam. Lay No. 2 is similar to lay No. 1 except that the right side of the collar and the right lapel are pressed. Make this lay on the front of the large end of the buck. Lay Nos. 1 and 2 serve to restore the balance of the coat so that the left front and right front hang evenly.

After creasing the two sides of the collar, place the collar on the large end of the buch (see lay No. 3) so that the center is on the center line of the buck. In most cases the collar is stretched while



LAY 1 – LEFT LEG FRONT PORTION



LAY 2 – LEFT LEG FRONT CREASE

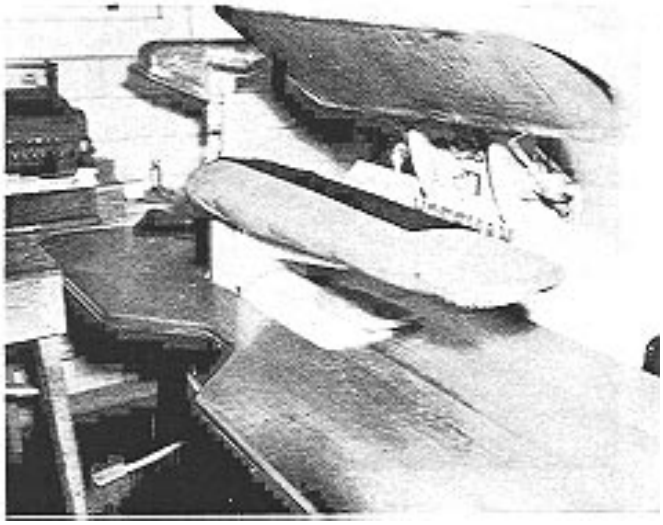


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Figure 6-6.—Lays for pressing trouser legs.

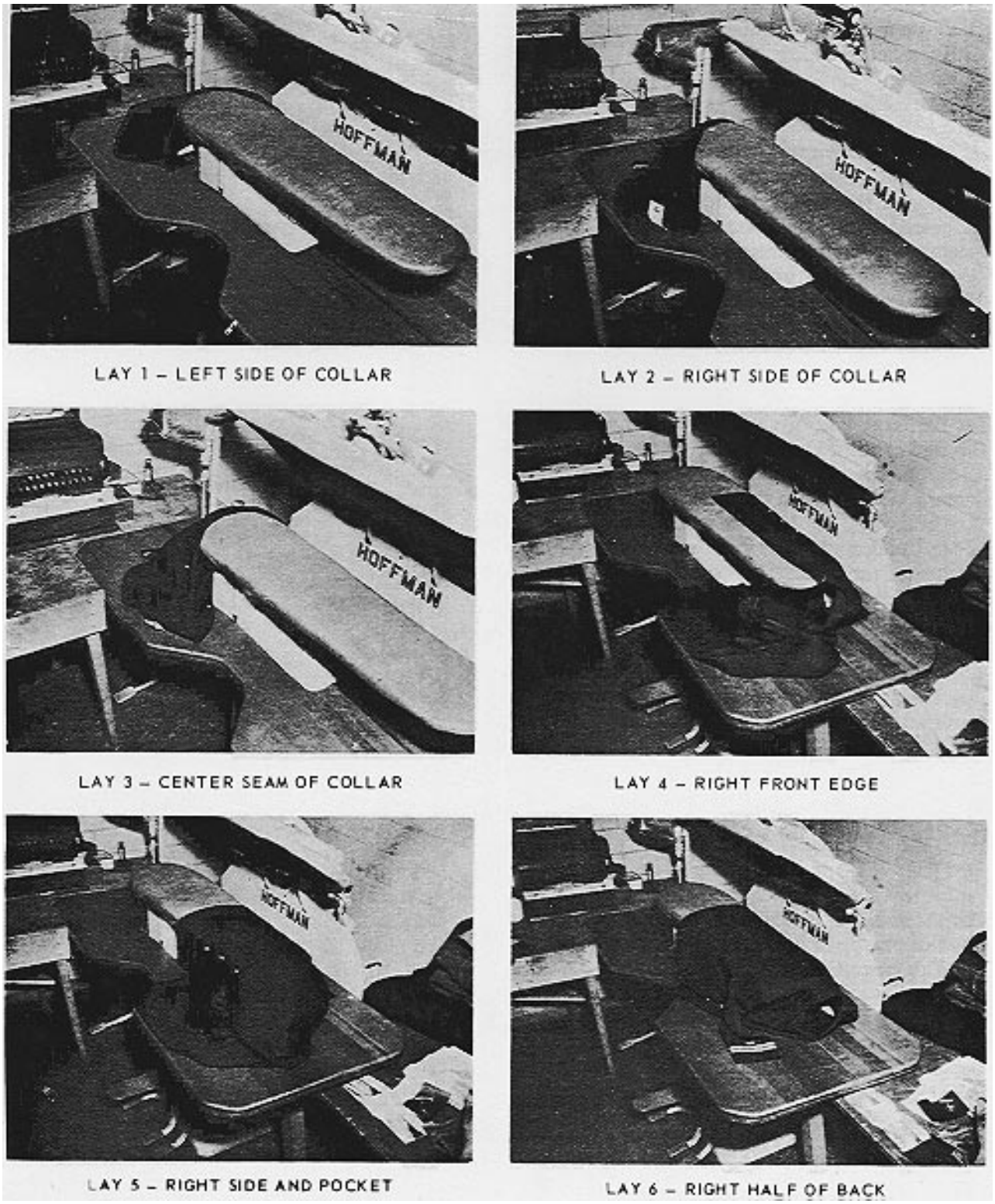

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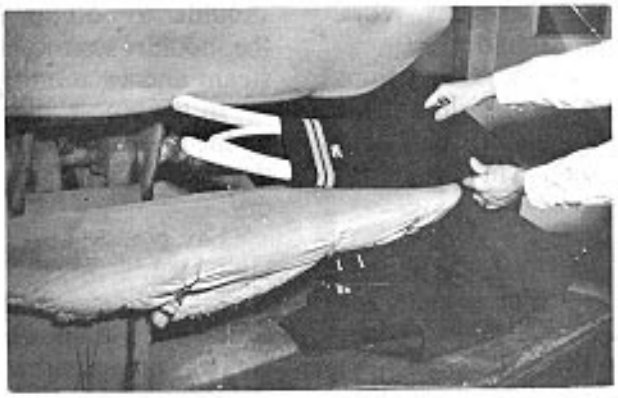
Figure 6-7.-Lays 1 thrugh 6 for pressing uniform coats.

LAY 7 – CENTER SEAM OF BACK

LAY 11 – COAT FACINGS



LAY 13 – SLEEVES, ROLLED

119.37.2

Figure 6-8.-Lays 7, 11, and 13 for pressing uniform coats.

being worn. Distribute the extra fullness over the length of the collar and steam freely.

In lay No. 4, place the right front of the coat at an angle to bring out the chest. Never stretch the front of the coat; gather in the front slightly and shrink it to the proper length. Steam well before applying pressure, then vacuum dry.

See that the pocket is smooth. Move the coat forward on the buck for lay No. 5. The small end of the buck fits into the chest about 1 inch below the armhole pit and within 2 or 3 inches of the side seam. Any fullness on the dart seam should be taken in between the pocket and the armhole pit.

In lay No. 6, place the right half of the back on the buck so that the lay is about 1 inch from the right armhole and about 2 inches below the collar. The side seam slants in from the armhole; the bottom of the seam is about 4 inches from the front edge of the buck.

The center seam in the back of the coat should be placed in the center line of the buck for lay No. 7 (fig. 6-8). See that the bottom edge of the under collar is placed even with the edge of the buck. Any fullness in the center seam between the shoulders should be taken in.

Continue on around the coat, making lay No. 8 (left half of coat back), lay No. 9 (left side and pocket), and lay No. 10 (left front edge) to correspond to lays 6, 5, and 4.

Place the right facing of the coat fronton the buck, facing up as shown in lay No. 11. This lay takes in the coat edge from the bottom of the coat

to a point below the gorge seam. Lay No. 12, for the left facing, is the same as No. 11.

Insert the sleeve former as shown in lay No. 13 and place on the buck of press. Bring the press head down for light contact only and steam from the head and the buck and then apply vacuum until dry. Turn the sleeve over without removing the former and repeat on the other side. The same methods are applied for the right sleeve. Visible creases from previous pressing can be removed by rubbing on the buck and steaming with the former still in the sleeve. For stubborn creases, wet with a damp cloth, allow to dry, and press as above.

Fit the shoulder pad into the sleeve head at the back seam. After spreading the fullness evenly, apply steam and then hold lightly against the head allowing the heat to press out the fullness. Next follow around to the front of the sleeve, getting in far enough to take care of the wrinkles. Work out the wrinkles in the other shoulder.

Dry-cleaning plants on board some Navy ships are equipped with a steam air finisher. This equipment can be used to do suit coats and increase work output. This equipment is discussed later in this chapter.

Enlisted Men's Trousers

Figure 6-9 shows the sequence of lays for pressing enlisted men's trousers. The procedure is the same for both blues and whites.

Turn the trousers inside out for the entire pressing operation. Place the left front of the trousers on the small end of the buck, smooth out the flap, and then apply steam and vacuum dry. See lay No. 1.

In lay No. 2, the left side back is placed on the small end of the buck, even with the side crease. Smooth out all wrinkles, apply steam freely, and vacuum dry.

In making lay No. 3, draw the trouser top over the small end of the buck so that the end of the buck fits well into the seat of the trousers and the back seam is directly in the center of the buck. Apply steam and light pressure and vacuum dry.

In making lay No. 4 and lay No. 5, continue on around the trouser top. These lays are not shown as they correspond closely to lay Nos. 2 and 1.

In lay No. 6, place the front portion of the left leg on the buck, crotch at the large end. With the seam facing up, running parallel to inside crease, apply light pressure and vacuum dry.

Lay the left leg, as shown in lay No. 7, at the rear of the buck, so the outside crease is in the center of the buck in line with the bottom of flap, to avoid crushing buttons, Apply steam fully to take out fullness of knee and vacuum dry.

Lay No. 8 (right leg, front portion) and lay No. 9 (right leg, outside crease) are substantially the same as lay Nos. 7 and 6.

Enlisted Men's Jumpers

Figures 6-10 and 6-11 give the sequence of lays for pressing enlisted men's jumpers. The procedure is the same for both blues and whites.

Turn the jumper inside out for the entire pressing operation. Place the body of the jumper on the center of the buck. Apply light pressure, steam, and vacuum dry. See lay No. 1.

Place the right side of the jumper on the small end of the buck (lay No. 2), extending from shoulder to bottom. Insert your right hand into the shoulder seam, smoothing out wrinkles. Apply steam and vacuum dry.

In lay No. 3, place the center of the jumper on the small end of the buck about 6 inches above the vee. Apply light pressure, steam, and vacuum dry.

Lay No. 4 is pressed in the same manner as lay No. 2.

Place the sleeve in the center of the small end of the buck as shown in lay No. 5, making sure creases correspond with the body crease and the shoulder crease. Smooth out all the wrinkles by applying light pressure to avoid crushing buttons on cuffs.

Lay No. 6 is pressed in the same manner as lay No. 5.

In lay No. 7, place the collar in the center of the buck and fold the sides to meet in the center as shown in lay No. 7. Apply plenty of pressure. Then fold the collar again so that the two outside creases are matched evenly. Place on the center of the buck and apply plenty of pressure. See lay No. 8.

In lay No. 9, fold the jumper in the center so that both sides of the jumper match. Place the center fold on the buck, apply light pressure, steam freely, and vacuum dry.

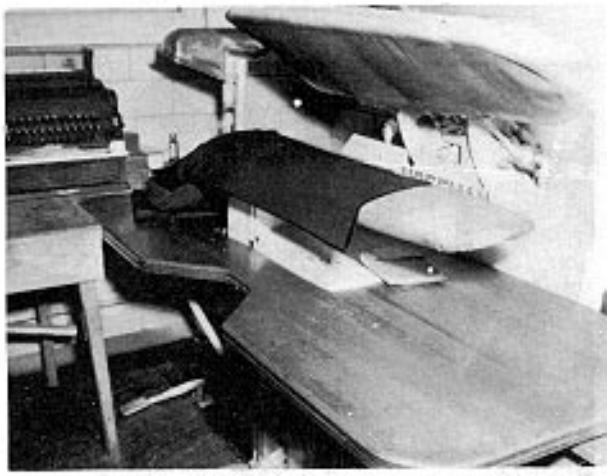
STEAM AIR FINISHER

When available, use the steam air finisher to finish such items as coats, overcoats, peacoats, and foul weather jackets. There are three styles of air finishers installed aboard Navy vessels. The

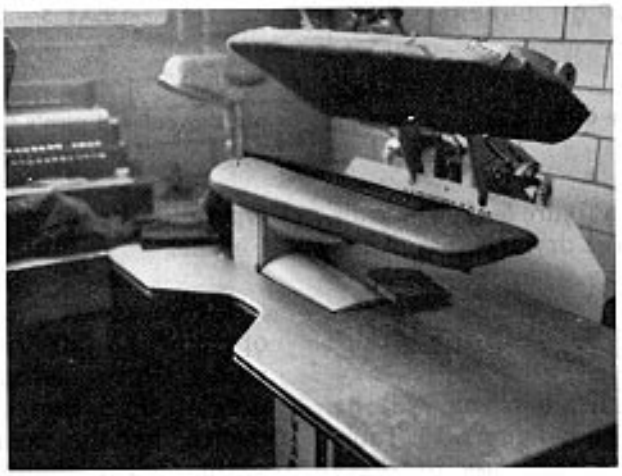
LAY 1 – LEFT SIDE FRONT

LAY 2 – LEFT SIDE BACK

LAY 3 – CENTER SEAM



LAY 6 – LEFT LEG FRONT PORTION



LAY 7 – LEFT LEG OUTSIDE PORTION

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Figure 6-9.-Lays for pressing enlisted men's trousers.

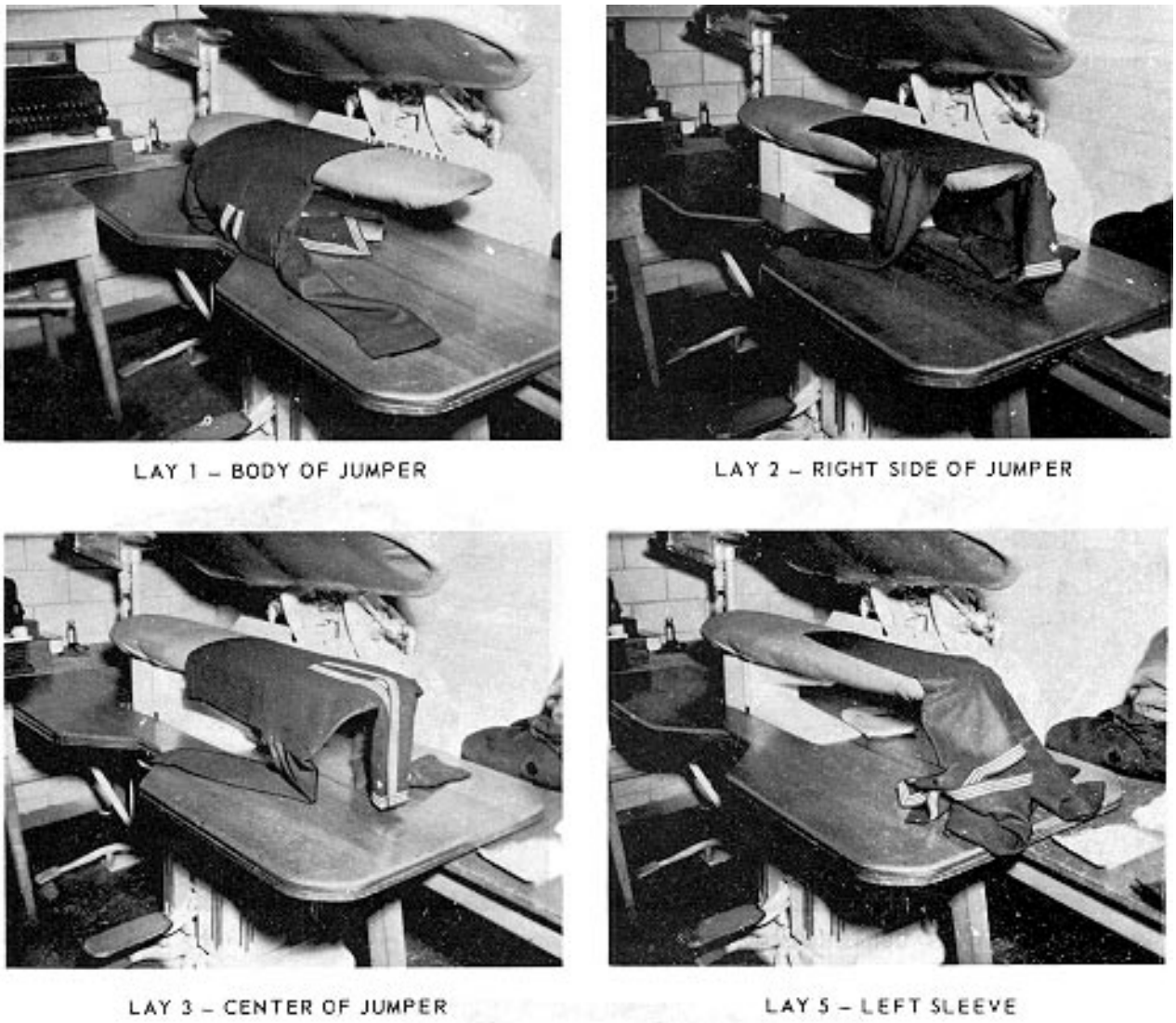

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Figure 6-10.-Lays 1, 2, 3, and 5 for pressing enlisted men's jumpers.

Ajax model is illustrated in figure 6-12. These air finishers make jobs in large dry-cleaning plants quicker and more efficient.

Controls and Indicators

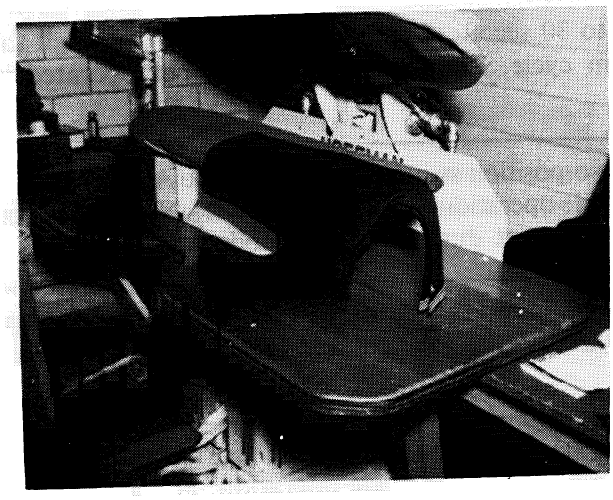
The controls and indicators you will be concerned with are illustrated in figure 6-13. Table 6-1 illustrates the purpose and use of these controls and indicators. Controls and indicators may vary between models; however, the operating principle is the same. Always refer to your technical manual for correct operating procedures.

Operation of the Steam Air Finisher

To eliminate problems, you should always operate the air finisher in the automatic mode. During automatic operation, the dura-tion of the steam and hot air cycles is con-trolled by the steam timer and air timer settings. The amount of time to set each control depends on the type of material. For most clothing items set the steam timer for 12 seconds and the air timer for 15 seconds. If the finisher is set at 0 or above 30 on either timer, it will not operate.

LAY 7 – COLLAR

LAY 8 – COLLAR



LAY 9 – CENTER CREASE

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Figure 6-11.—Lays 7, 8, and 9 for pressing enlisted men's jumpers.

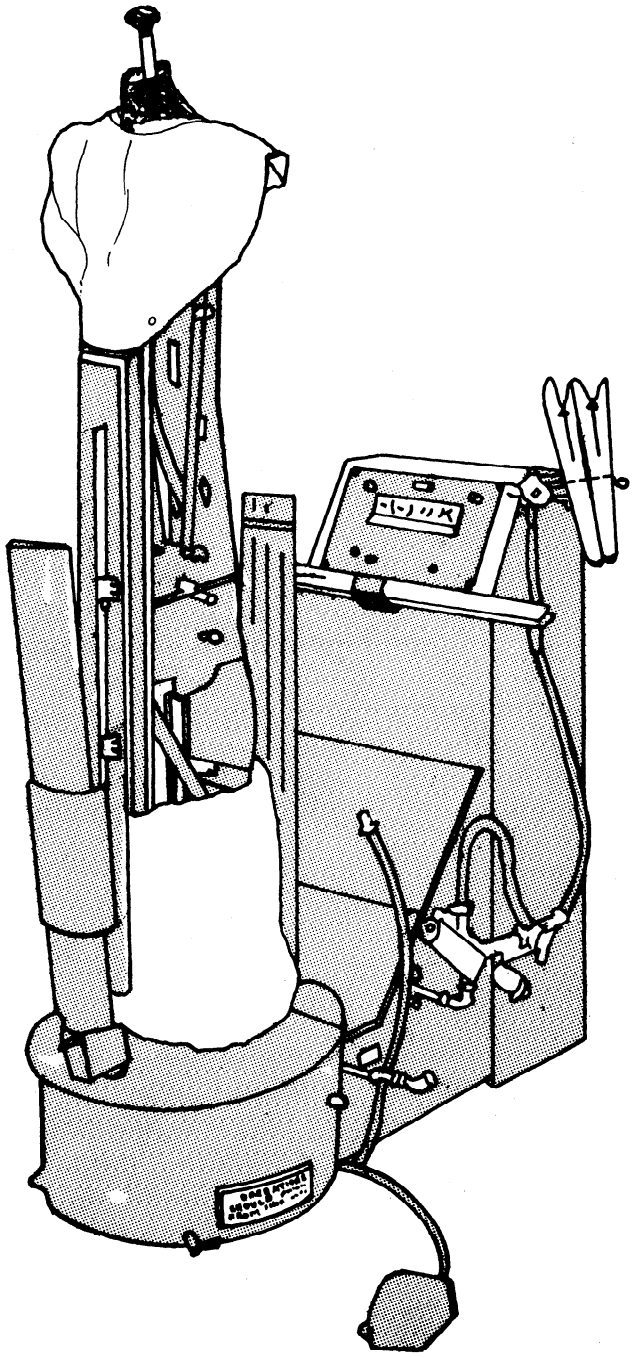
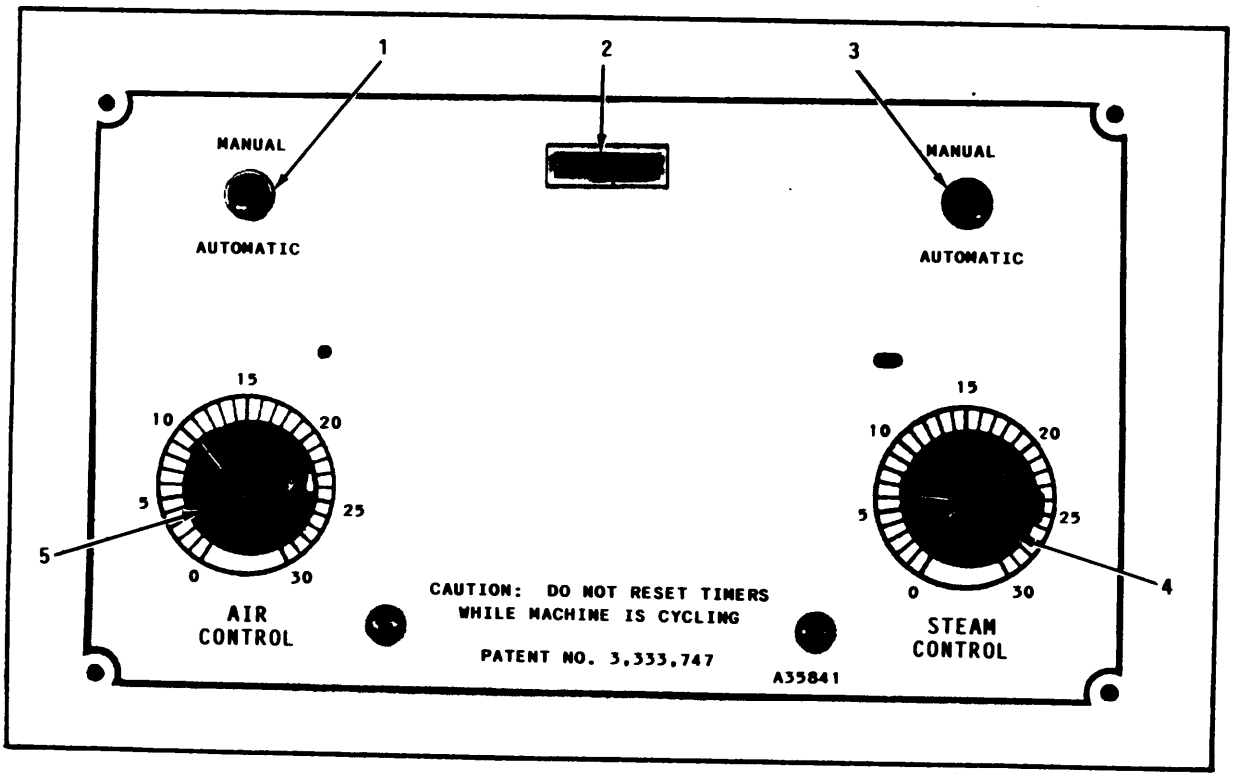


Figure 6-12.—Steam air finisher.

Loading the Steam Air Finisher

The following are basic procedures for loading a coat onto a steam air finisher. Overcoats, peacoats, and foul weather jackets are finished in basically the same way.

1. With shoulder expanders in and collar form in the down position, place the coat on the form.



1. Air control mode switch
2. Neon signal indicator
3. Steam control mode switch
4. Steam control timer
5. Air control timer

Figure 6-13.—Steam air finisher controls and indicators.

Table 6-1.—Pupose of Controls and Indicators

CONTROL	PURPOSE AND USE
AIR control timer	Sets the length of time (0 to 30 seconds) hot air will be blown through the garment following a steam cycle. Functions only if finisher operated in automatic mode.
AIR toggle switch	The AIR toggle switch is a two-position switch. Placing it in the AUTOMATIC position selects automatic mode operation. Placing it in the MANUAL position valves hot air through the garment during manual mode operation.
Neon signal indicator	Operative only during automatic mode operation. Lights to indicate steam or hot air is being blown through the garment and either steam or hot air timer is timing out.
STEAM toggle switch	The STEAM toggle switch is a two-position switch. Placing it in the AUTOMATIC position selects automatic mode operation. Placing it in the MANUAL position valves steam through the garment during manual mode operation.
STEAM control timer	Sets the length of time (0 to 30 seconds) steam will be blown through the garment. Functions only if finisher operates in automatic mode.

Adjust the shoulder of the form to fit the garment by pushing down on the knob at the top of form. Insert your hands in the pockets to straighten the linings and the pocket flaps.

2. Overlap the front of the jacket with the buttons outside and hold the coat firmly, closing the front flap with the knee.

3. Check and correct the back collar making sure there is no exposed facing and snap the collar form back.

4. Close the vents using the hand vent clamps, one clamp for each vent.

5. Start the steam before you insert the sleeves by releasing the foot switch. Once the steam is discharging freely from the sleeves, stop steam by pressing down on the foot switch. This automatically resets the steam cycle timer.

6. Keeping your foot on the switch, insert wood bars in the sleeves along the seam to within 2 inches of the armpit.

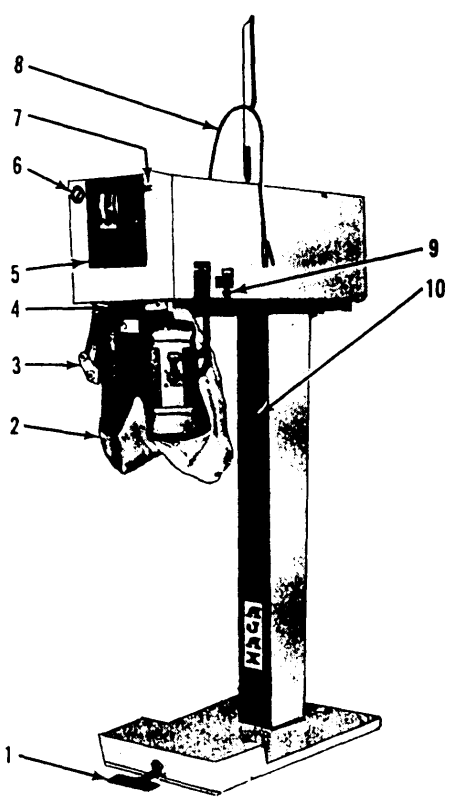
7. Release the foot switch to start the automatic cycle. The automatic cycle can be stopped anytime by stepping on the foot switch.

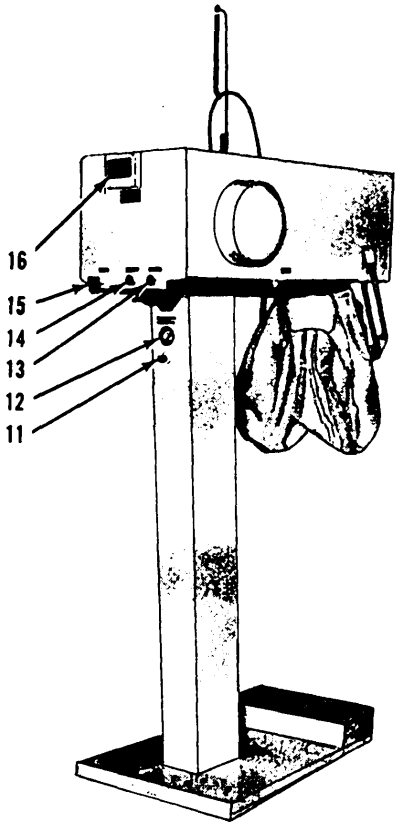
8. When the automatic cycle is complete, the red light goes off. Remove the vent clamps, release the foot clamp, remove the sleeves, and remove the coat.

The operating procedures above may vary slightly between models, but you should always consult your manufacturer's technical manual for the correct operating procedures.

AUTOMATIC PANTS TOPPER

When available, use the automatic pants topper shown in figure 6-14 to speed up





1. Foot pedal
2. Buck and padding
3. Pleat pressure plate
4. Waist clamp
5. Programmer
6. Pleat plate pressure gauge
7. Pleat plate pressure regulator
8. Water gun and hose
9. Damper control
10. Data plate
11. Expander pressure regulator
12. Expander pressure gauge
13. Steam supply connection
14. Steam outlet connection
15. Air supply connection and strainer
16. Electrical connection box

Figure 6-14.—Automatic pants topper.

production of trouser tops. The automatic pants topper is quicker and eliminates the several lays required to finish trouser tops on a conventional press by using air and steam. Steam and air are set automatically and then released into the air bag for a desired period of time in which the trouser tops are finished. The pants topper can be run manually or automatically. Refer to your technical manual for correct operating procedures.

ASSEMBLING AND ISSUING

When you finish pressing the clothes, you get them ready for issuing. Use the dry-cleaning lists for assembling articles into customer groups. The number on each master tag attached to the dry-cleaning list corresponds to the numbers of various articles in a customer's bundle. Put the tags in numerical order and collect all articles belonging to each master tag. Be sure that all articles written on the customer's dry-cleaning list are present and accounted for. Then check to see that all buttons are intact and that belts and buckles are present. Missing buttons should be replaced, and all belts and buckles presented to the laundry should be returned with the cleaned article or replaced when lost.

After you collect and check all items that belong in a customer's bundle, attach the dry-cleaning list, and put the items on the assembly and/or issue rack in numerical order.

As stated previously, the time for pickup by authorized persons is indicated on the dry-cleaning schedule. The hours are stated by divisions and activities and staggered to prevent congestion in the pickup line. Delivery periods should be at stated periods that will not interfere with active dry-cleaning processes in the department.

CARE AND MAINTENANCE OF THE DRY-CLEANING MACHINE

Keep the surfaces of machines in the dry-cleaning unit free of dust. Wash them with hot water and soap or a safe solvent. Apply a light coat of wax to the surfaces of new machines to help keep dirt from adhering to them. Clean the foam filter located in the lint housing daily by brushing the foam material to remove excess lint and washing it with clear water and squeezing it dry. Do not reinstall the filter when it is wet or use soaps or solvents when you clean it.

Check for accumulations of lint on coils when you remove the lint bag in the evening. Clean the pump lint strainer once each week or more often under heavy use. Never remove this strainer for cleaning while the machine is running. Be on the alert for solvent and grease leaks. Occasionally, check the timer with a watch. Make sure maintenance and lubrication charts are followed. Report requirements for maintenance to your supervisor.

MAINTENANCE OF DRY-CLEANING PRESSES

The maintenance of dry-cleaning presses is basically the same as laundry presses. Thoroughly clean them daily and change the pads and covers as required. Padding is so important in the dry-cleaning plant in order to produce a beautifully finished product. The presses are padded in the same manner as conventional presses, one steel wool pad (change once a year), two flannel pads (change the oldest one once a week or as required), and one cover that can either be changed when it shows signs of wear or taken off and washed once a week. All other press maintenance should be done by qualified maintenance personnel. Dry-cleaning personnel should not attempt maintenance on the presses that they are not qualified to perform.

SPOTS AND STAINS

Many spots and stains are removed through the regular washing or dry-cleaning process. Spots on clothing are caused by foods, blood, grease, and so forth. When these spots become set in the material they are considered a stain. The setting of a spot usually is caused by heat or from certain chemical reactions. Once set it cannot be removed without some injury to the fabric. In many cases the injury is so minor that removal is still worthwhile. In other instances, the risk of damage to the fabric is so serious that it's better to leave the stain in the fabric. Therefore, as you will learn, it is very important that spots are identified and treated before they become a stain.

SPOTTING

Any stain that resists the normal washing or dry-cleaning process can usually be removed using a special treatment called spotting. Spotting is a

Table 6-2.—Basic Stain Groups

OIL BASE TYPE

Adhesive Tape	Ink, Marking	Pitch
Airplane Dope	Ink, Printing	Rouge
Asphalt	Lacquer	Rubber Cement
Carbon Paper	Leather	Sauces
Crayon	Lipstick	Shellac
Furniture Polish	Lotions	Shoe Polish
Glue	Mascara	Soot
Grass	Nail Polish	Soup
Gravy	Oil	Tar
Grease	Ointments	Varnish
Hair Dressing	Paint, Latex	wax
Ink, Ball Pen	Paint, Plastic	

PROTEIN TYPE

Albumin	Egg	Milk
Blood	Glue (Animal)	Perspiration
Candy	Ice Cream	Salad Dressing
Catsup	Jelly	Starch
Chocolate	Mayonnaise	Sweets
Cocoa	Mercurochrome	Syrup
Discharge	Merthiolate	Vomit

TANNIN TYPE

Beer	Fruit Juice	Tea
Berry	Liquor	Tobacco
Coffee	Perfume	Wine
Fruit	Soft Drinks	Yellow

MISCELLANEOUS

Rust	Metallic (Other Than Rust)
Dyes	Silver Nitrate
Ink, writing	Photo Developer
	Tarnish

specialized art in which a spot or stain is identified and removed using the proper chemical agent without damaging or affecting the clothing. Aboard ship, basic spotting chemical preparations, which we will discuss later, should be used for removing stains contained in the basic stain groups shown in table 6-2. Stains are easier to remove when they are fresh and, therefore, early identification is essential.

THE SPOTTER

The person who does the actual spotting is called the spotter. The spotter's job is to identify the substance that caused the spot or stain and to know what cleaning agents and type of treatment to use to remove it. Many of the fabrics the spotter handles are expensive. Serious damage to any of them means financial loss as well as inconvenience to the owner. Therefore, the spotter

should know before trying to remove a spot or stain that the substance and methods to be used will not destroy the fabric or ruin its appearance. When in doubt about whether a spot or stain can be removed without serious damage to the material, the spotter should contact the supervisor and obtain his or her advice before starting the work. We have indicated earlier that identification and treatment of some spots are necessary to keep them from becoming stains. This is not always possible due to heavy workloads and lack of time to check clothing items. In this case a note should be placed in the plan of the day (POD) by the supply officer asking the owners of articles requiring spotting to tag the articles with a note identifying the spots. This information makes the spotter's job easier, faster, and more accurate. It also alerts the spotter to do spotting before dry cleaning.

SPOTTING TOOLS AND EQUIPMENT

The spotter must know and understand the equipment and tools used in spotting operations in order to get the best possible results. Spotting tools and equipment consist of the spotting board assembly—main spotting board, sleeveboard, garment tray, chemical tray, and spotting gun; spotting brushes; spatula; chamois and towels; cheesecloth and blotters; magnifying glass; soap solution containers; and spotting bottles and agents.

Main Spotting Board

The main spotting board is the spotter's worktable. (See fig. 6-15.) It is shaped like an

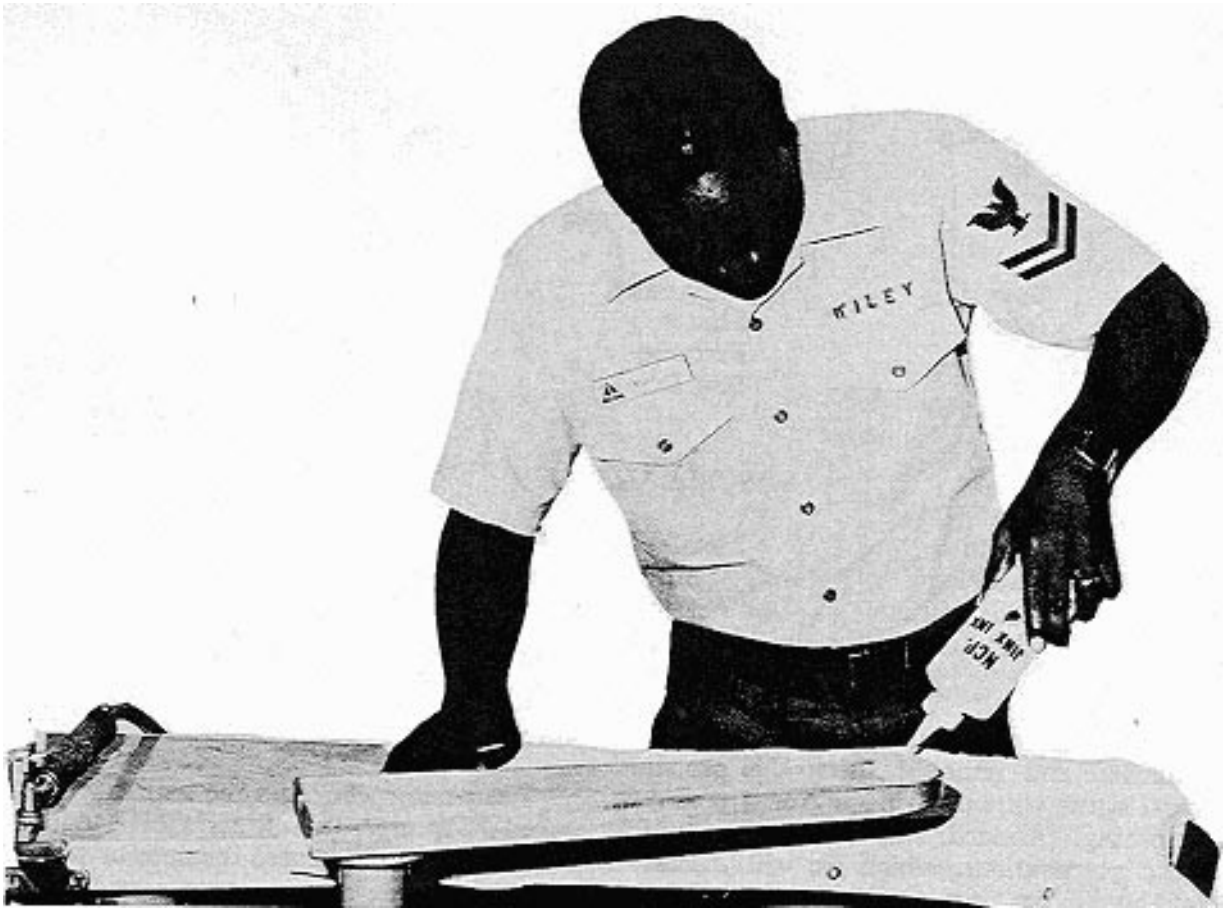


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Figure 6-15.-Spotter using the spotter board.

ironing board to provide large and small work spaces for articles of different sizes. The board is usually a combination of a smooth area and a perforated or screened area. The smooth surface is hard and usually made of glass, marble, or Monel metal, all of which are resistant to alkalies and acids. The smooth area is used for tamping and for applying spotting agents. The perforated or screened area is used for flushing. The perforated area must be taken apart and steam-cleaned each day to remove excess chemicals or dyes.

Sleeveboard

The sleeveboard is mounted about 6 inches above the level of the main spotting board. The sleeveboard, like the main spotting board, also has a flushing and tamping area. The sleeveboard is attached to the main board by a movable arm that can be adjusted. This board is used when working out stains on sleeves and other small areas. Clean the sleeveboard in the same manner as the main spotting board.

Garment Tray

The garment tray is under the main spotting board, midway between the board and the floor. The tray must always be clean; otherwise, the garment resting in it will be soiled.

Chemical Tray

All the basic spotting agents are placed on the chemical tray.

Spotting Gun

The spotting gun is used for removing spots or stains from wool, silk, and synthetics. The gun is adjusted so that slight pressure on the steam pedal provides steam and more pressure provides hot water or wet steam. If compressed air is piped to the spotting board, it will come through the gun when the appropriate foot pedal is depressed. When vacuum is piped to the spotting board, it is controlled by a foot pedal. However, the vacuum is piped to the perforated area of the board to dry and hold the garment in place while spotting. The spotting gun must be held about 4 inches above the garment. If the gun is held closer than 4 inches from the fabric, the steam or air pressure at 70 to 80 pounds per square inch can cause permanent damage to the fabric. The spotting gun should be held perpendicular when blowing the chemicals or spots off a garment. Before using the spotting gun, point it toward the deck and depress the steam pedal to remove excess condensation. The spotting gun must be cleaned daily and all chemicals removed from the nozzle.

Spotting Brushes

Spotting brushes help break up stains so that spotting agents can penetrate into and around the stains. When the spotting brush is not being used, the bristles should be pointed downward to allow the agents to drain from the bristles. The brush can also be placed in the brush holder to obtain similar results. When the brushes are used for tamping, the bristles should hit the fabric flat to prevent damaging the fabric. Never brush or scrub the spot.

Spoting brushes usually come in two sizes (2-inch and 3-inch) and two colors (black and white) and are made of nylon bristles. The large brush is used mainly on woolens and synthetics because the bristles are spread far apart. The small brush has a close set of bristles and is effective on silk. The black-bristled brush is used for dry-side spotting and for dark-colored fabrics. The white-bristled brush is used for wet-side spotting and light-colored fabrics. After a brush is used on a garment, clean the brush with the spotting gun.

Spatula

The spatula is made of stainless steel, bone, or ivory and is about 1 inch wide and 5 inches long. The spatula is usually pointed on one end and rounded at the other end and is used to manipulate chemicals, soften the stain, and to get better penetration. The pointed end should not be used because it will dig into the fabric and distort it. The rounded end should be used for better results. After each use the spatula should be cleaned.

Chamois and Towels

A thick, heavy chamois is used for absorbing water and spotting solutions as they are removed from fabrics. The chamois should be spread smoothly over the portion of the spotting board being used. A medium-weight Turkish towel serves the same purpose. By absorbing cleaning chemicals, particularly acids, the absorbent prevents pitting of the spotting board. Keep

chamois cloths or Turkish towels available for this purpose.

Cheesecloth and Blotters

Cheesecloth, because it is soft and absorbent, is used in spotting or feathering out—picking up all the moisture around a spot just removed. This prevents rings from forming. Chamois, because of its heavy texture, is not good for feathering out.

You can use blotters for absorbing materials rinsed from the garment. You can also use them to test the resistance of dyes in fabrics to cleaning chemicals and/or spotting agents. Put a small portion of fabric on a blotter and apply the chemical or spotting agent. The amount of coloring matter dissolved by the chemical and absorbed by the blotter indicates the effect of the chemical on the dye.

Magnifying Glass

When in doubt about the substance that caused a spot or stain, a spotter may examine it under a magnifying glass. Although an inexperienced spotter may get few results with a magnifying glass at first, through practice the spotter will learn to identify various substances as they appear when magnified.

The magnifying glass is used to observe the weave and imperfections of the fabric and to determine if a discoloration on the garment is a spot or damaged fibers. It helps to determine the kind of spot or stain and to observe the action of the spotting chemical. The glass can also be used to determine whether a spot has a staining substance or whether the spot has a chafed area with loss of dye. The magnifying glass will help you determine if the stained area is too weak to stand treatment and if a spot on a synthetic fabric was caused by heat damage.

Soap Solution Containers

Usually each spotting board has two containers to hold soap solutions. The containers should be cleaned daily.

Spotting Bottles and Agents

Spotting bottles and chemical agents are held in a tray at the right end of the spotting board. Dropper bottles with ground glass stoppers and rubber bulk pipettes are preferred. These types of bottles control the chemicals and conserve materials. However, on board ship, squeeze-type containers with a dropper top have been found to be more convenient and satisfactory from the standpoint of handling and breakage. The chemical agents commonly used to remove spots and stains are listed in table 6-3. Their characteristics and uses are given, and also the precautions you should take with them.

IDENTIFYING SPOTS AND STAINS

Once you have learned the basic uses of the equipment, tools, and chemical agents, you must be able to determine what the spot or stain is before you try to remove it. Through experience as a spotter, you will be able to easily identify spots and stains. Until you learn, you must be careful because if you try to remove a spot or stain before properly identifying it you may damage the clothing by using the wrong chemical or spotting technique. Listed below are several ways to identify a spot:

Sight—Sight is the most important and the quickest way to identify a spot or stain. Is the spot built up, built up and absorbed, or absorbed and visible on the back side? What is its shape? Is it dull or shiny, smooth- or rough-surfaced, or is it rugged with uneven edges? What is the color?

Feeling—Is the spot hard, soft, sticky, or brittle? Does it become white when scratched?

Odor—Sometimes the odor is so prominent that positive identification of the spot or stain is possible without the use of other guides. Sometimes a drop of water or a feather of steam is required to intensify the odor so you can positively identify what it is.

Location—Food spots are usually found on the front of the garment and on the underside of cuffs and sleeves. Perspiration stains are found under arms, across the back and shoulders, knees, and the seat of trousers. Leg makeup, mud, and shoe polish are found on the lower part of the skirt and coats or legs and cuffs of trousers.

Solvent test—Solvent tests are used to determine whether the spot or stain should be removed by water or dry solvent. If the appearance indicates the spot or stain was spread

Table 6-3.—Chemicals Used in Spotting

Name	Characteristics	Uses	Precautions
Acetic acid, 28%	Clear, colorless liquid, pungent odor	To neutralize alkalis; to restore color; as general spotting agent	Bleeds basic dyes.
Acetone	Colorless, volatile liquid with agreeable odor; flammable	Solvent for stains from oils, resins, paints, varnishes, and nail polishes	Dissolves cellulose acetate and some basic dyes.
Ammonia	Colorless liquid of water and dissolved ammonia gas; evaporates	To neutralize acids; to restore color	Bleeds acid dyes and some direct dyes; at full strength, yellows white silk or wool.
Amyl acetate	Colorless liquid with banana odor; flammable	Solvent for paint, lacquer, nail polish	Chemically pure is harmless; commercial or technical grade may damage cellulose acetate.
Amyl alcohol	Clear, colorless liquid; flammable	Solvent for formaldehyde resins	Harmless to all fabrics; bleeds some basic dyes.
Benzaldehyde	Colorless, fragrant, volatile liquid	Removes blacking, hair dye, and some types of shoe polish	Affects cellulose acetate; bleeds some basic dyes
Digestive agents	White or yellow powder	Convert albumins, starches, and sugars into simpler compounds which can be removed	Safe on all fabrics and dyes unaffected by water.
Hydrochloric acid	Clear, colorless or slightly yellow, pungent liquid	Diluted, to remove dye and ink stains, and metallic soap stains	Concentrated, it injures all fabrics and bleeds basic dyes.
Hydrogen peroxide (3%)	Clear, colorless liquid	Spot bleaching; and small areas, on spotting board	Safe in dilute form.
Oxalic acid	Powder	Removes rust	Poison.
Potassium iodide	White crystalline or powdered substance	Removal of silver nitrate and other silver stains	Safe on all fabrics and dyes. Should be rinsed well

Table 6-3.—Chemicals Used in Spotting—Continued

Name	Characteristics	Uses	Precautions
Sodium chloride Common salt . . .	White, powdered or granular substance	Helps to remove blood and fruit stains	Safe on all fabrics if properly rinsed. Has setting action on direct dyes
Sodium hypochlorite	Clear, colorless, or slightly yellow liquid	Bleach for vegetable and synthetic fibers; to remove blood, blue stains, grass stains, indelible pencil, mildew and molds, medicine, and perspiration stains	Discolors animal fibers. Strong solutions will injure vegetable fibers. Follow treatment with a sour.
Sodium thiosulfate.	Whitish, slightly opaque, crystalline substance	To remove iodine stains	Safe on all fabrics and dyes if rinsed well after using.
1, 1, 1-Trichloro-ethane (Methyl chloroform)	Colorless, nonflammable liquid	General spotting agent for oil and grease stains	Safe on all fabrics. If warm, may bleed cellulose acetate dyes.

by oil, solvent may remove the spot or stain. An ink spot may be tested as follows:

- Add a drop of water to the ink spot. If the ink bleeds easily, it is considered to be water soluble.

- Add a drop of ammonia to the spot. More color should bleed from the spot.

- Add a drop of acetic acid to the spot. If no more color bleeds, then remove the ink spot by a water and ammonia process of bleeding and flushing until spot is completely removed.

- If water does not bleed the ink spot, add dry solvent. If the ink bleeds, then the ink spot is ball-point, marking, Mimeograph, or printing ink, which must be removed on the dry side. Continue bleeding and flushing until spot is removed.

Chemical tests—Litmus paper indicates the presence of acid or alkali. Tannin can be discovered by applying a drop of ammonia to a spot or stain and noting whether the color turns tan or brown. The change to tan or brown indicates the presence of tannin. Wine and berry stains are distinguished from ink stains by a discharge of color. The color of wine and berry stains will change from blue to red and back to blue with alternate applications of ammonia and acid.

METHODS USED IN SPOTTING

The spotter removes spots and stains by using one or more of four following methods:

- Solution
- Emulsification
- Chemical action
- Mechanical action

SOLUTION

A solution is a mixture of two substances, the solvent and the solute. A solution occurs when the solute is dissolved in the solvent. The most common way to remove soils and spots from

Table 6-4.—Spot and Stain Removal Chart

GROUP NO. 1—Albuminous and Simple Food Stains

Spot	Appearance	Removal Steps
(l) Food	Built up, dark, turns white when scratched	Step No. 1 (A) Dampen area with water or steam. (B) Apply neutral lubricant or protein type agent.
(2) Starches	Built up	(C) Tamp with brush, flush with water or steam.
(3) Perspiration	Absorbed	
(4) Blood	Dull, absorbed, reddish brown	Step No. 2 (A) Dampen area with water or steam. (B) Apply ammonia (WHITE MATERIAL ONLY).
(5) Mud	Dull, absorbed	(C) Tamp with brush, flush with water or steam.
(6) Discharge	Absorbed, built up, dark or white	Step No. 3 (A) Dampen area with water or steam.
(7) Glue	Built up	(B) Apply wet spotter. (C) Tamp with brush, flush with water or steam.
(8) Ice Cream	Dull, absorbed	
(9) Sweets	Built up, dark to white	Step No. 4 (A) Dampen area with water or steam. (B) Apply digest powder. (C) Leave digester on stain for at least 15 min. (D) Flush with water or steam.

fabrics is to dissolve them in solvents. In washing, water is the chief solvent, while in dry cleaning, perchloroethylene is the chief solvent. Most substances will dissolve in either solvent mentioned above; however, many will not. These substances can be removed using appropriate chemicals. Table 6-4 is a spot and stain removal chart that lists different types of spots and stains and the steps and procedures for removing them. The chemicals used in spot removal will mix with the substance to loosen it so it may be rinsed away. Any clothing articles that are spotted after the wash or dry-cleaning cycle will have to be sent through the cycle again to rinse away any chemicals still remaining in the article. This should be done before you dry or press the material.

EMULSIFICATION

Any substances that help the solvent in removing stains such as soap or detergent are called emulsifiers. In dry cleaning, emulsifiers are already part of the dry-cleaning solvent; however, in regular washing, emulsifiers should be added to the solvent (water) to assist it in efficient stain removal.

CHEMICAL ACTION

In chemical action, two or more substances combine to produce one or more totally new substances. These new substances are normally very soluble and can be rinsed away easily. A good example of this is when you use an acid to remove an alkaline spot or use an alkali, like ammonia or sodium bicarbonate, to remove an acid spot. When you do this the two substances react chemically to forma soluble salt that can be rinsed out of the fabric easily.

Table 6-4.—Spot and Stain Removal Chart—Continued

GROUP NO. 2—Stains Containing Tannin.

Spot	Appearance	Removal Steps
(l) Coffee	Dull, absorbed	Step No. 1 (A) Dampen the area with water. (B) Apply neutral lubricant or tannin type agent. (C) Tamp with brush, flush with water or steam. Step No. 2 (A) Dampen area with water. (B) Apply neutral lubricant and 28% acetic acid. (C) Tamp with brush, flush with water or steam. Step No. 3 (A) Dampen the area with cold water. (B) Apply the general formula. (C) Tamp with brush, flush with cold water only. Step No. 4 (A) Dampen the area with water or steam. (B) Apply rust remover. (C) Never allow rust remover to come into contact with spotting board. (D) Flush with water or steam. Step No. 5 (A) Dampen the area with water or steam. (B) Apply digest powder. (C) Allow digester to remain on stain for at least 15 min. (D) Flush with water or steam. Step No. 6 (A) Dampen the area with water or steam. (B) Spot bleach (Oxidizing). (C) Flush with water or steam.
(2) Tea	Absorbed	
(3) Liquor	Dull, absorbed	
(4) Beer	Dull, absorbed, ring around the outside	
(5) Soft drinks	Absorbed	
(6) Fruit juices	Dull, absorbed	
(7) Medicine	Absorbed	
(8) Grass	Smeared, dull absorbed	

Chemicals must always be used very carefully because of the danger that they will affect the dye or damage the fibers. Note that in several instances in table 6-4, it is recommended that other methods be tried first and the chemicals used only for persistent stains.

MECHANICAL ACTION

Mechanical action is the simplest method of spot removal and an aid to all other methods. Mechanical action in spotting is done by using a brush, spatula, sponge, or spray gun to work a cleansing agent into the fabric. The important thing to remember about all mechanical action is that it tends to wear or damage the fabric. Never use more force than is necessary and continue the action only as long as necessary. Consider how the various fibers react to mechanical action (for instance, felting of wool) and avoid actions that will injure them. The spatula particularly

Table 6-4.—Spot and Stain Removal Chart—Continued

GROUP NO. 3—3 Miscellaneous Stains—Dye, Ink (Wet and Dry), and Rust.

Stain	Appearance	Removal Steps
(1) Ink (nonpermanent). . . .	Absorbed	Step No. 1 (A) Dampen area with water. (B) Apply rust remover or oil base type agent.
(2) Ink (permanent)	Absorbed	(C) Flush area with water or steam,
(3) Dye stains	Absorbed	Step No. 2 (A) Dampen area with water (B) Apply neutral lubricant and acetic acid or oil base type agent. (C) Absorb ink with a blotter. (D) Flush area with water or steam. Step No. 3 (A) Dampen area with cold water. (B) Apply general formula. (C) Tamp with brush. (D) Flush out with water or steam. Step No. 4 (A) Dampen area with water. (B) Apply neutral lubricant and ammonia. (C) Absorb with a blotter. (D) Flush area with water or steam. (E) Dry area completely. (F) Bleach (reducing).
(4) Rust	Absorbed, reddish color	Step No. 1 (A) Flush area with water or steam. (B) Apply rust remover. (C) Flush area with water or steam.

can cause damage to fabric when not used properly.

STAIN REMOVAL SAFETY PRECAUTIONS

As with any job there are certain precautions you should use when removing stains. They include the following:

1. Stain removal should take place under the best possible light conditions and with adequate ventilation.

2. Always examine the spot first and try, if possible, to determine what substance caused it. This procedure was discussed earlier.

3. Always make sure the solvent you are treating the spot with will not affect the garment. This is done by doing a preliminary test in a hidden portion of the garment as we discussed earlier.

4. CAUTION: Never use chlorine bleach or alkalies on any material containing silk, wool, or any other animal fiber.

5. If you are spotting rayon articles, never treat them with organic solvents unless resistance to the treatment is known by a preliminary test on an unexposed portion of the garment.

6. When using chemical agents always allow ample time for the agent to start to act on a spot before trying to remove it.

7. When you use the spatula to help the cleaning formula to penetrate the spot, be careful. Rub the spatula back and forth across the spot using short smooth strokes without applying too much pressure. This will prevent damage to the fabric.

8. Always use the proper spotting brush as we discussed earlier. The spotting brush should be used in the same manner as the spatula to prevent damage to the fabric.

9. Avoid excessive friction when treating silk or rayon fabrics. Where some friction is necessary, it is recommended you use the wrong side of the garment.

10. Do not use the spatula on silk or synthetic fabrics. The pressure you can apply on it without causing damage to the fabric will be insufficient to do any good.

11. When you remove spots and stains from delicate fabrics, you should place the stained portion of the garment over a pad of clean cloth or a white blotter and apply the cleaning solution with a squeeze bottle, a medicine dropper, or a cleaning sponge may also be used. Allow sufficient time for the cleaning solution to penetrate, but remove it as soon as possible to prevent damage.

12. All chemical agents used in spotting must be rinsed from the fabric thoroughly before you dry or press the fabric.

SPOTTING FORMULAS

Spotting agents are normally available in the *Ship's Store Contract Bulletin.* Ample supplies of spotting agents should be obtained before your ship deploys overseas or leaves port for an extended period of time. The spotting formulas listed in table 6-5 are the ones generally used for removing spots and stains for the purpose indicated. They are included in this chapter for your information and should be used when satisfactory commercial products are not available. All ingredients of these formulas are generally available aboard ship.

Table 6-5.—Spotting Formulas

Formula	Chemical Composition	When Used
General Formula	Amyl acetate — 1 part Glacial acetic acid 99% — ½ part Lactic acid — 1 part Oxalic acid crystals (by weight) — ½ part Synthetic methanol — 1 part	Used with water to remove ink, tannin, berry, lipstick, and dyestuff stains, or stains that contain dyestuff. Safe on all fabrics when cold, but not on all dyestuffs.
Paint remover	Chloropicrin (Use as prescribed by the manufacturer)	Good for removing all kinds of paint and similar substances. Evaporates completely.
Prespotting soap	Ammonia (26%) — ½ part Hexalin — 2 parts Oleic acid — 3 parts Water (distilled) — 1½ parts (Can use plain water.)	Used on paint, oil, tar, road oil, and asphalt to prevent SETTING during the dry-cleaning process. Blood and tannin stains should be removed by water before you dry clean.
Wet spotters	Acetone — 1 part Castile soap — 6 parts Chloroform — 1 part Ethyl acetate — 1 part Synthetic methanol — 1 part Water — 1 part	Wet and dry solvents are used to remove soil, paint oils, and greases. For very severe stains, or large areas, DO NOT USE wet spotters.

APPENDIX I

GLOSSARY

ACCOUNTABILITY—The personal obligation on the part of the ship's store officer to render an accounting of ship's store property and funds.

ACCOUNTABLE OFFICER—The ship's store officer.

ACCOUNTING PERIOD—Any period for which returns must be submitted. It is normally a 4-month period ending 31 January, 31 May, and 30 September.

ACETIC ACID—A general spotting agent used to neutralize alkalies, restore colors that have been damaged by alkalies, and test some dyes.

ACETONE—A general spotting agent used for such stains as oils, resins, paints, varnishes, and nail polish.

ACTIVE PHASE—A phase in the life cycle of bacteria when they grow and reproduce. This normally happens in the barbershop when sanitation requirements are not met.

AIR PRESSURE SWITCH—A safety device on the washer extractor that will not allow the machine to operate on less than 50 pounds of air pressure for the wash cycle and 80 pounds of air pressure for extract.

AMMONIA—A colorless, water soluble, volatile liquid alkali with a pungent odor used in spotting and wet cleaning.

AMUSEMENT MACHINES—Leased vending machines that provide the ship's crew with a variety of amusing games for 25 cents a play.

AMYL NITRATE—A clear, colorless, volatile liquid used chiefly on lacquer stains such as fingernail polish.

APPOINTMENT SYSTEM—A system of scheduling haircuts in the afloat barbershop where the ship's barber posts an appointment list outside the barbershop the day before the haircut is to be received. Crew members then sign their name next to the desired time and show up for their haircut at that time the next day.

ASSEMBLY BIN—A bin used in the ship's laundry to assemble finished laundry.

AUTOMATIC BRAKE—A safety device installed on the washer extractor that engages during power loss or emergency stop.

AUTOMATIC SUPPLY BINS— Supply bins located on the washer extractor that allow laundry supplies to be automatically injected into the washer shell at a time set on the program chart.

BACTERIA—One-cell microorganisms commonly referred to as germs and found nearly everywhere.

BARBERSHOP INSTRUCTIONS—Instructions used to assist barbershop personnel in performing their duties.

BASE EXCHANGE—The process of softening hard water when the compounds of calcium and magnesium in the water are exchanged for compounds of sodium that do not cause hardness.

BASIC STOCK ITEMS—Items listed in the current *Consolidated Afloat Requisitioning Guide Overseas* (CARGO), NAVSUP Pub 4998, chapter II. These items are considered the most popular and essential items of ship's store stock and should be stocked at all times.

BATHS—The washing process during which soil is loosened from the fabric, suspended in the water, and rinsed away. There are five baths in

a wash cycle: the break suds, flush suds, two rinse baths, and the sour bath.

BENZALDEHYDE—A general spotting agent used to remove black ink, hair dye, and some types of shoe polish.

BREAKBACK—A transfer of an item from a sales outlet back to the bulk storeroom.

BREAKOUT—A transfer of material from the bulk storeroom to a sales outlet or service activity.

BUCK—The worktable of the laundry press where items are pressed.

BULK LOTS— All divisional laundry, flatwork (bed linens, tablecloths, and so forth), and service lots (foodservice personnel, barbers, hospital corpsmen, and so forth).

BULK SALE—A sale made at cost to an activity authorized to buy in this manner.

BULK SALESROOM—A separate cash sales unit established in a bulk storeroom from which bulk sales are made.

BULK STOREROOM—A main storage facility for all or part of the stock in a ship's store operation. No sales are made from a bulk storeroom.

BULK STOREROOM CUSTODIAN—A person in charge of a bulk storeroom. In separate responsibility operations, the custodian is responsible for the stock by quantity on individual stock records.

CALCIUM—A silver-white, soft metallic element that forms a compound with chlorides and sulfates to make hardness in water.

CASH COLLECTION AGENT—An officer or enlisted person designated in writing by the ship's store officer to collect and deposit cash with the disbursing officer for cash received from sales in the ship's store.

CENTRIFUGAL FORCE—The force exerted against clothes in a washer extractor to force out solvent or water.

CHAMOIS—Heavy cloth used to absorb water and spotting solutions as they are removed from the fabric.

CHEESECLOTH—Soft, absorbent cloth used in spotting or feathering out; it picks up all moisture around a spot just removed.

CHEMICAL ACTION—An action used in spotting to remove stains by mixing two or more substances together on the fabric to produce one or more totally new substances that are very soluble and can be rinsed away easily.

CHEMICAL AGENTS—Chemicals commonly used to remove spots and stains.

CHEMICAL DISINFECTANTS—Germitidal solutions, sprays, or substances that eliminate or render inactive the bacteria found on barbering instruments.

CHEMICAL SOLUBLE SOILS—Soils that are soluble or readily dissolvable in chemical solvents, but are usually not soluble in water and may require special treatment.

CHT TANKS—Collection, holding, and transfer tanks are installed aboard ship for the purpose of handling waste water until further transfer ashore or at sea.

CLASSIFICATION—The process of separating laundry for washing according to color, type of fabric, and degree of soil.

CLOTHING ITEMS—Standard Navy clothing items.

COIL BOX—Housing for the steam coils located in the top portion of the tumbler dryer.

COLOR TRANSFERENCE—The transfer of the color of one fabric onto other fabrics during the wash cycle.

COMBINED RESPONSIBILITY OPERATION—A ship's store operation in which one person is responsible for both a sales outlet and the bulk storeroom that supplies that outlet.

COMBUSTIBLE TEMPERATURE—The actual temperature at which a liquid will begin to burn.

COMPOSITE RECREATION FUND—A fund in which a ship without a ship's store shares in the profits of the supporting ship's store. For example, an SSN/SSBN supported by an AS receives a share of the ship's store profits from the AS to be used as the SSN/SSBN's recreation fund.

CONSTANTS—Data maintained in a central file in the ROM system that is used repetitively to produce various reports and forms.

COOL-DOWN CYCLE—The final portion of the actual drying cycle; the cool-down timer on the tumbler dryer is set for 10 minutes, the dampers are moved to the cool position, and the dryer load is cooled down to approximately 120°F.

COST ITEM—An item of ship's store stock carried for ultimate issue as cost of operations and cost of sales.

COST OF OPERATIONS ISSUE—An expenditure of stock for ultimate consumption in a ship's store activity.

COST OF OPERATIONS ITEMS—Cost items carried for ultimate issue to ship's store activities and for which cash is not ultimately received.

COST OF SALES ITEMS—Cost items carried for issue to a sales outlet. Cash is ultimately received for cost of sales items. They differ from retail items in that further processing is required before sale.

COST PRICE—The price at which an item is received from the supplier. Standard Navy clothing is sold and issued at cost price. Cost of operations items are issued at cost price.

COTTON—A soft, white fibrous substance with a cellulose base that is used to make cotton fabrics.

CUSTODIAN (RESPONSIBLE CUSTODIAN)—A person held responsible for the operation of a sales outlet and strict custody of the material used in it.

CUSTODY—Responsibility for proper care, storage, use, and records of Navy material.

CYLINDER—Part of the washer extractor that has three pockets to hold clothes and is perforated to allow water and suds in the bottom of the shell to enter and clean clothes during the wash cycle.

CYLINDER DOOR—Door that allows the laundry person access to each pocket in the cylinder.

DACRON—A synthetic fiber.

DAILY RECORD OF VENDING MACHINE DRINKS—Locally developed form placed on the inside of each vending machine that lists the date, flavor, and amount of sodas placed in the machine when it is refilled.

DAMP BOX—A box used to stow trousers and shirts and keep them damp while they are waiting to be pressed.

DAMPERS— Dampers that regulate the temperature of the air coming into the tumbler dryer.

DELIVERY TABLE—Table that catches all material discharged from the flatwork ironer.

DEODORIZING CYCLE—Last cycle of the dry-cleaning process where the clothes in the dry-cleaning machine are treated with a stream of fresh air to strip away any remaining odor or solvent vapor.

DEPARTMENT CODE—A code by which ship's store merchandise is identified by categories; listed in appendix B of the ROM TUG.

DETERGENT/OXYGEN BLEACH—A mixture used for laundering cotton, synthetic, and blended clothing items in either fresh water or seawater. Commonly referred to as two-shot detergent.

DISTILLATION—The process in which used or impure solvent that contains an excessive amount of impurities is heated to approximately 250°F and vaporized. The impurities, mostly solvent, soluble, nonvolatile, boil at a much higher temperature; thus as the solvent is boiled off, the impurities are left behind where they remain in the bottom of the still in the dry-cleaning unit. The solvent vapors, now free of impurities, run over cold pipes to lower their

temperature rapidly and return them to a liquid state where they reenter the wash cycle.

DIVISIONAL LAUNDRY BAGS—Large nylon bags used for pickup and delivery of divisional laundry and other bulk lots.

DIVISIONAL LAUNDRY PETTY OFFICER—Petty officers assigned by their respective divisions whom the laundry supervisor can contact for delivery or pickup of bulk divisional laundry or for resolving any other problems concerning the laundry.

DIVISIONAL SCHEDULE—A system of scheduling appointments in the barbershop where a definite number of hours are set aside for personnel in a particular division to receive haircuts.

DRAWSTRING—Device used to tighten the press cover onto the buck of the laundry press.

DRUM CONTROL DISK— A disk that the program chart is attached to on the inside of the programmer. The drum control disk can be operated automatically or you can turn it manually to set it on a particular operation on the program chart.

DRY BULB THERMOMETER—A mercury-in-glass or alcohol-in-glass thermometer whose bulb is kept dry and shielded from radiation; used to record temperatures in the ship's laundry.

DRY CLEANING—The process of immersing soiled and stained garments in dry-cleaning solvent to clean them.

DRY-CLEANING STANDARDS—The amount of dry-cleaning work that the dry-cleaning activity can normally be expected to accomplish in a given period of time.

DRY-CLEANING TAGS—Premarked tags that come with the dry-cleaning list used to tag each article contained in an individual lot.

DRY-CLEANING WORK LOG—A written record used to log dry-cleaning articles in and out.

DUNNAGE—Material such as lumber or burlap used in storing material to provide protection to both the material and the ship.

DUTY SUPPLY OFFICER—An officer or senior petty officer representing the supply department after normal working hours.

EQUIPMENT CAPABILITIES—The output capabilities of a piece of equipment in a given period of time based on equipment capacity and time required to complete a cycle.

EQUIPMENT MAINTENANCE LOG—A log used to record historical repair data on each piece of laundry equipment.

EXHAUST DUCT—A rectangular or circular enclosure where air is sucked through by a large fan motor and discharged to the outer part of the ship.

EXHAUST FAN—Fan used to remove air from the basket of the tumbler dryer and force it out through the exhaust duct.

EXPENDITURE—Removal of stock from the accountability of a ship's store officer.

EXPENDITURE DOCUMENT—Any document that is assigned an expenditure serial number.

EXTRACT MOTOR—Motor on the washer extractor that spins the cylinder around during extract.

FEATHER OUT—A spotting term referring to the process of gradually dispersing moisture from the center of the stain outward to prevent leaving water circles or sizing rings.

FEED RIBBON DRIVE ROLL—A device that turns the feed ribbons on the flatwork ironer.

FEED RIBBONS—Devices used to feed flatwork into the flatwork ironer.

FINGER GUARD—Safety device on the flatwork ironer that prevents the hands of the operator from getting near the padded pressure rolls.

FINGERS—Devices located on the washer extractor inside the programmer. They energize the various functions of the washer extractor during the automatic mode. This is done when the fingers fall into the grooves that were cut out on the program chart. Once the finger does this

and contacts the metal on the drum control disk, that particular operation is energized.

FISCAL YEAR—A 12-month period selected for government accounting purposes beginning on 1 October and ending 30 September the following calendar year.

FLANNEL PADS—Pads used on the press buck to provide cushion and good pressing quality.

FLASH POINT—The lowest temperature at which the vapors of a liquid form an ignitable mixture with the air.

FLATWORK—Any items that can be safely processed through the flatwork ironer can be referred to as flatwork. The most common types of flatwork are bed linens and tablecloths.

FOOT PEDAL—Pedal worked by the foot that engages the compression roll on the flatwork ironer.

FRAUD—Any theft of funds or merchandise or a change of official records by an accountable officer or responsible individual in the ship's store operation.

FRICTION MATERIAL—6-inch-wide material that is wound around the feed ribbon roll; it has a rough surface so the feed ribbons will catch properly on the drive roll and be driven properly.

FUNCTION—A particular process in the ROM system that affects the ship's store records.

FUNDS— A sum of money or other resources established for a specific purpose usually without fiscal year limitations.

GARMENT TRAY—Tray used to hold clothing while removing a spot or stain on the spotting board.

GENERAL INFECTION—Infection that occurs when bacteria enters into the bloodstream.

GOOD BARBER ETHICS—Rules and standards of conduct and practice in the barbershop that will reflect well on the customers served.

GROOMING STANDARDS— Standards set forth by *U.S. Navy Regulations* regarding the appearance of naval personnel.

GROUP SALE—A sale of merchandise to a group in which several individual orders have been consolidated. A group sale is made when individual sales to personnel cannot be made.

HANDWHEEL—A device used to open and secure the shell door to the washer extractor.

HARD WATER—Water that contains an appreciable amount of salt; it cannot be used to wash clothes because it renders the detergent useless for washing.

HAZARDOUS SUBSTANCE— Any substance or mixture of substances that is toxic, corrosive, irritating, flammable, a strong oxidizer, a strong sanitizer, or that generates pressure through decomposition, heat, or other means.

HEAD—The top portion of the laundry press that is brought down against the fabric on the buck of the press during operation.

HEAD PRESSURE—The pressure exerted by the head against the buck of the press when it is in the lowered position.

HEAT STRESS—A combination of air temperature, thermal radiation, humidity, airflow, and workload that may stress the body as it tries to regulate body temperature.

HEAT STRESS LOG—Record of temperatures in the laundry.

HEAT STRESS SURVEY—A survey conducted by the medical officer using the wet bulb and globe temperature (WBGT) meter to determine whether a space is safe for human beings to work in.

HEATSTROKE—A condition marked by cessation of sweating, extremely high body temperature, and collapse that results from prolonged exposure to high heat.

HUMIDITY—The degree of wetness in the atmosphere.

HYDROFLUORIC ACID—A compound commonly referred to as rust remover, it is a colorless, volatile, fuming, corrosive acid used to removed rust and tannin stains from clothing.

HYDROGEN PEROXIDE—A mild liquid oxidizing bleach used chiefly for removal of organic stains such as bloodstains.

INACTIVE PHASE—A phase within the life cycle of bacteria during which they are not active or reproducing but are not dead either. Instead of remaining active or dying, the bacteria are rendered helpless while the area in which they are located is kept sanitized. The bacteria survive by forming a tough outer shell and are not affected by disinfectants, heat, or cold. Once the area is not sanitized or conditions become favorable again, these inactive cells become active and reproduce again.

INCINERATOR—A furnace or container used to burn waste materials.

INDIVIDUAL LOTS—Lots of laundry including officer and chief petty officer personal clothing normally delivered to the laundry in net bags.

INSOLUBLE SOILS—Soils such as earth, concrete, dust, sand, carbon, ashes, lint, hair, and so forth. These types of soil are insoluble in water or chemical solvents. Most insoluble soils are dispersed during the wash cycle and complete removal is difficult because these soils may redeposit on the clothes, causing a gray look on the fabric.

INTERLOCK SWITCH—Switch that prevents the wash motor of the washer extractor from activating while the outer shell door is open.

INTRASTORE TRANSFER—A movement of material from the responsibility of one sales outlet operator to that of another.

INVENTORY—The process of identifying, counting, and evaluating all stock on hand at a specific time.

INVENTORY TEAM—A team normally consisting of two persons; one person counts while the other records those counts on the Inventory Count Sheet, NAVSUP Form 238.

ISSUE—An expenditure of stock for some further purpose. Issues reduce accountability.

JOG SWITCH—A switch that is depressed simultaneously with the reverse or forward switch on the washer extractor to rotate the cylinder of the washer to the proper position for loading or unloading.

LAUNDRY BASKETS—Baskets used to transport clothing from one work station in the ship's laundry to another.

LAUNDRY MARK—Mark placed on clothing for identification purposes. The mark includes the first letter of the individual's last name plus the last four numbers of the individual's social security number.

LAUNDRY SHIFT—A period normally lasting 8 hours with 3 shifts per day. Normally done in shipboard laundries that require operation past normal working hours to complete the laundry.

LAUNDRY SUMMARY SHEET—A record used to summarize what the laundry accomplished during a weekly period; includes pounds washed, pieces pressed, and supplies usage data.

LAUNDRY WORKFLOW—Routing laundry from one work station to another for the purpose of efficient production.

LAYOUT SKETCH—Sketch of each sales outlet and bulk storeroom prepared by the ship's store officer including each bin, shelf, showcase, and so forth, in each space identified by a number.

LINT SCREEN—A rectangular-shaped screen that catches lint and dirt; located in the lower portion of the tumbler dryer; referred to as the primary lint trap.

LINT TRAP BAGS—Fine mesh bags available through the *Ship's Store Contract Bulletin;* used normally on secondary lint traps to catch lint and dirt before they enter the exhaust duct from the tumbler dryer.

LINT TRAPDOOR—A door that provides access to the lint screen; located on the lower part of the tumbler dryer.

LOAD LIMITS—The maximum amount of clothes in pounds that may be placed in a piece of equipment based on manufacturer's recommendation and washing formulas.

LOCAL INFECTION—An infection of the skin or scalp indicated by a boil or pimple containing pus.

MAGNIFYING GLASS—Used to identify substances by magnification.

MAIN SPOTTING BOARD— A worktable consisting of a smooth area used for tamping and applying spotting agents and a perforated area used for flushing.

MANUAL MODE—An equipment mode during which the equipment is operated without the use of automatic devices.

MANUFACTURE DATE—The date a particular item of stock was manufactured; indicated on the container of the item as a manufacturer's code. These codes are currently contained in NAVRESSO INST 4067.4.

MANUFACTURED ITEMS—Items that require further processing in the snack bar such as popcorn.

MARKDOWN—A voluntary reduction in the selling price of an item. There are three types of markdowns: markdowns below cost, markdowns to zero, and retail markdowns.

MARKDOWN BELOW COST—A voluntary reduction in the selling price of an item below its original cost price.

MARKDOWN TO COST—A type of retail markdown in which the selling price of an item is reduced so that it is equal to its cost price.

MARKDOWN TO ZERO—An expenditure of stock through a price change that reduces the value of the item to zero.

MARKON—Any voluntary increase in the established selling price of an item.

MARKUP—The difference between the cost price and selling price of a retail item.

MECHANICAL ACTION—The force that is applied as an expedient in the removal of soil from fabrics in the laundry.

METALLIC INSTRUMENTS—Barbering equipment that is made of metal.

MONETARY—A term used in the ship's store operation referring to money.

NONMETALLIC INSTRUMENTS—Barbering equipment that is not made of metal.

NONPATHOGENIC BACTERIA—Bacteria that do not cause disease.

NSA—Navy Stock Account is the inventory of supplies purchased from the Navy Stock Fund that have not yet been expended to end use.

NSF—The Navy Stock Fund is a revolving fund that finances the purchase or manufacture of supplies and services that are to be taken up in the Navy Stock Account (NSA).

ORLON ACRYLIC—A synthetic fiber chemically composed of acrylonitrile.

OVERRING—An incorrect higher price for an item rung up on a cash register.

OXALIC ACID—A poison powder used to remove rust from clothing.

PADDED ROLLS—The rolls on the flatwork ironer that smooth and flatten fabrics to the heated cylinders.

PARAFFINED CLOTH—A cloth saturated with wax for use in waxing the flatwork ironer.

PATHOGENIC BACTERIA—Bacteria that attack plant or human tissue and cause disease.

PERFORATED BASKET—The rotating basket within the tumbler dryer.

PERMANENT HARDNESS—That characteristic of water that contains calcium and magnesium chlorides unaffected by boiling.

POOR BARBER ETHICS—Bad rules and standards for conduct and practice in the barbershop that reflect poorly on the way customers feel about the barbershop.

POSITIONING INTERLOCK SWITCH—Safety device that eliminates the possibility of having the washer motor activate while the outer shell door is open.

POTASSIUM IODIDE—A white crystalline or powdered substance used for removing silver nitrate and other silver stains.

PRECONDITIONING—Preparing heavy items to be pressed by drying them slightly in the tumbler dryer to make pressing easier.

PRESPOTTING—Examining and treating spots or stains before the fabric is cleaned.

PRESS COVER—The top portion of the buck that covers the buck, flannel pads, and steel wool pad; it is fastened using the drawstring and press cover springs that are attached underneath the buck.

PRESS DECK LOG—A record used to log press deck laundry in and out; press deck laundry includes officer and chief petty officer lots.

PRESS HEAD MITTS—Mitts used to prevent laundry personnel from being burned while cleaning press heads.

PRESS UNIT—Two or more presses grouped together.

PRESSURE GAUGES—Gauges found in the laundry that indicate such things as steam and air pressure on different pieces of equipment. These gauges are checked to be sure the equipment is operated within the appropriate limits.

PRICE MANIPULATION—A change in the price of an item of ship's store stock by unlawful means to one's own advantage.

PRIMARY LINT TRAPS—Traps located in the front of the tumbler dryer inside the lower lint trapdoor; they prevent lint and dirt from entering the secondary lint trap and exhaust ducting.

PROCUREMENT—The act of obtaining supplies or services.

PROCUREMENT DOCUMENT—A document used to obtain supplies or services that is assigned either a purchase order or requisition serial number.

PROFIT—The amount of money remaining after all expenses and costs have been paid.

PROGRAM CHART—A chart attached to the drum control disk of the programmer that is cut to conform with the Navy wash formula so it can be used during the automatic operation of the washer extractor.

PROGRAMMER—A mechanism that controls all manual and automatic operations of the washer extractor.

PURCHASE ORDER—An order for material that also establishes a one-time contract. An item ordered from the *Ship's Store Afloat Catalog is* procured via a purchase order.

RECEIPT—The acceptance of the quantity and quality of material for accountability purposes.

RECEIPT INSPECTOR—An officer or enlisted person given the authority to receive, identify, and inspect incoming ship's store stock. This authority is given in writing by the ship's store officer.

RECORDSKEEPER—A person in charge of keeping ship's store records.

REFUND—Cash given back to a customer in exchange for merchandise that was previously bought from a sales activity.

REQUISITION—An order for material from a government source; for example, other supply officers, another ship's store, or a shore supply support activity.

RESALE ACTIVITY—A sales outlet.

RESALE OPERATIONS MANAGEMENT SYSTEM—A microcomputer-based recordskeeping system used to assist ship's store personnel in administering the requisition, management, and control of the ship's store inventory and in producing resale operations reports and returns.

RESPONSIBILITY—The obligation to exercise care, custody, and protection of ship's store money and materials.

RETAIL ITEM—Any item sold in its original form in exchange for cash.

RETAIL MARKDOWN—A voluntary price reduction in the retail price of an item to a price above or equal to its original cost price.

RETAIL PRICE—The price at which an item other than standard Navy clothing and cost of operations items is sold or issued.

RETAIL STORE—A sales outlet where retail items are sold.

RETAIL STORE OPERATOR—The person in charge of a retail store. For combined responsibility operations, it also refers to the custodian of a retail store and bulk storeroom who provides supplies for that store.

RETURN RIBBONS—A mechanism that holds flatwork in contact with the heated cylinder of the flatwork ironer until the flatwork is discharged.

SAFETY PRECAUTIONS—Acts or measures that must be carried out to prevent injury to operators.

SALE—Any expenditure of stock for which cash is received. Accountability is unchanged by a sale.

SALES OUTLETS—Retail stores, vending machines, amusement machines, and standard Navy clothing stores.

SECONDARY LINT TRAPS—Traps used to help in cutting down the buildup of lint in the ducting from which the exhaust air enters from the tumbler dryer.

SEPARATE RESPONSIBILITY OPERATION—An operation in which two or more persons are responsible for the operation of a sales activity and the bulk storeroom that supplies that activity.

SERVICE ACTIVITY—A ship's store facility that renders a service. The barbershop, laundry, dry-cleaning plant, and tailor shop are service activities.

SERVICE LOTS—Clothing of cooks, foodservice attendants, barbers, hospital corpsmen, and snack bar personnel.

SERVICE-TYPE SHIPS—Surface ships that provide services to other ships or submarines.

SHELL—Outer part of the washer extractor that holds the water and cleaning ingredients.

SHIP'S STORE—The sales outlets and service activities on board a ship.

SHIP'S STORE AFLOAT CATALOG—Catalog containing luxury and semiluxury items. It is published and maintained by NAVRESSO.

SHIP'S STORE CONTRACT BULLETIN—Catalog containing basic staple-type items required to support the needs of the crew. It is published and maintained by NAVRESSO.

SHIP'S STORE OFFICER—The officer in charge of the ship's store operation aboard a ship. The ship's store officer is the accountable officer.

SIGNAL ALARM—An alarm on the washer extractor that warns the operator when a load is completed when the automatic mode is used.

SINGLE OPERATOR STATION—Two utility presses and one pants topper press.

SLEEVEBOARD—Smaller board attached to the main spotting board used when working stains on sleeves and other small areas.

SNACK BAR—A sales outlet where ice cream, drinks, and retail snack items such as candy and cookies are sold.

SNACK BAR OPERATOR—The person in charge of the snack bar.

SODIUM HYPOCHLORITE—Spotting agent used on vegetable and synthetic fibers to remove blood, glue stains, grass stains, indelible pencil, mildew and molds, medicine, and perspiration stains.

SODIUM THIOSULFATE—Spotting agent used to remove iodine stains.

SOFT WATER—Water that has not picked up salts from the earth, or water that has had these substances removed or neutralized.

SOLVENT TEST—Test used to determine whether a spot or stain should be removed by water or dry solvent.

SOURING—The process of neutralizing the alkalinity in a garment by using one of the mild acids or acid salts; used on the last rinse cycle of the washing formula in the laundry.

SPATULA—A knifelike implement made of bone or plastic used to increase the penetration

or to spread out thick spotting agents and soften the stain.

SPECIAL ORDER—The procurement and sale of a retail item to a specified individual who has ordered the item. The item is sold through a retail store but is not carried as stock.

SPECIAL SOILS—Soils that are insoluble in either water or laundry chemicals. They must be removed partially or entirely using spotting operations.

SPOT—Mark on clothing caused by foods, blood, grease, or other substances.

SPOTTER—A person who actually does the spotting.

SPOTTING—A specialized art in which a spot or stain is identified and removed using the proper chemical agent without damaging or affecting the clothing.

SPOTTING BRUSHES—Used to help break up stains so the spotting agents can penetrate into and around the stains.

SPOTTING GUN—Used for removing spots or stains from wool, silk, and synthetics.

SPRAY GUNS—Used on the press deck in the laundry to dampen shirts or trousers that have gotten dry so they can be pressed properly.

STAIN—The setting of a spot on material or clothing.

STANDARD NAVY CLOTHING ITEMS—Items authorized in the Navy Standard Clothing Price List for Men and Women, NAVRESSO Pub 90.

STANDARD PRICE—The price at which an item of standard Navy clothing is bought and sold.

STARCHING—The process of adding sizing to clothing to give it stiffness.

STAY TIME—The maximum permissible exposure duration that a person may stay in a heat stress environment before being removed to a cool, dry recovery environment.

STEAM AIR FINISHER—Piece of equipment used in dry-cleaning activities to finish coats, overcoats, peacoats, and foul weather jackets.

SUIT WRAPPER—Plastic wrapper used to cover all pressed or finished articles to keep them free of dirt or dust and to keep them together.

SUPPLY DOOR—Door located on the side of the washer extractor used to add supplies manually to the washer extractor.

SURVEY—An expenditure of stock for immediate disposal. Surveys reduce accountability.

SUSPENSION—The solution in which solids are finely dispersed and held in suspension by liquid or solid, as soil is held in suspension by soaps.

TEMPERATURE CONTROL—Control on the program chart that regulates the temperature of the water according to what is set on the thermostat.

TENSION SPRINGS—Used to secure the press head cover to the head of the press.

THERAPEUTIC PRACTICES—The treatment of disease or disorders by remedial agents or methods. These types of practices are prohibited in the barbershop.

THERMOSTAT—The device that controls the desired temperature in the washer extractor. This thermostat can control the high temperature setting for washing and the low temperature setting for sour.

TRANSFER—The movement of stock from the accountability of one ship's store officer to that of another.

TROUSER GUARD—A tubular or flattened piece of cardboard affixed to a clothes hanger to prevent lines from being imprinted on trousers after they have been hung up.

UNDERRING—Occurs when a price lower than the selling price of an item is rung up on the cash register.

UNIT IDENTIFICATION CODE—A symbol assigned by the Comptroller of the Navy to ships, aircraft units, stations, and other

activities or units for the purpose of identification on all accounting documents and reports.

VENDING MACHINE—A sales outlet where canned or cup-type drinks, candy, cookies, cigarettes, and other retail items are sold.

VENDING MACHINE CUSTODIAN—The person in charge of the vending machine operation.

VIBRATION SWITCH—A safety device that is installed to automatically stop incorrectly loaded machines during extract.

VISUAL MERCHANDISING—The display of merchandise in ship's store activities. Rotation and arrangement of stock, lighting, and signing help increase salability.

WASHING FORMULA—A standard, prescribed procedure established for washing certain types of clothing.

WATER SOLUBLE SOILS—Soils such as sugar, starch, gums, salt, flavoring agents, and so forth, that are removed during the normal laundering process.

WET STERILIZER—A receptacle used in the barbershop to sanitize nonmetallic instruments by immersing them in a disinfectant solution.

APPENDIX II

STANDARDS OF CONDUCT

This appendix was developed using the information already in appendix E of NAVSUP P-487 on the standards of conduct. The material was developed into a training format to make it easier for you to read and understand. Appendix E of NAVSUP P-487 was developed to emphasize the requirement that all ship's store personnel adhere to the standards of conduct contained in DOD Directive 5500.7 and SECNAVINST 5370.2. This appendix is not intended to replace or modify the above instructions or material.

DEPARTMENT OF DEFENSE STANDARDS OF CONDUCT

The Department of Defense (DOD) standards of conduct describes the relationship between ship's store personnel and vendors. All ship's store personnel must observe the highest ethical standards when dealing with vendors. In all areas of the ship's store operation, equal treatment must be given to all vendors and suppliers. Ship's store personnel should be aware that it is strictly forbidden to accept gratuities, gifts, prizes, and so forth, from vendors or to give preferential treatment to vendors in regard to procurement, distribution, stocking, display, or resale of their products.

As a Ship's Serviceman, you must understand that your actions and the decisions you make are closely watched by people in and out of the government. Even though a conflict of interest does not exist in your dealings, you must avoid even the appearance of such a conflict existing in the public's eyes. For example, being hospitable to a friend may be inappropriate if the friend is a contractor's representative and the contractor is involved in an official matter with your command or an official matter that is expected to arise on which you may have to make a decision. This is an example of conflict of interest because your decision on this official matter may be swayed by your friendship with the contractor's representative.

SHIP'S STORE POLICY

Ship's store policy is firm and to the point. Any ship's store personnel who solicit, accept, or agree to accept gratuities in any form from vendors or suppliers or anyone else who deals with the ship's store either directly or indirectly is subject to disciplinary action or, in some cases, criminal prosecution.

Ship's store personnel will also not give preferential treatment to vendors, suppliers, or anyone else in any area including procurement, distribution, stocking, display, or resale of products under any circumstances.

ACTIONS BY NAVRESSO

NAVRESSO has advised all *Ship's Store Afloat Catalog* vendors and all contractors of the policy and prohibitions. NAVRESSO prepared and developed various signs for display in the ship's store to advise and remind all personnel and vendors of the policy. The ship's store officer must make sure these signs are posted in the ship's store office and any other appropriate area for observance by all ship's store personnel and vendors. Semiannually, the ship's store officer must review DOD standards of conduct with all ship's store personnel and remind local vendors and suppliers of these policies.

SECNAVINST 5370.2

SECNAVINST 5370.2 implements and supplements DOD Directive 5500.7 of 15 Jan 1977 regarding the standards of conduct of personnel in the Department of Defense. This instruction prescribes required standards of ethical conduct governing all personnel of the Department of the Navy; related requirements that apply to all personnel in understanding and executing the standards of conduct; and responsibilities and procedures for monitoring and enforcing

compliance with the standards of conduct and related requirements within the Department of the Navy.

The contents of this instruction apply to all naval personnel and, when applicable, to retired naval personnel and members of the Reserve components. Noncompliance with this instruction may result in disciplinary or punitive action. Appropriate administrative measures must be taken to prevent and correct noncompliance to this instruction in a timely manner.

You should become familiar with the following terms because they are mentioned often during our discussion.

Naval personnel—All civilian officers and employees and all active duty military personnel of the Department of the Navy, including special government employees and personnel of nonappropriated fund instrumentalities.

Gratuity—Any gift, favor, entertainment, hospitality, transportation, loan, any other tangible item, and any intangible benefit; for example, discounts, passes, and promotional vendor training given or extended to, or on behalf of, naval personnel or their spouses, minor children, or households, for which a fair market value is not paid by the recipient or the U.S. Government.

Appropriate Supervisor—Superior within the chain of command who knows the duties of the naval personnel concerned and can best determine whether a conflict of interest exists for such personnel. This person will ordinarily be the immediate superior of the person concerned. Each commanding officer and department head should make sure all personnel know who their appropriate supervisor is.

POLICIES GOVERNING THE CONDUCT OF NAVAL PERSONNEL

Naval personnel must become familiar with the range of their authority and the limitations placed on them concerning activities for which they have responsibility. To do this, they must direct their attention to the prohibitions that apply to the conduct of naval personnel.

Naval personnel are prohibited from making or recommending any expenditures of funds or taking or recommending any action that is known to be a violation of U.S. laws, Executive orders, or applicable directives, instructions, or regulations. If you are in doubt whether your proposed actions or decisions comply to the terms of regulation or law, you should consult legal counsel or, if appropriate, a standards of conduct counselor or deputy counselor to make sure your actions or decisions are the proper and lawful conduct of Navy programs and activities.

Conduct Prejudicial to the Government

Conduct that is prejudicial to the government tends to injure or impair the attitude of the public toward the government. Whether specifically prohibited or not in this instruction, you should avoid any action that may be prejudicial to the government. Conduct prejudicial to the government might result in or reasonably be expected to create the appearance of the following:

- Using public office for private gains
- Giving preferential treatment to any person or entity
- Impeding government efficiency or economy
- Losing complete independence or impartiality
- Making a government decision outside official channels
- Adversely affecting the confidence of the public in the integrity of the government

Personal Judgment

As stated earlier, all naval personnel must adhere strictly to the standards of conduct and related requirements. In some instances, standards are imposed that require you to exercise your own personal judgment. You must consider each of these instances carefully and prepare to account for the manner in which you judged the situation. This is particularly important in a situation that involves acceptance of hospitality or favors from another person or entity who do or are seeking to do business with the Department of Defense.

Dealing with Business and Industry Representatives

No matter where you work or what position you hold, sooner or later you will deal with business or industrial representatives. You must remember when doing so that you are representing the government in these business dealings, and you must make sure that while you handle them, you observe the highest ethical standards. Practices that may be acceptable in the business world may not be acceptable for naval personnel. Avoid placing yourself in the position in which a conflict of interest might arise or be suspected. Such a conflict of interest may arise or appear to arise when you accept gratuities or engage in any activity that would influence or reasonably be interpreted as influencing the strict impartiality that must be maintained in all business relationships involving the government. When these business relations become personal, it becomes difficult for you to maintain the impartiality required in your relations with business or industrial representatives. You should at all times make sure any person doing business or attempting to do business with the DOD, or representing such entities, does not try to gain favor or favorable acceptance from you. You should deny any offers for special treatment from such persons; follow the rule of strict impartiality when dealing with such persons in an official capacity. When you accept gratuities or favors from those who have or seek business dealings with the DOD, it may result in embarrassment to the department and to the naval personnel involved. It may also affect your judgment as the recipient and impair the judgment of the public on the way the government handles its business dealings. It must be stressed that prohibited conflicts and apparent conflicts of interest may sometimes arise even with relationships and transactions that the personnel involved may perceive as unimportant. When in doubt about the propriety of accepting gratuities, attending functions, or accepting other invitations of a hospitable nature, you must refrain.

Preferential Treatment

In all your business dealings with other individuals or firms, special treatment must not be given unless equivalent treatment is also given to other individuals or firms who are justifiably entitled to such treatment.

ACQUIRING CONFLICTING FINANCIAL INTERESTS

Naval personnel must avoid acquiring or retaining financial interest that would disqualify them from performing their duties or responsibilities. The following are some of the more likely situations in which conflicts of interest might arise. Naval personnel have government duties or responsibilities related to business entities—

- with which they, their spouse, their minor children, or household members are associated with employees, officers, owners, directors, members, trustees, partners, advisors, or consultants;

- with which they, their spouse, minor children, or household members are negotiating or have arrangements for prospective employment; and

- in which they, their spouse, minor children, or household members have interest through ownership of stocks, bonds, securities, or other financial arrangements, such as trusts, or through participation in pension or retirement plans.

Membership in Associations

Naval personnel who are members or officers of nongovernmental associations or organizations must avoid activities on behalf of the association or organization that are incompatible with their official government positions. SECNAVINST 5760.4 sets policy for the Department of the Navy regarding participation by naval activities and naval personnel in the activities of private associations.

Equal Opportunity

Naval personnel should scrupulously adhere to the DOD program of equal opportunity regardless of race, color, religion, sex, age, or national origin, according to equal opportunity directives.

Reporting Suspected Violations

Naval personnel who have information that causes them to believe someone has violated the standards of conduct should report such information to their appropriate supervisor. The

matter will then be brought to the attention of the person concerned for a possible resolution without further command action unless the command determines that such communication is not likely to resolve the problem or will adversely affect a proper investigation of the matter.

Resolving Violations

The resolution of standards of conduct violations must be accomplished promptly by one or more measures, such as divestiture of conflicting interests, disqualification for particular assignments, changes in assigned duties, termination, or other appropriate action, as provided by statute or administrative procedures. Disciplinary actions must be taken according to established personnel procedures.

REGULATIONS GOVERNING THE CONDUCT OF NAVAL PERSONNEL

As a Ship's Serviceman, you must be familiar with the regulations concerning your everyday conduct. In this section we will discuss the regulations governing the conduct of all naval personnel.

Affiliations and Financial Interest

Naval personnel must not engage in any personal, business, or professional activity nor receive nor retain any direct or indirect financial interest that places them in a position of conflict between their private interests and the public interests of the United States related to the duties or responsibilities of their official positions. For the purpose of this prohibition, the private interests of a spouse, minor child, and any household member are treated as private interests of the naval personnel.

Unless otherwise expressly authorized by action taken under 18 USC 208(b), all naval personnel who have or acquire an affiliation or a financial interest that creates a conflict or appearance of a conflict with their official duties must report the possible disqualifying interest to the appropriate supervisor who will resolve the matter according to SECNAVINST 5370.2. If it is determined that the individual should be disqualified from participation in any official activities that are related to the conflicting interest, a formal disqualification notice must be sent to the concerned individual's appropriate supervisor and immediate subordinates. If the individual cannot adequately perform his or her official duties after such disqualification, he or she must discontinue such involvement or be removed from that position.

Naval personnel need not disqualify themselves under this section for holding shares of a widely held diversified mutual fund or regulated investment company. Such holdings are exempted as being too remote or inconsequential to affect the integrity of the services of government personnel.

Using Inside Information

Naval personnel must not use, directly or indirectly, inside information to further a private gain for themselves or others if that information is not generally available to the public and was obtained by reason of their DOD positions.

Using Naval Positions

Naval personnel must not use their official positions to induce, restrain, dominate, or in any manner unlawfully influence any person, including subordinates, to provide any benefit, financial or otherwise, to themselves or others.

Dealing with Present and Former Military and Civilian Personnel

Naval personnel must not knowingly deal on behalf of the government with present or former government personnel, military or civilian, whose participation in the transaction would be in violation of a statute, regulation, or policy set forth in SECNAVINST 5370.2. While all applicable prohibitions are within the prohibitions of this paragraph, attention is directed to the prohibition on retired Regular officers selling to the government through the department in which they hold a retired status, 18 USC 281; the prohibition on former personnel acting as an agent or attorney for anyone other than the United States in connection with claims against the government, 18 USC 207; and the prohibition on paying appropriated funds to retired Regular officers who are selling to certain government agencies, 37 USC 801(c).

Commercial Soliciting by Naval Personnel

To eliminate the appearance of coercion, intimidation, or pressure from rank, grade, or

position, full-time naval personnel, except special government employees and Reserve enlisted personnel on active duty for training, are prohibited from making personal commercial solicitations or sales to DOD personnel who are junior in rank or grade, at anytime, on or off duty.

This limitation includes, but is not limited to, the solicitation and sale of insurance, stocks, mutual funds, real estate, and any other commodities, goods, or services. This prohibition does not apply to the one-time sale by an individual of his or her own property or privately owned dwelling, or to the off-duty employment of naval personnel as employees in retail stores or other situations not including solicited sales.

In regard to solicitation by civilian personnel, the limitation applies only to solicitation of personnel under the supervision, at any level, of the solicitor.

Assignment of Reserve Personnel for Training

Naval personnel who are responsible for assigning Reserves for training must not assign them to duties in which they will obtain information that could be used by them or their private sector employers to gain unfair advantage over civilian competitors.

Gratuities

Except as discussed later in this section, naval personnel and their spouses, minor children, and members of their households must not solicit, accept, or agree to accept any gratuity for themselves, members of their families, or others, either directly or indirectly from, or on behalf of, a defense contractor. A defense contractor is a person or other entity that fulfills one or more of the following criteria:

- Is engaged in or seeks business or financial relations of any sort with any DOD component
- Conducts operations or activities that are either regulated by a DOD component or significantly affected by DOD decisions
- Has interests that may be substantially affected by the performance of the official duties of DOD personnel

This general prohibition does not apply to the situations below:

(1) The continued participation in employee welfare or benefit plans of a former employee when permitted by law and approved by the appropriate standards of conduct.

(2) The acceptance of unsolicited advertising or promotional items that are less than $5 in retail value.

(3) Trophies, entertainment, prizes, or awards for public service or achievement or given in games or contests that are clearly open to the public or that are officially approved for naval personnel participation.

(4) Things available to the public (such as university scholarships covered by DOD Directive 1322.6 and free exhibitions by Defense contractors at public trade fairs).

(5) Discounts or concessions extended throughout the Navy and Marine Corps that are realistically available to all naval personnel.

(6) Participation by naval personnel in civic and community activities when the involvement of Defense contractors is remote from the business purposes of any contractor who is sponsoring, supporting, or participating in the activity (for example, participation in a little league or Combined Federal Campaign luncheon that is subsidized by a Defense contractor).

(7) Social activities engaged in by officers in command and other naval officials, or their representatives, with local civil leaders as part of community relations programs of the Department of the Navy according to SECNAVINST 5720.44.

(8) The participation of naval personnel in widely attended gatherings of mutual interest to government and industry, sponsored or hosted by industrial, technical, and professional associations (not by individual contractors), provided that they have been approved according to DOD Instruction 5410.20.

(9) Situations in which participation by naval personnel at public ceremonial activities of mutual interest to industry or local communities and the Department of the Navy serves the interest of the government and acceptance of the invitation is approved by the commanding officer or other head of the activity to which the invited personnel are attached.

(10) Contractor-provided transportation, meals, or overnight accommodations in connection with official business when arrangements for government or commercial transportation, meals, or accommodations are clearly impractical

and the individual reports the circumstances in writing to his or her appropriate supervisor as soon as possible.

(11) Attendance at promotional vendor training sessions when the vendor's products or systems are provided under contract to DOD and the training is to facilitate the use of those products or systems by naval personnel.

(12) Attendance or participation of naval personnel in gatherings, including social events such as receptions, that are hosted by foreign governments or international organizations, provided that the acceptance of the invitation is approved by the commanding officer or other head of the activity to which the invitee is attached or, when there is doubt as to the propriety of acceptance, by higher authority. (See SECNAVINST 1650.1 for further information pertaining to gifts from foreign governments.)

(13) Customary exchanges of gratuities between naval personnel and their friends and relatives or the friends and relatives of their spouses, minor children, or members of their household where the circumstances make it clear that it is that relationship rather than the business of the persons concerned that is the motivating factor for the gratuity and where it is clear that the gratuity is not paid for by any entity.

(14) Situations in which, in the sound judgment of the individual concerned or his or her superior, the government's interest will be served by naval personnel participating in activities otherwise prohibited. In any such case, a written report of the circumstances must be made by the individual or his or her appropriate supervisor in advance of acceptance or, when an advance report is not possible, within 48 hours after acceptance, to the appropriate supervisor, if he or she is not otherwise aware of the acceptance, and to the appropriate standards of conduct counselor or deputy counselor.

Naval personnel who receive gratuities, or have gratuities received for them in circumstances not in conformance with the standards of this section, must promptly report the circumstances to the appropriate supervisor for a determination as to the proper disposition. The appropriate supervisor must consult with the standards of conduct counselor or deputy counselor. Procedures with respect to recruit officer training command (ROTC) staff members are set forth in DOD Directive 1215.8.

Receipts in Connection with Official Travel

The acceptance of accommodations, subsistence, or services, furnished in kind, in connection with official travel from sources other than those prohibited from our previous discussion is authorized only when the individual is to be a speaker, panelist, project officer, or other bona fide participant in the activity attended and when such attendance and acceptance is authorized by the order-issuing authority as being in the overall government interest.

Except as noted above, naval personnel may not accept personal reimbursement from any source for expenses incident to official travel, unless authorized by their commanding officer or the head of their activity, consistent with guidance by the appropriate standards of conduct counselor (pursuant to 5 USC 4111 or other authority). Rather, reimbursement must be made to the government by check payable to the Treasurer of the United States. Personnel will be reimbursed by the government according to regulations related to reimbursement. In no case may naval personnel accept reimbursement, either in kind or in cash, that is extravagant or excessive in nature.

When accommodations, subsistence, or services in kind are furnished to naval personnel by nongovernment sources, appropriate deductions must be reported and made in the travel per diem, or other allowance payable.

Prohibitions of Contributions or Presents to Superiors

Naval personnel must not solicit a contribution from other DOD personnel for a gift to an official superior, make a donation or a gift to an official superior, or accept a gift from other DOD personnel subordinate to themselves. This requirement, however, does not prohibit gifts or contributions of nominal value on special occasions, such as marriage, illness, transfer, or retirement, provided any gifts acquired with such contributions do not exceed a reasonable value.

Use of Government Facilities, Property, and Manpower

Naval personnel must not directly or indirectly use, take, dispose of, or allow the use, taking, or disposing of, government property leased to the government, for other than officially approved

purposes. Government facilities, property, and manpower (such as stationery, stenographic and typing assistance, Mimeograph, and chauffeur services) must be used only for official government business. Naval personnel have a positive duty to protect and conserve government property. These provisions do not prevent the use of government facilities for approved activities in furtherance of naval community relations, provided they do not interfere with military missions or government business. See SECNAVINST 5720.44 for community relations guidance.

Use of Civilian and Military Titles or Position in Connection with Commercial Enterprise

All naval personnel, except special government employees, are prohibited from using their grade, rank, title, or position in connection with any commercial enterprise or in endorsing any commercial product. This does not prevent author identification for materials published according to DOD procedures. A commercial enterprise is any entity that engages in activities that produce income as defined in Int. Rev. Code of 195461, and that has not been exempted from paying income taxes pursuant to Int. Rev. Code of 1954, 501(a).

All retired military personnel and all members of Reserve components, not on active duty, are permitted to use their military titles in connection with commercial enterprises, provided that they indicate their Inactive Reserve or Retired status. If, however, such use of military titles in any way casts discredit on the Department of the Navy or the Department of Defense or gives the appearance of sponsorship, sanction, endorsement, or approval by the Department of the Navy or the Department of Defense, it is prohibited. In addition, commanders of overseas installations may further restrict the use of titles including use by retired military personnel and members of Reserve components, not on active duty, in overseas areas.

Outside Employment of DOD Personnel

Naval personnel must not engage in outside employment or other outside activity, with or without compensation, that interferes with, or is not compatible with, the performance of their government duties, that may reasonably be expected to bring discredit on the government or the Department of the Navy, or is otherwise inconsistent with the requirements of this instruction, including the requirements to avoid actions and situations that reasonably can be expected to create the appearance of conflicts of interests.

Enlisted naval personnel on active duty may not be ordered or authorized to leave their post to engage in a civilian pursuit, business, or professional activity if it interferes with the customary or regular employment of local civilians in their art, trade, or profession.

Active duty Regular officers of the Navy and Marine Corps may not be employed by any person furnishing naval supplies or war materials to the United States. If such an officer is so employed, his or her entitlement to pay ceases for so long as he or she is so employed.

Off-duty employment of military personnel by an entity involved in a strike is permissible if the person was on the payroll of the entity before the beginning of the strike and if the employment is otherwise in conformance with the provisions of this instruction. After a strike begins and while it continues, no military personnel may accept employment by that involved entity at the strike location.

Naval personnel are encouraged to engage in teaching, lecturing, and writing. Naval personnel, however, must not, either for or without compensation, engage in activities that are dependent on information obtained as a result of their government employment, except when the information has been published or is generally available to the public, or it will be made generally available to the public and the official authorized to release such information to the public gives written authorization for the use of nonpublic information on the basis that the use is in the public interest.

Civilian Presidential appointees in the Department of the Navy must not receive compensation or anything of monetary value for any consultation, lecture, discussion, writing, or appearance, the subject matter of which is devoted substantially to naval responsibilities, programs, or operations or that draws substantially from official material that has not become part of the body of public information.

Gambling, Betting, and Lottery

While on government owned, leased, or controlled property, otherwise while on duty for

the government, naval personnel must not participate in any gambling activity, including a lottery or pool, a game for money or property, or the sale or purchase of a number slip or ticket. The only exceptions are for activities that have been specifically approved by the Secretary of the Navy.

Indebtedness

Naval personnel must pay their just financial obligations in a timely manner, particularly those imposed bylaws (such as federal, state, and local taxes), so that their indebtedness does not adversely affect the government as their employer. The Department of the Navy is not required to determine the validity or amount of disputed debts.

RESPONSIBILITIES FOR ACTIONS

The basic responsibility for complying with the requirements of this instruction rests with individual personnel concerned, but the primary responsibility for ensuring such compliance must rest with officers exercising command or similar authority over personnel. Each commanding officer or head of a command, a bureau, an office, or an activity is specifically responsible for the following actions:

- Review applicable information contained in SECNAVINST 5370.2 to all naval personnel within his or her organization at least semiannually, in a manner that will ensure familiarity and compliance with the pertinent provisions of this instruction by all personnel. (This is a continuing requirement and is in addition to the initial briefing required.)

- Establish and execute the procedures and controls established in this instruction so that all naval personnel within the organization who are required to file confidential statements of affiliations and financial interests (DD Form 1555) do file them in a timely manner, and that such statements are promptly and carefully reviewed.

- Make determinations pursuant to SECNAVINST 5370.2 and 18 USC 208(b) with respect to disqualification of personnel within the organization from performing duties in which they have conflicts or apparent conflicts of interests.

- Make sure reservists detailed to perform active duty for training at the organization are assigned duties that will minimize the possibility that they may obtain information that could be used by them or their employers to gain an unfair advantage over civilian competitors.

- Receive and take prompt and appropriate action on reports concerning acceptance of gratuities or other violations of SECNAVINST 5370.2 or related statutes by personnel within the organization.

APPENDIX III

REFERENCES

Chapter 1

Afloat Supply Procedures, NAVSUP P-485, Chapter 1, Revision 2, Naval Supply Systems Command, Washington, DC.

Retention Team Manual, Appendix F, Navy Enlisted Career Guide, Office of the Chief of Naval Operations, Washington, DC.

Ships Store Afloat, NAVSUP P-487, Chapter 1, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 1, Parts 1 and 10, Navy Resale and Services Support Office, Staten Island, NY.

Terminal User's Guide (TUG), Section 1, Navy Management Systems Support Office, Norfolk, VA.

Chapter 2

Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 1, Bureau of Medicine and Surgery, Washington, DC.

Merchandising and Stocking Guide for Ship's Stores, NAVRESSO Publication 81, Navy Resale and Services Support Office, Staten Island, NY.

Ship Store Afloat, NAVSUP P487, Chapters 1,2,3, and 9 and Appendix D, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 1, Parts 2, 7, 8, 10, and 11 and Chapter 2, Part 3, Navy Resale and Services Support Office, Staten Island, NY.

Chapter 3

Navy Safety Precautions For Forces Afloat, OPNAVINST 5100.19, Office of the Chief of Naval Operations, Washington, DC.

Ships Store Afloat, NAVSUP P-487, Chapters 3, 5, 6, and 9, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 1, Parts 2, 3, 9, and 10, Navy Resale and Services Support Office, Staten Island, NY.

Storage and Materials Handling, DOD Instruction 4145.19-12-1, Department of Defense, Washington, DC.

Stowage of Ship's Store Stock, NAVRESSO Instruction 4067.4, Navy Resale and Services Support Office, Staten Island, NY.

Chapter 4

Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 2, Bureau of Medicine and Surgery, Washington, DC.

Ships Store Afloat, NAVSUP P-487, Chapter 2 and Appendix D, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 2, Part 2, Navy Resale and Services Support Office, Staten Island, NY.

Chapter 5

Heat Stress, OPNAVINST 5100.20, Office of the Chief of Naval Operations, Washington, DC.

Laundering Chemicals, DOD Mil-STD-1485A, Department of Defense, Washington, DC.

Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 2, Bureau of Medicine and Surgery, Washington, DC.

Naval Ships' Technical Manual (NSTM), NAVSEA S9086-V4-STM-000, Chapter 655, "Laundry," Naval Sea Systems Command, Washington, DC.

Naval Ships' Technical Manual (NSTM), NAVSEA S9086-WK-SIM-010, Chapter 670, "Stowage, Handling, and Disposal of Hazardous General Use Materials," Naval Sea Systems Command, Washington, DC.

Navy Safety Precautions For Forces Afloat, OPNAVINST 5100.19, Chapter 13, Office of the Chief of Naval Operations, Washington, DC.

Ships Store Afloat, NAVSUP P-487, Chapter 2 and Appendix D, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 2, Part 1, Navy Resale and Services Support Office, Staten Island, NY.

Chapter 6

Heat Stress, OPNAVINST 5100.20, Office of the Chief of Naval Operations, Washington, DC.

Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 2, Bureau of Medicine and Surgery, Washington, DC.

Navy Safety Precautions For Forces Afloat, OPNAVINST 5100.19, Chapter 13, Office of the Chief of Naval Operations, Washington, DC.

Ships Store Afloat, NAVSUP P-487, Chapter 2 and Appendix D, Revision 3, Naval Supply Systems Command, Washington, DC.

Ships Store Afloat Handbook, NAVRESSO Publication 17, Chapter 2, Part 1, Navy Resale and Services Support Office, Staten Island, NY.

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Assignment Questions

Information: The text pages that you are to study are provided at the beginning of the assignment questions.

Assignment 1

Textbook Assignment: "Organization and Security," chapter 1, pages 1-1 through 1-11, and "Operation of the Sales Outlet," chapter 2, pages 2-1 through 2-10.

● Questions 1-1 through 1-46 refer to chapter 1 of the text.

Learning Objective: Identify the purpose of the Navy Resale Program and the functions of the activities related to ship's store afloat.

1-1. The purpose of the Navy Resale Program is to accomplish which of the following objectives?

1. To provide a convenient and reliable source from which personnel may obtain, at the lowest practical price, necessary articles for their health, comfort, and convenience and services needed in day-to-day living
2. To promote good morale
3. To provide through profits a source of funds for the recreation of naval personnel
4. All of the above

1-2. Which of the following activities under the command and control of NAVSUP is responsible for administering the Navy Resale Program?

1. NAVRESSO
2. NAVSEA
3. FAADC
4. NAVFINCEN

1-3. NAVRESSO is responsible for which of the following actions related to the operation of ship's stores?

1. Enters into agreement with commercial suppliers as to the quality and price of merchandise and issues, or causes to be issued, the Ship's Store Contract Bulletin and Ship's Store Afloat Catalog
2. Issues logistic policies. plans, and orders for support of the fleet
3. Audits ship's store returns
4. All of the above

1-4. The NAVRESSO fleet assistance teams were set up in the major port areas for which of the following purposes?

1. To provide technical assistance and guidance in all areas of the ship's store operation to shipboard personnel
2. To advise the fleet commanders on supply and transportation matters
3. To conduct inspections of ship's stores afloat and make formal reports to the commanding officer on completion of the inspection
4. All of the above

1-5. Auditing ship's store returns, paying dealers' bills, and reconciling differences with documents covering receipts from purchase and receipts from other supply officers are some of the responsibilities of what activity?

1. FAADC
2. NAVRESSO
3. NAVSUP
4. NAVMASSO

Learning Objective: Explain the mission, functions, organization, and responsibilities of an afloat supply department.

1-6. The mission of the afloat supply department is to provide the material and service needs of the ship.

1. True
2. False

1-7. The supply officer is responsible to the commanding officer for the proper operation and administration of which of the following functions?

1. Procurement and receipt of repair parts
2. Operation of the ship's store
3. Operation of the general mess
4. All of the above

1-8. When the supply officer assigns an assistant supply officer to the duty of ship's store officer, what official, if any, must approve the assignment?

1. Commander, Naval Supply Systems Command
2. Director, Ship's Store Division (SSD), NAVRESSO
3. Commanding officer
4. None

IN ANSWERING QUESTIONS 1-9 THROUGH 1-12, SELECT FROM COLUMN B THE DIVISION RESPONSIBLE FOR THE FUNCTION LISTED IN COLUMN A.

	A. FUNCTIONS	B. DIVISIONS
1-9.	Operate and maintain the vending machines aboard ship	1. s-1 2. s-2 3. s-3
1-10.	Maintain the military pay records	4. s-4
1-11.	Account for consumables, equipage, repair parts, and other material as required	
1-12.	Operate and manage the general mess	

Learning Objective: Explain the factors that pertain to the security of supply department spaces aboard ship.

1-13. Before unauthorized personnel can be allowed into supply department spaces, final approval must be granted by which of the following individuals?

1. The supply officer
2. The leading petty officer
3. The ship's master-at-arms
4. The person in charge of the space

1-14. Keys to supply department spaces may be taken off the ship overnight by the person in charge of the space providing a key log is maintained identifying the holder of the key.

1. True
2. False

SUPPLY DEPARTMENT SPACES ARE DIVIDED INTO GROUPS TO PROVIDE ADEQUATE SECURITY IN WORKING SPACES. IN ANSWERING QUESTIONS 1-15 THROUGH 1-18, SELECT FROM COLUMN B THE SECURITY GROUP FOR WHICH THE SPACE LISTED IN COLUMN A IS ASSIGNED.

	A. SPACES	B. GROUPS
1-15.	Ship's galley	1. I
1-16.	Ship's laundry	2. II
1-17.	General stores storeroom	3. III
1-18.	Ship's store bulk storeroom	4. IV

1-19. What should the Storekeeper in charge of a Group I space do with the key to the space at the end of the workday?

1. Retain it until the next day
2. Return it to the general key locker in the supply office
3. Turn it over to the duty supply officer
4. Turn it over to the leading SK

1-20. The master key for Group I spaces is kept by which of the following individuals?

1. The leading Storekeeper
2. The stores officer
3. The supply officer
4. The duty supply officer

1-21. Keys to the supply office are issued at the discretion of what individual?

1. The office recordskeeper
2. The leading petty officer of supply
3. The ship's store officer
4. The supply officer

1-22. The ROM system is included under what security classification?

1. Routine
2. Secret
3. Classified
4. Unclassified

1-23. What individual is required to input user IDs and passwords into the ROM system on a need-to-know basis?

1. The security officer
2. The supply officer
3. The ship's store officer
4. The leading Ship's Serviceman

1-24. Once users have been given access to the ROM system, their names will be included in the ROM security access list which is maintained in what location in a sealed envelope?

1. File SSA-17
2. Ship's store officer's safe
3. The supply officer's safe
4. File SSA-21

Learning Objective: Identify the factors that pertain to the security of Group III and Group IV spaces.

1-25. When dead bolt locks cannot be installed on doors leading to Group III spaces, what action should be taken?

1. Have the ship's security patrol check the space more often
2. Install a high-security key-type padlock with a shrouded shackle and high-security hasp
3. Install two high-security hasps with two combination locks
4. Use just one high-security hasp with one combination or key-type lock and attach a car seal at the end of each business day making sure it is properly logged in the car seal log

1-26. When available from supply, which of the following items should be installed on doors leading to Group III spaces in addition to dead bolt locks?

1. Keyless combination locks
2. Key-type padlock
3. Key-type lock with high-security shackle
4. Key-type lock used in conjunction with a numbered car seal

1-27. When installing hasps on doors leading to Group III spaces, what should you use to secure the hasp to the door?

1. Screws
2. Pop rivets
3. Tamperproof bolts
4. Nails

1-28. What action, if any, should be taken for exposed hinge pins on hasps installed on doors leading to Group III spaces?

1. Make a note of the problem to the ship's security patrol and have the space checked more often
2. Use an additional hasp with the appropriate lock
3. Tack weld the hinge pins to prevent removal
4. None

1-29. After the custodian of the Group III space changes the combination of the lock that secures the space, the new combination is sealed in an envelope and turned over to what holding individual?

1. The leading Ship's Serviceman
2. The ship's store officer
3. The supply officer
4. The security manager

1-30. For security, duplicate keys to Group III spaces are placed in a sealed envelope, signed and dated across the flaps by the ship's store officer and the responsible custodian, and placed in the ship's store officer's safe.

1. True
2. False

1-31. The inside perimeter of the removable sales windows to the retail store is secured by using what securing device(s)?

1. A car seal
2. Bars
3. Slip locks
4. Key locks

1-32. What additional security measure should the custodian of the bulk storeroom take when the contents of the bulk storeroom are visible from the outside?

1. Keep all high-cost, small-cube items out of sight or break them out to the retail store
2. Make sure adjacent passageways are well lighted
3. Make sure security watches check the bulk storeroom at varying intervals
4. Each of the above

1-33. Group III spaces should not be reentered after working hours by the responsible custodian unless circumstances warrant it and final approval is obtained from what individual, if any?

1. Ship's store officer
2. Duty supply officer
3. Leading Ship's Serviceman
4. None

1-34. Merchandise exceeding what retail value should NOT be left in the display windows of the retail store after working hours?

1. $50
2. $40
3. $35
4. $25

1-35. The key or combination to the padlock securing the coin box in the vending machine is kept by which of the following individuals?

1. Ship's store officer
2. Supply officer
3. Vending machine operator
4. Commanding officer

1-36. The locks installed by the manufacturer on the outside of vending machines are considered adequate for security purposes.

1. True
2. False

1-37. When locked money boxes are used in the vending machine, the keys that lock the money box itself into the vending machine are kept by what individual?

1. Vending machine operator
2. Supply officer
3. Agent cashier
4. Person making collections

1-38. With what security measure are the duplicate keys to the locked money boxes in the vending machines handled?

1. Kept in a special duplicate key locker in the supply office
2. Sealed in an envelope and kept in the supply officer's safe
3. Sealed in an envelope and kept in the ship's store officer's safe
4. Retained by the responsible custodian until relieved

1-39. Where are the working keys to the ship's laundry kept after normal working hours?

1. In the custody of the Ship's Serviceman in charge of the laundry
2. In the custody of the duty supply officer
3. In the custody of the leading Ship's Serviceman
4. Inside the general key locker in the supply office

1-40. What security precaution is taken with regard to duplicate keys to Group IV spaces?

1. Kept in a sealed envelope in the supply officer's safe
2. Kept by the supply officer in a special duplicate key locker in the supply office or in the supply officer's safe
3. Kept in the general key locker in the supply office
4. Kept by the leading Ship's Serviceman for access into ship's store spaces after normal working hours

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Learning objective: Explain the procedures for emergency entry into Group III spaces.

1-41. Emergency entry procedures are included in supply department instructions and should be posted outside which of the following spaces?

1. Group I
2. Group II
3. Group III
4. Group IV

1-42. If the ship's store officer has to enter a Group III space in the absence of the responsible custodians such entry made in the presence of at least how many witnesses?

1. One
2. Two
3. Three
4. Four

1-43. How should the ship's store officer secure a Group III space after he or she has entered it and is ready to secure it?

1. Replace the lock and attach a car seal
2. Replace the lock after changing the combination
3. Replace the lock and add a key-type lock
4. Lock it with a different keyless padlock

1-44. After a Group III space has been entered by the ship's store officer, how long should the witnesses remain thereafter?

1. Until the space is secured
2. Until the responsible custodian returns
3. Until the command duty officer arrives
4. They do not have to remain

1-45. Which of the following actions should be taken by the responsible custodian of a Group III space that was entered under emergency conditions?

1. Reseal the combination and duplicate keys to the dead bolt in separate envelopes and replace them in the ship's store officer's safe
2. Change the combination to the lock
3. Verify the car seal number
4. All of the above

1-46. What individual may enter a Group III space in the presence of two witnesses when an emergency exists and the ship's store officer or responsible custodian is not available?

1. Duty section leader
2. Duty storekeeper
3. Command duty officer
4. Leading Ship's Serviceman

● Questions 1-47 through 1-75 refer to chapter 2 of the text.

Learning Objective: Identify practices and procedures applicable to the establishment and operation of the ship's store afloat.

1-47. On a commissioned ship, what action is required by the commanding officer to establish a ship's store?

1. Receive approval from the ship's type commander before establishing the ship's store
2. Send an official letter to the Naval Supply Systems Command informing them the day the ship's store will begin operations
3. Send an official letter to the Navy Resale and Services Support Office informing them the day the ship's store will begin operations
4. Send an official letter to the fleet accounting and disbursing center requesting approval to establish a ship's store

1-48. On a precommissioned ship, a ship's store may be established after which of the following conditions is met?

1. The prospective disbursing officer has reported aboard
2. Approval of the ship's type commander has been received
3. The prospective supply officer has reported aboard
4. Approval for establishment of a ship's store has been received from the Naval Supply Systems Command

1-49. Activities operating within the ship's store must be authorized by what officer?

1. The ship's store officer
2. The supply officer
3. The commanding officer
4. The type commander

1-50. Ship's stores are operated to fulfill which of the following purposes?

1. Provide a source of funds for welfare and recreation
2. Promote morale
3. Provide a source of articles necessary for day-to-day living
4. All of the above

1-51. To provide customers with a convenient and reliable source for obtaining the most needed articles, the retail store operator must keep the most popular items in stock at all times using which of the following references?

1. NAVSUP P-487
2. The list of basic stock items
3. The ship's Store Afloat Visual Merchandising Guide
4. The Ship's Store Afloat Catalog

1-52. Which of the following individuals is accountable for the operation of the retail store?

1. The retail store operator
2. The ship's store officer
3. The leading Ship's serviceman
4. The disbursing officer

1-53. Before you can be assigned responsibilities in the ship's store operation, the ship's store officer is required to perform which of the following actions?

1. Send you to ship's Serviceman C school
2. Assign responsibilities in writing
3. Administer a performance test
4. Update your personal training record

1-54. Which of the following operations would be considered a combined responsibility operation?

1. A service activity and bulk storeroom supplying that service activity operated by different persons
2. A sales outlet and bulk storeroom supplying that sales outlet operated by the same person
3. A can drink vending machine and bulk storeroom supplying that vending machine operated by different people
4. All of the above

1-55. When a retail store is operated by more than one person, which of the following requirements must be met?

1. Cash should be collected at the end of each shift
2. Inventory should be taken monthly
3. Approval must be obtained from the ship's type commander
4. All of the above

Learning Objective: Explain the general policies that govern the operation of the sales outlets aboard ship.

1-56. Purchases made from the sales outlets in the ship's store operation may be used by the purchaser for which of the following purposes?

1. For sale to a friend
2. For the personal use of a friend
3. For the personal use of the purchaser or his or her dependent(s)
4. For barter with another person

1-57. Which of the following personnel are NOT authorized to use the ship's store?

1. Foreign service personnel in a foreign port
2. Enlisted Marine Corps personnel en route to duty
3. Public Health Service Personnel on board for training
4. Officers of the Coast Guard on board for training

1-58. A third class petty officer comes to the standard Navy clothing store to make a purchase. Which of the following items should NOT be sold to the petty officer?

1. Neckerchief
2. Third class chevron
3. E-7 insignia
4. White service dress jumper

1-59. Sales of ship's store stock and nondistinctive items may be made to merchant ships in distress on a cash basis when the request made by the master of the merchant ship is approved by the commanding officer of the ship that will sell the merchandise.

1. True
2. False

1-60. What officer approves the sale of ship's store stock to personnel aboard foreign ships that are in distress?

1. Fleet commander
2. Type commander
3. Commanding officer
4. Supply officer

1-61. Ship's store or nondistinctive items of clothing stock may be sold to representatives of an official United States Embassy in an isolated overseas location under which of the following conditions?

1. When the items required cannot be obtained elsewhere
2. When the sale is approved by the commanding officer
3. When the normal operation of the ship's store is not impaired by making the sale
4. All of the above

1-62. The hours of operation of the retail or clothing store are prescribed by what officer?

1. Supply officer
2. Commanding officer
3. Ship's store officer
4. Recreational services officer

1-63. The retail or clothing store operator should post the store hours prominently so they are visible from the outside of the store.

1. True
2. False

1-64. What minimum number of hours per week should the retail store be open while the ship is underway?

1. 20 hours
2. 24 hours
3. 42 hours
4. 48 hours

1-65. The retail store should remain open how many minutes past normal closing time to alow the customers to finish shopping in walk-in stores?

1. 20 minutes
2. 15 minutes
3. 10 minutes
4. 5 minutes

1-66. How much time in advance should crew members be notified of changes in store hours?

1. 1 day
2. 7 days
3. 10 working days
4. 30 days

1-67. Which of the following areas would be the BEST place for the retail store operator to post the policy sign regarding authorized customers?

1. On the door leading to the ship's store office
2. Near the quarterdeck area
3. On the ship's store bulletin board
4. Near the cash register in the retail store

Learning Objective: Identify the policies regarding pricing of merchandise in the ship's store afloat. (cont'd)

1-68. Which of the following individuals is responsible for establishing the prices for merchandise sold in the retail store?

1. Retail store operator
2. Ship's store officer
3. Supply officer
4. Commanding officer

1-69. What markup rate, if any, is prescribed for retail items in the ship's store?

1. cost plus 15%
2. Cost plus transportation expenses plus 15%
3. Cost plus 15% rounded off to the next higher nickel
4. None

1-70. The ROM system automatically computes the prescribed markup for all stock items. What individual may override the ROM markup system and enter a different price?

1. The leading Ship's Serviceman
2. The ship's store recordskeeper
3. The ship's store officer
4. Each of the above

1-71. The markup on retail items should be sufficient enough to provide for which of the following expenditures?

1. Markdowns and surveys
2. Operating expenses of the service activities
3. Sales outlet operating expenses
4. All of the above

1-72. What overall maximum percentage of profit is the ship's store authorized to make?

1. 5%
2. 10%
3. 15%
4. 20%

1-73. For what price are standard Navy clothing items sold in the ship's store?

1. Retail price
2. Price prescribed in the standard price list
3. Cost price plus 15%
4. Price established by the Naval Supply Systems Command

1-74. The ROM system will not compute a markup for stock items assigned to which of the following department codes?

1. A1
2. D1
3. D3
4. L1

1-75. What is meant by the term "mark-on"?

1. An amount added to the cost price to arrive at the retail price
2. An increase in the previously established retail price
3. An amount added to the cost of operation items to cover losses by inventory
4. An increase in the previously established cost price

Assignment 2

Textbook Assignment: "Operation of the Sales Outlets (continued)," chapter 2, pages 2-10 through 2-25.

Learning Objective: Identify the policies regarding pricing of merchandise in the ship's store afloat. (cont'd)

2-1. When a mark-on is desired on selected items in the retail store, the retail store operator can only change the price of those items after what action is taken?

1. Inventory is taken of those items by the ship's store officer or designated assistant in the presence of the retail store operator and the retail store operator signs and dates the Retail Price Change, NAVSUP Form 983
2. Notification by the ship's store recordskeeper to change the price
3. A number is assigned to the Retail Price Change, NAVSUP Form 983, from the Number Control, NAVSUP Form 980
4. The bulk storeroom custodian breaks out new merchandise to the retail store

IN ANSWERING QUESTIONS 2-2 THROUGH 2-5, SELECT FROM COLUMN B THE PRICE THAT SHOULD BE CHARGED FOR EACH OF THE SALES LISTED IN COLUMN A.

	A. SALES	B. PRICES
2-2.	Sales to the commanding officer of ship's store stock for recreational purposes	1. Retail price
2-3.	Sales to ships not operating ship's stores, when the transferring ship does not provide a composite recreation fund	2. Cost price
2-4.	Sales of standard Navy clothing items to authorized customers	3. Standard price
2-5.	Sales to merchant ships of ship's store stock	4. Mutually agreed-on price

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Learning Objective: Identify the techniques and procedures for effectively displaying merchandise in the sales outlet.

2-6. What is the purpose of merchandise displays in the ship's store?

1. To show what is available for order
2. To make the store look attractive
3. To facilitate taking inventories
4. To inform and educate the customer

2-7. Customer displays should be changed frequently for which of the following purposes?

1. To stimulate customer interest
2. To make inventory easier
3. To make room for breakouts of merchandise
4. To rotate stock items into the display that were left out

2-8. What area of the retail store would be the best place to display large items?

1. On the very top shelf
2. On a shelf located at eye level
3. On the ledges in the retail store
4. On one of the lower shelves

2-9. The retail store operator can accomplish which of the following actions to help the customer in selecting what they need?

1. Use a sign to identify new or out-of-stock items
2. Display merchandise so labels face right side up
3. Display items so the purpose is obvious
4. All of the above

2-10. Which of the following would be an example of merchandise that is not readily accessible?

1. Soap stocked behind deodorants and hair spray
2. dungaree trousers stocked near dungaree shirts
3. Small items stowed on a shelf at eye level
4. All of the above

2-11. If available, ledges in the retail store should be used to store merchandise that cannot fit on the shelves.

1. True
2. False

2-12. Which of the following pairs of items would be a good example of two items of ship's store stock correlated properly in the retail store?

1. Toothpaste stowed near toothbrushes
2. Perfume stowed near bracelets
3. Cigarettes stowed near uniform items
4. Soap stowed near crackers

2-13. Decorations are used in the sales outlets for which of the following reasons?

1. To arouse customer interest
2. To alert customers to coming events
3. To add to the appearance of the display merchandise
4. All of the above

2-14. What is the maximum time that decorations may remain in a display without being refreshed or changed?

1. 1 month
2. 2 months
3. 3 months
4. 1 week

2-15. ROM-generated shelf labels are used in the retail store to eliminate the need for individual price marking.

1. True
2. False

2-16. Shower shoes do not lend themselves to individual price marking. Where should the price for shower shoes be displayed so the customer knows how much they cost?

1. On a price list posted in the ship's store office
2. On a piece of paper located near the cash register
3. No price needs to be displayed if the retail store operator has a copy of the price list
4. On the bin or shelf holding the shower shoes by use of a sign, price list, or shelf label

2-17. What price marking system should the retail store operator use to display prices on items located in the retail store?

1. Price marker or price tags
2. Grease pencil
3. Crayons
4. Each of the above

2-18. Prices displayed on merchandise in the retail store should only be changed by the operator on the authority of a Retail Price Change, NAVSUP Form 983, approved by what officer?

1. Ship's store officer
2. Supply officer
3. Disbursing officer
4. Commanding officer

Learning Objective: Determine the procedures for using the cash register in the sales outlet.

2-19. Which of the following individuals is/are allowed access to the cash register in the retail store for ringing up sales?

1. The ship's store officer
2. The designated cash collection agent
3. The retail store operator
4. All of the above

2-20. When, if ever, may the cash register in the sales outlet be installed in an area where the customer does not have a view of the amount rung up?

1. When the cash register is installed in a walk-in store
2. When making sales directly from the bulk storeroom
3. When the cash register provides the customer with an itemized receipt
4. Never

2-21. The cash register keys will be in the custody of which of the following individuals?

1. The leading petty officer
2. The sales outlet operator
3. The person making collections
4. The agent cashier

2-22. What action should the sales outlet operator take when the retained cash register tape in the cash register has run out?

1. Continue using the register until the end of the day
2, Remove the detailed tape so it will not jam and continue ringing up sales until cash collections are made
3. Remove the tape and install a new register tape provided by the ship's store officer
4. Contact the ship's store officer or designated cash collection agent and have the tape changed before ringing up any additional sales

2-23. When arranging money in a drawer with less than five compartments, where should you place the personal checks?

1. Underneath the twenties
2. Under the cash tray
3. In a drawer next to the twenties not being used
4. Underneath the ones

2-24. When new bills are placed in the cash register, what action should the cash register operator take to prevent errors in giving change?

1. Place the new bills in a drawer by themselves in the cash register
2. Place the new bills under the ones rolled together
3. Tear a corner off of each new bill
4. Turn the corner up on each new bill

2-25. Most errors involving the cash register occur at which of the following times?

1. When the cash is being collected at the end of the business day
2. When the cash register operator exchanges money with the customer
3. When the cash register operator is placing the change fund in the register
4. When the cash register operator is ringing up sales

2-26. Under what conditions may the cash register operator ring up more than one item at a time on the cash register?

1. When the retail store is very busy
2. When the items are of low cost and can be added together easily in the operator's head
3. When a calculator is available for the cash register operator to use
4. When the cash register is designed to total more than one item at a time

2-27. The customer makes a purchase of $3 and gives you a $5 bill for payment. Where should you place the $5 bill while making change ?

1. On the change plate of the register
2. On the counter near the register
3. In the $5 compartment OF the cash drawer
4. On the keys of the cash register

2-28. A customer gives you a $10 bill to pay for merchandise valued at $7.50. As you give change to the customer, how do you count it?

1. Count up $2.50 as you take the change from the cash register and count from $7.50 to $10.00 as you hand the change to the customer
2. Count up to $2.50 as you take the change from the cash register and repeat the same count as you hand the change to the customer
3. Count $7.50 to $10.00 as you take the change from the cash register and repeat the same count as you hand the change to the customer
4. Count from $7.50 to $10.00 as you take the change from the cash register and count up to $2.50 as you hand the change to the customer

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Learning Objective: Identify the procedures for handling ship's store funds in the sales outlets aboard ship.

2-29. Payment for merchandise purchased in the ship's store may be made by which of the following methods?

1. U.S. currency
2. Personal check
3. Traveler's check
4. All of the above

2-30. For what amount over the purchase price, if any, may traveler's checks be accepted in the ship's store?

1. $5
2. $10
3. $25
4. None

2-31. Which of the following kinds of personal checks is acceptable in the ship's store?

1. A personal check for the amount of purchase only
2. A personal check for $5 over the amount of purchase
3. A two-party check
4. Each of the above

2-32. The sales outlet operator should verify the purchaser's signature and social security number on the personal check with which of the following identification cards?

1. State driver's license
2. Armed forces identification card
3. Major credit card
4. Automatic bank teller card

2-33. A change fund is advanced to the sales outlet operator for use as change during the business day. The amount of change fund advanced to the sales outlet operator is determined by what officer?

1. Supply officer
2. Ship's store officer
3. Disbursing officer
4. Commanding officer

2-34. What form is signed by the sales outlet operator to receipt for change funds?

1. NAVSUP Form 470
2. NAVSUP Form 464
3. NAVCOMPT Form 2114
4. NAVCOMPT Form 153

2-35. When will the sales outlet operator return the funds advanced for change to the person providing the funds?

1. At the end of the month
2. At the start of the business day
3. At the close of the business day before the register reading is taken
4. At the end of each accounting period

2-36. All cash refunds on defective merchandise are processed on what form?

1. NAVSUP Form 972
2. NAVSUP Form 973
3. NAVSUP Form 977
4. NAVSUP Form 978

2-37. What official must approve all refund vouchers before the customer can receive a cash refund?

1. The sales outlet operator
2. The ship's store officer
3. The commanding officer
4. The leading Ship's Serviceman

2-38. What will the sales outlet operator do with the completed refund voucher?

1. Forward it to the ship's store officer for filing
2. Place it under the cash tray in the cash register until daily collections
3. Give it to the leading Ship's Serviceman
4. Ring it up in the cash register and hold it in the cash drawer until collections are made

2-39. When a personal check written for purchase in the ship's store is returned due to insufficient funds, what will the ship's store officer do with the check?

1. Reimburse the disbursing officer for the amount of the check from the ship's recreation fund and hold the check in the cash register until it is settled
2. Reimburse the sales outlet operator for the loss and place the check in the safe in a sealed envelope until it is settled
3. Reimburse the disbursing officer for the amount of the check from the retail store cash register and hold the check in the register until it is settled
4. Hold the check in the cash register and file a written report to the Navy Resale and Services Support Office

2-40. After what time period is a personal check returned to the ship due to insufficient funds considered uncollectible?

1. 1 year
2. 5 years
3. 6 months
4. 4 months

2-41. When a personal check is not settled by the end of the accounting period, what action should the retail store operator take?

1. Request a markdown to zero for the amount of the check from the ship's store officer
2. Survey the check to the Navy Stock Fund
3. Include the check on the inventory prelisting
4. Forward the personal check to the disbursing office for action

2-42. ROM users will accomplish which, if any, of the following actions to adjust the accountability of the retail store for losses incurred from dishonored checks?

1. The amount of the checks is surveyed to the Navy Stock Fund on the DD Form 200 and the appropriate survey data is entered in the ROM survey function
2. A separate intrastore transfer is created by ROM users for dishonored checks, breaking back the amount of the checks from the retail store to the bulk storeroom
3. A money value only DD Form 1149 is prepared for dishonored checks and the appropriate expenditure information is entered in the ROM miscellaneous expenditure function
4. None of the above; the loss is absorbed in the cost of retail sales and no action is required by ROM users

2-43. When, if ever, is retail merchandise located in the retail store sold at cost price?

1. When group sales are made to troops attached to the ship
2. When making health and comfort issues
3. When bulk sales are made to a ship not operating a ship's store and your ship does not provide that ship a composite recreation fund
4. Never

2-44. When payment is not received for bulk sales at the time the merchandise is delivered from the retail store, what action should the retail store operator take?

1. Make a list of the items taken and retain this list under the cash tray in the register until payment is received
2. List the items taken on a summary NAVSUP Form 973, retain one copy in the cash register under the cash tray until payment is received, and forward the original to the ship's store office
3. Maintain a copy of the Requisition and Invoice/Shipping Document, DD Form 1149, for bulk sales under the cash tray in the cash register until payment is received
4. List the items taken on an Inventory Count Sheet, NAVSUP Form 233, retain the blue copy in the cash register under the cash tray, and forward the white, yellow, and pink copies to the ship's store office

2-45. ROM users must enter the amount of cash collected from bulk sales in the ROM cash receipt function using what store number?

1. 99
2. 98
3. 96
4. 95

2-46. The sale of traveler's checks through the ship's store requires the approval of what officer?

1. Commanding officer
2. Disbursing officer
3. Ship's store officer
4. Supply officer

2-47. During normal store hours, where will the retail store operator hold the working stock of traveler's checks?

1. In an empty cash drawer in the cash register
2. Under the cash tray in the cash register
3. Under the counter within reach from the cash register
4. Stowed securely in a three-combination safe

2-48. What is the minimum amount of sale of traveler's checks the retail store operator can make to one customer?

1. $100
2. $50
3. $25
4. $5

2-49. You have just sold traveler's checks to one customer with a face value of $600. What total amount should you collect from the customer?

1. $601.98
2. $604.02
3. $606.00
4. $612.00

Learning Objective: Identify the procedures for collecting cash in the retail store.

2-50. What individual is responsible for collecting and depositing funds received from sales in the ship's store?

1. Ship's store officer
2. Disbursing officer
3. Supply officer
4. Commanding officer

2-51. How often will cash be counted and collected in the retail store when locked moneybags and a night depository safe are not used?

1. Monthly
2. Weekly
3. Twice a week
4. Daily

2-52. All cash including change funds will be collected from the retail store at which of the following times?

1. At the end of each accounting period
2. When the retail store is closed for 72 hours or more
3. When the ship's store officer is relieved
4. All of the above

2-53. How will the person making collections compute the total cash that should be collected?

1. Current register reading plus the previous day's register reading minus any change fund
2. Current register reading plus change fund minus the previous day's register reading
3. Current register reading minus the previous day's register reading minus any change fund
4. Current register reading minus previous day's register reading plus the change fund

2-54. When the retail store operator is delivering all cash including change funds to the cash collection agent, how often, at a minimum, should the cash collection agent take the register readings?

1. Once weekly
2. Twice weekly
3. Three times weekly
4. Every day

2-55. When moneybags are issued to the retail store operator, they have two keys that come with each bag. One is retained by the retail store operator. What happens to the other key?

1. Retained by the supply officer in a duplicate key locker
2. Kept in a sealed envelope in the ship's store officer's safe
3. Retained in the personal custody of the person making collections
4. Exchanged each duty day by the offgoing and oncoming duty supply officers

2-56. The combination to the night depository safe is known by which of the following individuals?

1. Disbursing officer
2. Ship's store officer
3. The designated cash collection agent
4. Both 2 and 3 above

2-57. When using the night depository safe, the person making collections will take the cash register readings at what time?

1. At the close of business the day the deposit is made
2. At the close of business the following day
3. Before the start of business the following day
4. Before the end of the week

2-58. A change fund of over $50 may be left in the cash register overnight if approved by what officer?

1. Disbursing officer
2. Ship's store officer
3. Type commander
4. Commanding officer

Learning Objective:
the documents used by the sales outlet operator to account for cash collected in the ship's store.

2-59. The Cash Receipt Book, NAVSUP Form 470, for the retail store is kept in the custody of what individual?

1. The ship's store officer
2. The cash collection agent
3. The disbursing officer
4. The retail store operator

2-60. How often is the ship's store officer required to compare the amounts entered in the Cash Receipt Book, NAVSUP Form 470, with the amounts entered in the ROM system?

1. Daily
2. Twice a week
3. Once a week
4. Monthly

2-61. When an error is made in the cash receipt book, what should be done to correct it?

1. Draw a line through the error, write the correct information above the error, and both the sales outlet operator and the person making collections initial the line-out
2. Draw a line through the entire line, write the correct information in the following space, and both the sales outlet operator and the person making collections initial the line-out
3. Draw a line through the entire line, write the correct information above it, and both the sales outlet operator and the person making collections initial the line-out
4. Erase the entire error and enter the correct information

2-62. What is the disposition of the Overring/Refund voucher, NAVSUP Form 972, once the retail store operator gives it to the person making collections?

1. The amount of the overring/refund voucher is entered in the cash receipt book for information purposes only and the NAVSUP Form 972 is stapled to the applicable page of the NAVSUP Form 470
2, The Overring/Refund Voucher, NAVSUP Form 972, is disposed of once a separate entry is made in both the NAVSUP Form 470 and NAVSUP Form 469 and is included in the total cash collections for the month
3. A separate entry is made in both the NAVSUP Forms 469 and 470 and the Overring/Refund Voucher, NAVSUP Form 972, is stapled to the applicable page of the NAVSUP Form 469; the amount of the overring/refund voucher is not included in the total collections for the month
4. The overring/refund voucher is entered in the Cash Register Record, NAVSUP Form 469, for information purposes and then turned over to the disbursing officer for filing

2-63. At the end of the month, the sales outlet operator will total up the amounts in the Cash Receipt Book, NAVSUP Form 470. The total figure computed by the sales outlet operator must match the total figure shown on what form?

1. NAVSUP Form 464
2. NAVSUP Form 469
3. NAVSUP Form 977
4. NAVSUP Form 978

2-64. When the person making collections is the cash collections agent, the ship's store officer will review the cash receipt book for each sales outlet at least how often?

1. Monthly
2. Weekly
3. Twice a week
4. Daily

Learning Objective: Identify the general procedures followed when theft or fraud occurs in the ship's store operation.

2-65. To prevent theft in a walk-in retail store, the retail store operator should take which of the following precautions?

1. Keep a close watch on customers
2. Allow only a limited number of customers in the retail store at a time
3. Do not allow customers to shop in the retail store wearing heavy jackets
4. All of the above

2-66. After a ship's store space has been broken into, it is reported to the commanding officer and an informal investigation is made for what purpose?

1. To determine who is responsible for the theft
2. To reveal the extent of the loss
3. To determine what structural damage was done
4. To use the findings as evidence in the event of a court-martial

2-67. When can a ship's store space be reopened for business after being broken into?

1. After the person responsible for the breakin is captured
2. After all disciplinary action as required by the UCMJ is resolved
3. After inventory is accomplished and accountability reestablished
4. After an action report is received by the commanding officer from the Naval Supply Systems Command

2-68. Which of the following examples of mishaps in the ship's store operation would be considered fraud?

1. The ship's store officer changes the ship's store afloat financial control record and supporting documents to conceal a large loss in the retail store
2. The leading Ship's Serviceman steals an expensive watch during a working party and reports to the ship's store officer that the working party stole it
3. The retail store operator is not ringing up all sales in the retail store and is placing the excess amount of money in his or her pocket
4. All of the above

2-69. After the commanding officer receives a report of fraud in the ship's store operation, he or she will direct the ship's store officer to conduct an informal examination.

1. True
2. False

Learning Objective: Identify the general procedures used for inventorying and restocking the sales outlet. (cont'd)

2-70. Physical inventory is taken in the retail store at which of the following times?

1. When the retail store operator is relieved
2. At the end of each accounting period
3. When directed to do so by higher authority
4. All of the above

2-71. What individual is responsible for the inventory in the sales outlets?

1. The ship's store officer
2. The leading Ship's Serviceman
3. The sales outlet operator
4. The ship's store recordskeeper

2-72. When sufficient personnel are not available for inventory, how many persons may be assigned to each inventory team?

1. One
2. Two
3. Three
4. Four

2-73. Which of the following individuals may NOT be assigned to an inventory team?

1. An E-6 Storekeeper (SK)
2. The ship's store officer
3. The ship's store recordskeeper
4. An E-7 Mess Management Specialist (MS)

2-74. The inventory layout sketch for one of the sales outlets will show which of the following information?

1. Personnel assignments
2. Fixture numbers
3. Stock arrangements
4. All of the above

2-75. The layout sketch for each sales outlet is prepared by what individual?

1. The sales outlet operator
2. The ship's store officer
3. The leading Ship's Serviceman
4. The ship's store recordskeeper

Assignment 3

Textbook Assignment: "Operation of the Sales Outlets (continued)," chapter 2, pages 2-25 through 2-34, and "Stowage," chapter 3, Pages 3-1 through 3-12.

● Questions 3-1 through 3-36 refer to chapter 2 of the text.

Learning Objective: Identify the general procedures used for inventorying and restocking the sales outlet. (cont'd)

3-1. Before the actual inventory counting begins, the sales outlet operator should accomplish which of the following tasks?

1. Prelist the space being inventoried
2. Stack all merchandise neatly
3. Arrange similar items together
4. All of the above

3-2. What reference should the retail store operator use as a guide when preparing stock requirements for the retail store?

1. Basic stock list
2. NAVSUP P-485
3. Ship 's Store Contract Bulletin
4. Ship's Store Afloat Catalog

3-3. Within what temperature range should the retail store be kept to protect perishable items?

1. 70°F to 75°F
2. 65°F to 70°F
3. 60°F to 65°F
4. 55°F to 60°F

3-4. What individual approves the sanitation requirements for each of the sales outlets?

1. The commanding officer
2. The senior member of the medical department
3. The leading Ship's Serviceman
4. The ship's store officer

Learning Objective: Identify the procedures used for the proper operation of the vending and amusement machines.

3-5. The cash from the vending machine should be collected at which of the following times while the ship is in port?

1. Daily and on weekends when the volume of business exceeds $150
2. Before making repairs to the coin mechanism or the vending machine
3. On the last business day of the month when it falls on a weekend or holiday
4. All of the above

3-6. The quantity of canned drinks in the custody of the vending machine operator is determined at what frequency?

1. Weekly
2. Monthly
3. Quarterly
4. Annually

3-7. During the daily collections of the vending machine, the meter reading was 10295. If the previous meter reading was 09956 and the selling price per can was raised from 35 cents to 40 cents at the time of the last collection, how much cash should be collected from the vending machine?

1. $115.60
2. $118.65
3. $135.60
4. $148.60

3-8. The vending machine operator should be issued money boxes for use in the vending machines by what individual?

1. The person responsible for making collections
2. The disbursing officer
3. The leading Ship's Serviceman
4. The supply officer

3-9. The key that locks the money box into the vending machine will be kept by what individual?

1. The ship's store officer
2. The cash collection agent
3. The disbursing officer
4. The vending machine operator

● In answering question 3-10, refer to the information in the following paragraph.

You are the vending machine operator on a large ship and you are delivering the locked money box to the person making collections. The vending machine from which you removed the money box is not equipped with a meter or cash totalizer and you must compute the number of cans you sold. At the time of the last collection there were 112 cans in the vending machine. At the time of collection there are 95 cans in the vending machine and you placed 750 cans in the machine since the last collection.

3-10. How many cans did you sell since the last collection?

1. 543
2. 733
3. 767
4. 957

3-11. When the ship's store officer or cash collection agent is not aboard to accept the locked money box and a night depository safe is not available, the vending machine operator will turn the locked money box over to the supply department duty officer or another commissioned officer for safekeeping. Each time the vending machine operator delivers a locked money box to the duty officer, what action must be taken?

1. The locked money box and meter reading are turned over to the duty officer, all cash is counted and verified, and a cash receipt is received by the vending machine operator
2. The money box and the keys to the money box are turned over to the duty officer, but the cash is not counted
3. The locked money box and meter reading are turned over to the duty officer, and an entry is made in the money box log and signed by the vending machine operator and the duty officer
4. The locked money box is turned over to the duty officer for safekeeping without signing for or counting the money

3-12. How are amusement machines aboard ship acquired by the ship's store officer?

1. Purchased through a NAVRESSO Bulletin
2. Leased from the contractor
3. Purchased using a special DD Form 1155
4. Purchased through the supply center using OPTAR funds

3-13. The amusement machine money box is secured using a keyless combination lock and which of the following items?

1. A restraining bar
2. A lead car seal
3. A key-type padlock
4. A dead bolt lock

Learning Objective: Identify the procedures used by the operator when servicing and caring for the vending machine.

3-14. What are the two primary jobs of the vending machine operator?

1. Filling and repairing the vending machine
2. Taking care of customer complaints and repairing the vending machine
3. Filling the vending machines and taking care of customer complaints
4. Repairing and collecting money from the vending machines

3-15. What is the primary purpose of timely schedules for refilling the vending machines?

1. To increase profits
2. To ensure maximum rotation of products
3. To ensure canned sodas are cold at all times
4. To ensure a continuous supply of products and services

3-16. What action should the vending machine operator take to keep track of the canned sodas placed in each vending machine in a separate responsibility operation?

1. Keep a daily record posted in the back of the soda storeroom to account for the canned sodas put in each machine
2. Carry a memorandum book with you at all times and list the quantity of canned sodas placed in each machine daily
3. Maintain a daily record placed on the inside of each vending machine indicating the date, type, and quantities of canned sodas placed in each vending machine
4. Fill out an Intra-Store Transfer Data, NAVSUP Form 973, each time sodas are placed in a vending machine including the date, type, and quantity of canned sodas placed in each vending machine

IN ANSWERING QUESTIONS 3-17 THROUGH 3-20, SELECT FROM COLUMN B THE PROBABLE CAUSE FOR THE PROBLEM LISTED IN COLUMN A.

	A. PROBLEMS	B. PROBABLE CAUSES
3-17.	A vending machine accepts a customer's $.50, but the customer does not get any change back even though the price of the canned soda is $.40	1. Products were stacked in the wrong slot 2. The sold-out light is inoperative 3. The change light is inoperative 4. The coin changer is dirty
3-18.	A customer receives a product other than the one selected	
3-19.	A customer places money in the vending machine, but it does not register because it gets stuck in the coin mechanism	
3-20.	Customer places money in the vending machine; the money is accepted but when the customer pushes the selection button nothing comes out	

3-21. To make the job of cleaning under and around the vending machine easier, the vending machine itself should be mounted on a stand so it is about how many inches off the deck?

1. 10 inches
2. 12 inches
3. 3 inches
4. 6 inches

3-22. A cleaning record should be maintained on the inside of each vending machine by the operator. This record should be kept current for how many days?

1. 60 days
2. 30 days
3. 15 days
4. 10 days

Learning Objective: Identify the procedures for operating the snack bar aboard ship.

3-23. What is the primary objective of the snack bar aboard ship?

1. To promote morale
2. To provide profits to the recreation fund
3. To provide crew members with a convenient place to go for snacks after normal working hours
4. To give the best possible service to the greatest number of customers

3-24. In determining the type of service to be rendered by the snack bar aboard ship, you must consider the availability of which of the following factors?

1. Equipment and space only
2. Space and personnel only
3. Personnel, time, and equipment only
4. Time, personnel, space, and equipment

3-25. What is the operating goal for the snack bar?

1. A 35 percent markup over the cost of the items sold
2. The amount of money needed to purchase new supplies
3. The desired gross profit percent
4. The gross amount of sales anticipated for the accounting period

3-26. The operating goal for the snack bar is established by what individual?

1. The ship's store officer
2. The supply officer
3. The commanding officer
4. The snack bar operator

● In answering question 3-27, refer to the information in the following paragraph.

You are determining the selling price for ice cream in the snack bar. The cost of selling the ice cream is $1.20. The desired profit margin for the snack bar is 35%.

3-27. What should the selling price for the ice cream be?

1. $1.85
2. $1.70
3. $1.65
4. $1.60

3-28. The Production Record, NAVSUP Form 241, is maintained to determine the cost per portion of those items manufactured in the snack bar. What individual maintains the NAVSUP Form 241?

1. The office recordskeeper
2. The cash collection agent
3. The leading Ship's Serviceman
4. The snack bar operator

3-29. How often will the ship's store officer check the NAVSUP Form 241?

1. Every time inventory is taken in the snack bar
2. Each accounting period
3. Monthly
4. Weekly

3-30. The value of retail items sold in the snack bar must be computed at what minimum frequency?

1. Each accounting period
2. Monthly or as required
3. Weekly
4. Daily

3-31. All cash collected from the snack bar is included and recorded with the sales from the retail store.

1. True
2. False

3-32. When the snack bar is operated by more than one person, how often will cash be collected?

1. At the end of each accounting period
2. Monthly
3. At the end of each shift
4. Twice weekly

3-33. How often should a representative from the medical department aboard ship inspect the snack bar for sanitation and cleanliness?

1. Once every 2 weeks
2. Daily
3. Monthly
4. Weekly

3-34. Once the operator of the snack bar receives his or her initial physical examination, how often thereafter is he or she required to receive another physical?

1. Annually
2. Every 6 months
3. Each accounting period
4. Monthly

3-35. Utensils used for serving ice cream or frozen desserts must be kept in running water or water maintained at what temperature in between servings?

1. 200°F
2. 180°F
3. 160°F
4. 130°F

3-36. Once the equipment used to manufacture ice cream is cleaned and disinfected, the interior parts of the machine that come in contact with the ice cream can only be touched by the operator's hands at which of the following times?

1. When taking it apart to clean it
2. In between servings
3. When adding additional mix
4. All of the above

● Questions 3-37 through 3-72 refer to chapter 3 of the text.

Learning Objective: Determine the general duties and responsibilities of the bulk storeroom custodian.

3-37. The responsibility for effectively arranging stock in the ship's store storerooms begins with what individual?

1. The commanding officer
2. The ship's store officer
3. The leading Ship's Serviceman
4. The person in charge of the storeroom

3-38. The bulk storeroom custodian is responsible to what individual for the stock in the bulk storeroom?

1. Retail store operator
2. Office supervisor
3. Ship's store officer
4. Ship's store recordskeeper

3-39. During the receipt of material, the bulk storeroom custodian will accept responsibility and custody for materials received once he or she performs which of the following actions?

1. Signs and dates the dealer's bill
2. Signs the receipt document
3. Signs the letter of assignment
4. Changes the padlock combination to the bulk storeroom

3-40. The responsibilities of the bulk storeroom custodian are assigned in writing by what individual?

1. The leading Ship's Serviceman
2. The commanding officer
3. The supply officer
4. The ship's store officer

3-41. Stowing materials in the bulk storeroom not in the custody of the bulk storeroom custodian is acceptable under which of the following conditions?

1. Just before deployment overseas
2. When the storeroom is not being inventoried
3. When stowage space is limited for one of the other supply divisions
4. When an emergency exists and the commanding officer authorizes it in writing

3-42. What is the primary responsibility of the bulk storeroom custodian?

1. Proper stowage, security, financial accountability, receipt, and expenditure of all stock in the bulk storeroom
2. Protection of stores from damage or deterioration
3. Arranging stock for breakouts and inventories
4. Issuing stock to the retail stores

3-43. How should the storerooms be numbered on a ship with 10 or more bulk storerooms?

1. By department code number
2. By compartment and frame number
3. In numerical sequence
4. By commodity number

Learning Objective: Identify procedures used for maintaining financial accountability for material in the custody of the bulk storeroom custodian.

3-44. The primary factor that contributes to inventory shortages or overages in the bulk storeroom is lack of internal checks and controls.

1. True
2. False

3-45. What should the bulk storeroom custodian NEVER do when receiving material into the bulk storeroom?

1. Physically inspect the merchandise for quality and damage
2. Make sure the quantity received is the same as shown on the receipt document
3. Change the quantity shown on the receipt document when it is not the same as the quantity counted
4. Sign and date the accountability stamp on the receipt document without counting the merchandise

3-46. When receiving stock into the bulk storeroom, the custodian will obtain the retained receipt documents from which of the following files?

1. The outstanding purchase order file
2. The incoming material file
3. The receipt inspector's file
4. The accountability file

3-47. What action will the bulk storeroom custodian take to accept merchandise receipts?

1. Circle the quantity received on the receipt document and sign and date the received block
2. Circle the quantity received on the receipt document and sign the accountability stamp
3. Check the quantities received and place initials by each check
4. Sign the accountability stamp only

3-48. While the working party is moving materials from the pier to the bulk storeroom, which of the following personnel is/are authorized inside the bulk storeroom?

1. All personnel on the working party
2. The leading Ship's Serviceman
3. Only those personnel authorized by the bulk storeroom custodian
4. The receipt inspector

3-49. What action should the bulk storeroom custodian take when the quantity he or she counted is not the same as shown on the receipt document?

1. Cross out the quantity shown on the receipt document, initial it, and enter and circle the actual amount received
2. Circle the quantity shown on the receipt document; the office will take care of the shortage
3. Circle the quantity shown on the receipt document and write the actual amount received above it
4. Leave the receipt document blank until the ship's store officer recounts the merchandise

3-50. When may the bulk storeroom custodian use the quantity indicated on the outside of the container as his or her count?

1. When the case has been opened
2. When the case has been opened but taped shut
3. When the case has not been previously opened
4. Both 2 or 3 above

3-51. What ship's store term is used to describe the movement of retail items from the bulk storeroom to the retail store?

1. Breakout
2. Breakback
3. Issue
4. Transfer

3-52. Which of the following items would be issued from the bulk storeroom?

1. Cigarettes for the cigarette machine
2. Snack bar ingredients
3. Repair parts for the can drink machine
4. Retail items for the retail store

3-53. What ship's store term is used to describe the movement of stock from the sales outlet to the bulk storeroom?

1. Breakout
2. Breakback
3. Issue
4. Transfer

3-54. What portion(s) of the Intra-Store Transfer Data, NAVSUP Form 973, is/are given to the bulk storeroom custodian to move stock from the bulk storeroom to the retail store?

1. Original only
2. Original and duplicate only
3. Original, duplicate, and triplicate only
4. Original, duplicate, triplicate, and quadruplicate

3-55. What action will the bulk storeroom custodian take once he or she has broken out the merchandise and recorded the quantities broken out on the breakout document?

1. Sign and forward the original to the receiving custodian
2. Sign and forward the original and all copies to the ship's store officer
3. Sign and forward the original to the office recordskeeper
4. Sign and forward the quadruplicate to the office recordskeeper

3-56. What portion of the NAVSUP Form 973 is retained by the bulk storeroom custodian for his or her records?

1. Original
2. Duplicate
3. Triplicate
4. Quadruplicate

3-57. What scenario can the bulk storeroom custodian expect to encounter if a discrepancy is noted between quantities broken out and quantities received?

1. Conduct an inventory of all items located in the receiving person's space
2. Conduct an inventory of the item discrepancy in the bulk storeroom and compare it to the inventory quantities on the corresponding Stock Record, NAVSUP Form 464
3. Survey the items missing, charging the Navy Stock Fund
4. Mark the items missing down to zero, charging Ships' Store Profits, Navy

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Learning Objective: Identify the purpose of and procedures for conducting spot check inventories aboard ship and explain the procedures for handling tax-free tobacco products.

3-58. What is the purpose of taking spot check inventories in the bulk storeroom?

1. To make sure inventory count sheets are correct
2. To see what merchandise needs to be ordered
3. To see if there is any difference between the quantity of stock in the bulk storeroom and the quantity shown on the NAVSUP Form 464
4. To make sure the ship's store does not have an excess inventory on any ship's store items

3-59. When will the ship's store officer conduct spot check inventories?

1. Daily
2. Weekly
3. Monthly
4. At unannounced times

3-60. What are the procedures normally used for taking spot check inventories?

1. The bulk storeroom custodian indicates the balance on hand of each item on the Intra-Store Transfer Data, NAVSUP Form 973, after a breakout or issue
2. The bulk storeroom custodian will receive a locally prepared spot check inventory sheet from the ship's store officer and count the items listed on it
3. A two-count inventory is conducted with one person counting and one recording
4. The ship's store officer selects certain items, enters them on an Inventory Count Sheet, NAVSUP Form 238, and counts them

3-61. Tax-free tobacco products may be sold in the ship's store only when the ship is in what location?

1. Outside the 3-mile limit of the United States
2. In international waters
3. Inside a United States port
4. Inside the 3-mile limit of the United States

3-62. In addition to the normal ship's store inventory cycles, how often should tax-free cigarettes be inventoried?

1. When departing the 3-mile limit of the United States only
2. When arriving within the 3-mile limit of the United States only
3. When arriving within a CONUS port only
4. When departing from or arriving within the 3-mile limit of the United States

3-63. Tax-free tobacco products must be removed from the retail store while the ship is in a United States port. An exception to this rule would be when time does not warrant moving the products and the ship's stay in port does not exceed how many days?

1. 5 days
2. 10 days
3. 15 days
4. 30 days

3-64. Tax-free tobacco products need not be inventoried when the ship arrives within the 3-mile limit of the United States if the tax-free tobacco products are stowed in a storeroom secured by replacing the lock and attaching a numbered car seal. The above procedure is authorized at the discretion of the commanding officer when the ship is scheduled to depart beyond the 3-mile limit of the United States within what maximum time period?

1. 1 day
2. 5 days
3. 3 days
4. 15 days

Learning Objective: Identify the procedures and regulations used to properly stow ship's store stock. (cont'd)

3-65. The stowage plans for the bulk storeroom should be flexible for which of the following purposes?

1. To provide for changing conditions and requirements
2. To make sure space is used to the maximum capacity
3. To prevent damage to stock
4. To prevent overstocking the storeroom

3-66. Your ship should begin planning for the stowage of ship's store stock within what range of months before a scheduled deployment?

1. 1 to 3 months
2. 2 to 4 months
3. 3 to 5 months
4. 4 to 6 months

3-67. Which of the following factors will help you in determining a suitable location to stow stock?

1. Size of the storeroom
2. Storeroom location
3. The characteristics of the storeroom
4. All of the above

3-68. What individual is responsible for preparing safety precautions for the bulk storeroom?

1. The bulk storeroom custodian
2. The office recordskeeper
3. The ship's safety officer
4. The ship's store officer

3-69. What part of your body should you use to lift an object?

1. Your back
2. Your arms
3. Your shoulders
4. Your legs

3-70. Which of the following actions should you avoid while carrying a load?

1. Carrying the load so you have a clear view over the top of the load
2. Changing directions while moving the load by moving your feet
3. Changing your grip while carrying the load
4. Facing the spot where you are going to-set the object down

3-71. In what priority should the bulk storeroom custodian issue stock from the bulk storeroom?

1. First in--first out
2. First in--last out
3. Last in--first out
4. Issue the stock that is easily accessible

3-72. When the bulk storeroom custodian receives highly perishable stock into the bulk storeroom, what date should be marked on each case?

1. Manufacturer's date
2. Date of the purchase order
3. Receipt date
4. Shipping date

Assignment 4

Textbook Assignment: "Stowage (continued)," chapter 3, pages 3-12 through 3-16; "Barbershop Service," chapter 4, pages 4-1 through 4-7; and "The Ship's Laundry," chapter 5, pages 5-1 through 5-2.

● Questions 4-1 through 4-33 refer to chapter 3 of the text.

Learning Objective: Identify the procedures and regulations used to properly stow ship's store stock. (cont'd)

4-1. What publication or instruction is used by the bulk storeroom custodian to determine the manufacture date code on a case of stock?

1. NAVSUP P-485
2. NAVRESSOINST 4067.4
3. NAVSUP P-487
4. NAVRESSO Publication 81

● In answering question 4-2, refer to the following paragraph and figure 4A.

You are the bulk storeroom custodian and you currently have three full cases of Baby Ruth candy bars in your storeroom. The first case was received on 1 April 1990 with a manufacture date of 10 March 1990. The second case was received on 1 May 1990 with a manufacture date of 1 March 1990. The third case was received 1 February 1990 with a manufacture date of 15 January 1990. While you are deployed, you receive an additional three cases of Baby Ruth candy bars during an underway replenishment on 15 June 1990. These three additional cases all have a manufacture date of 8 January 1990.

A. The third case received 1 February 1990.
B. The first case received 1 April 1990.
C. The three cases received while deployed on 15 June 1990.
D. The second case received 1 May 1990.

Figure 4A

4-2. Figure 4A lists the cases of Baby Ruth mentioned in the paragraph, but not necessarily in the order in which they should be issued. In what order should the bulk storeroom custodian issue the cases of Baby Ruth?

1. A, B, D, C
2. A, C, B, D
3. C, A, D, B
4. C, D, A, B

4-3. The bulk storeroom custodian may have difficulty gaining access to stock located in the bulk storeroom if he or she performs which of the following actions?

1. Stows items with similar handling requirements together
2. Stows items with a recurring demand by the entrance to the bulk storeroom
3. Stows an item of large quantity in one storeroom rather than two or more storerooms
4. Stows 1 case of one type of item behind 10 cases of another type of item in the same stowage bin

Learning Objective: Identify the correct procedures for arranging stock in the bulk storeroom.

4-4. How should the bulk storeroom custodian arrange the stock in the bulk storeroom?

1. Container labels facing out and cases arranged by item, brand name, and date of receipt or manufacture
2. Container labels facing sideways with the date of receipt or manufacture date showing on the outside
3. Container labels facing out with the date of receipt or manufacture indicated on the top of the case
4. Container labels facing inward and arranged by date of receipt

4-5. What type of stock items should be stowed in areas easily accessible to the custodian of the bulk storeroom?

1. Items that are similar
2. Popular items
3. Slow-moving items
4. Breakable items

4-6. What stock item should be stowed in areas that provide a balance between required handling and accessibility?

1. Hair spray
2. 50-pound laundry sour
3. Dial deodorant
4. Bath soap

4-7. What type(s) of stock items should be stowed together to make the job of issuing and controlling these items easier?

1. Popular items
2. Similar items
3. Slow-moving items
4. Light and heavy items

4-8. When conditions in the bulk storeroom allow the positioning of an aisle between the items being stowed, how wide should this aisle be?

1. 5 feet
2. 2 feet
3. 2 ½ feet
4. 3 ½ feet

4-9. You have just received a large quantity of one stock item. When conditions allow, how many storerooms should this stock item be stowed in?

1. One storeroom
2. Two storerooms
3. Three storerooms
4. Four or more storerooms

4-10. Fragile material should be stowed in which of the following locations in the bulk storeroom?

1. In a separate location, using empty cardboard carton strips to fill in unused space
2. In the same location as heavy material
3. In the angle irons on the sides of the ship
4. On the deck gratings in the rear of the storeroom

Learning Objective: Explain the procedures for maintaining the material condition of the bulk storeroom.

4-11. The custodian of the bulk storeroom should notify which of the following individuals when there are damaged or deteriorated items located in the bulk storeroom?

1. The supply officer
2. The ship's store recordskeeper
3. The custodian's supervisor
4. The retail store operator

4-12. The cleaning and maintenance of the bulk storeroom is the responsibility of what individual?

1. The damage control petty officer
2. The custodian
3. The receipt inspector
4. The retail store operator

4-13. How often should the bulk storeroom be cleaned and swept?

1. Daily
2. Twice weekly
3. Weekly
4. Monthly

4-14. How often should the custodian examine electrical systems in the bulk storeroom?

1. Daily
2. Weekly
3. Monthly
4. Bimonthly

4-15. How often should the ship's store officer inspect the bulk storeroom?

1. Each business day
2. Twice weekly
3. Weekly
4. During the monthly zone inspection

4-16. When the ship is expecting to get underway, the custodian of the bulk storeroom should notify what individual once the storeroom is prepared for sea?

1. The ship's store officer
2. The custodian's supervisor
3. The supply officer
4. The officer of the deck

4-17. When possible, how often should the bulk storeroom custodian ventilate the bulk storeroom to permit good air circulation?

1. Daily
2. Weekly
3. Monthly
4. Once per accounting period

Learning Objective: Explain the procedures and precautions used for stowing materials that require special handling.

4-18, When stowing stock with special handling requirements, which of the following factors should the custodian consider?

1. Hazards to personnel or facilities
2. Shelf life so the oldest stock is issued first
3. Temperature control to prevent deterioration
4. All of the above

4-19. The requirements for stowage of dangerous, semisafe, and safe materials are contained in which of the following publications?

1. Hazardous Material Identification System (HMIS) List, DOD 6050.5
2. Afloat Supply Procedures, NAVSUP P-485
3. Food Service Management Manual, NAVSUP P-486
4. Ship's Store Afloat, NAVSUP P-487

4-20. Which of the following categories of materials must be stowed in the paint and flammable liquids storeroom?

1. Safe only
2. Safe and semisafe
3. Dangerous and safe
4. Dangerous and semisafe

4-21. What atmospheric condition in your storeroom may cause pinholing in canned products?

1. High temperature
2. Low humidity
3. Low temperature
4. High humidity

4-22. What is the maximum closed cup flash point a product can have to be classified a flammable item?

1. 100°F
2. 160°F
3. 200°F
4. 220°F

4-23. What publication lists authorized ship's store items that are classified as flammable stock?

1. NAVRESSO Pub 90
2. NAVRESSO Pub 43
3. NAVSUP P-487
4. NAVSUP P-486

4-24. Flammable stock stowed in the retail store should be limited to how many days' sales?

1. 30 days
2. 60 days
3. 3 days
4. 15 days

4-25. How should you arrange standard Navy clothing stock in the bulk storeroom?

1. By manufacture date
2. By size in stock number order
3. By purchase order number
4. By style number

4-26. What is the ideal temperature for storerooms where food products are stowed?

1. 60°F
2. 65°F
3. 70°F
4. 75°F

4-27. When you are stowing cookies or crackers in your storeroom, they will become stale rapidly when the storeroom humidity percentage is greater than what amount?

1. 50%
2. 75%
3. 80%
4. 85%

4-28. What is the maximum recommended stowage (a) temperature and (b) humidity for chocolate?

1. (a) 65°F (b) 75%
2. (a) 65°F (b) 50%
3. (a) 70°F (b) 50%
4. (a) 70°F (b) 75%

4-29. Which of the following types of candy is more affected by high humidity than by temperature?

1. Chocolate candy
2. Nonchocolate candy
3. Nougat
4. Fudge

4-30. What date is used by the custodian to determine the order in which photographic film should be issued from the bulk storeroom?

1. Receipt date
2. Order date
3. Manufacture date
4. Expiration date

4-31. When cigarettes are stowed in the bulk storeroom, the temperature in the storeroom should not exceed what amount?

1. 60°F
2. 65°F
3. 70°F
4. 75°F

4-32. What is the recommended way to stow canned drinks to prevent them from falling while the ship is underway in high seas and at the same time to provide good air circulation?

1. Cross stack them
2. Stack them so they are at least 3 feet from the overhead
3. Secure them on pallets or deck grating with battens
4. Stack them together tightly, bulkhead to bulkhead

4-33. What causes secondary damage in a stack of canned drinks?

1. Damaged and/or leaky cans or cases left in the stack
2. High temperature
3. High humidity
4. Cold ventilation

● Questions 4-34 through 4-69 refer to chapter 4 of the text.

Learning Objective: Explain the organization and administration of the afloat barbershop.

4-34. The overall responsibility for the administration and operation of the afloat barbershop rests with what individual?

1. The retail store operator
2. The supply officer
3. The barbershop supervisor
4. The leading Ship's Serviceman

4-35. Services provided in the barbershop should include which of the following?

1. Regular haircut
2. Afro haircut
3. Tonic
4. All of the above

4-36. What is the primary purpose of the afloat barbershop?

1. To provide haircuts to every crew member before an inspection
2. To provide input to the Navy on personal grooming standards
3. To provide the desired haircut of each individual
4. To provide a regulation haircut to maintain the smart appearance of Navy men and woman

4-37. As a barber, you should become familiar with the Navy grooming standards contained in what publication?

1. Navy Customer Service Manual, NAVEDTRA 10119
2. Ship's Store Afloat, NAVSUP P-487
3. Navy Regulations, 1973 NAVPERS 15665
4. Standard Organization and Regulations of the U.S. Navy, OPNAVINST 3120.32

4-38. To maintain a high quality of service in the barbershop, you must become familiar with the standards of service the barbershop should provide to customers. What publication or instruction will the barber use to learn the barbershop standards of service?

1. NAVEDTRA 10119-B
2. OPNAVINST 3120.32
3. NAVPERS 15665
4. NAVSUP P-487

4-39. Which of the following instructions are used to assist shipboard barbers in performing their duties properly?

1. Supply department instructions
2. Ship's instructions
3. Medical instructions
4. All of the above

4-40. Which of the following instructions should be posted inside the barbershop for all barbers to see?

1. Ship's instructions
2. Supply department instructions
3. Medical instructions
4. Both 2 and 3 above

4-41. The barbershop supervisor is responsible directly to what officer for the satisfactory operation of the barbershop?

1. The supply officer
2. The medical officer
3. The executive officer
4. The commanding officer

4-42. What is the primary job of the barbershop supervisor?

1. To make sure courtesy and military etiquette are maintained in the barbershop at all times
2. To make sure security is maintained in the barbershop
3. To make sure supplies are ordered
4. To make sure all barbers are using proper barbering techniques

Learning Objective: Identify the barbershop space requirements and the importance of customer service.

4-43. Which of the following actions by the barber could cause a poor relationship between the barbershop and the ship's crew?

1. Answering the phone using military courtesy
2. Showing no favoritism between customers
3. Opening the barbershop late
4. Attending to complaints of customers

4-44. While servicing a customer in the barbershop, which of the following actions should you AVOID?

1. Carrying on a conversation with another barber while cutting a customer's hair
2. Discussing family problems with the customer
3. Criticizing another barber in front of a customer
4. All of the above

4-45. The barbershop should plan services so quality and prompt customer service is given to every individual. To do this, how often should the barbershop plan to give a haircut to each crew member?

1. Once every 7 days
2. Once every 2 weeks
3. Once every 10 days
4. Once a month

4-46. How much time should be allowed for each barber to service one customer?

1. 10 minutes
2. 15 minutes
3. 20 minutes
4. 30 minutes

4-47. The barber should control the atmosphere within the barbershop by keeping the air at what temperature?

1. 60°F
2. 65°F
3. 70°F
4. 75°F

4-48. When the barbershop is equipped with more than one barber chair, how far apart should the barber chairs be spaced?

1. 5 ½ to 6 feet
2. 4 ½ to 5 feet
3. 3 ½ to 4 feet
4. 2 ½ to 3 feet

4-49. How many barber chairs should be available for a ship with 900 personnel attached?

1. One
2. Two
3. Three
4. Four

4-50. When, if ever, should a separate barbershop be provided on ships that carry troops?

1. When deployed overseas
2. When one barber chair is required for the troops
3. When two or more barber chairs are required for the troops
4. Never

4-51. A barber standing for several hours at a time can put added stress on the body. Which of the following rules should the barber follow to help relieve some of the added stress?

1. Keep the stomach held in
2. Keep the shoulders back
3. Carry the weight of the body on the balls of the feet
4. All of the above

Learning Objective: Explain the procedures for scheduling appointments in the barbershop.

4-52. What is the primary purpose of scheduling appointments in the barbershop?

1. To distribute work evenly between barbers
2. To provide better service to the customer
3. To limit the number of customers at any one time
4. To resolve complaints of customers about not receiving a haircut

4-53. When using the appointment system in the barbershop, what is the best time for the barber to post his or her appointment sheet?

1. The day before the scheduled time of the haircut
2. 2 days before the scheduled day of the haircut
3. The week before the appointment
4. Monthly

4-54. What action should the barber take when several crew members miss their appointments?

1. Cut down on the hours of operating the barbershop
2. Give the names of the crew members to the responsible division officer
3. Change from the appointment schedule to the division schedule
4. Do not serve those crew members missing appointments

4-55. When the division schedule is used in the barbershop, what individual controls the scheduling of appointments for each division?

1. The barbershop supervisor
2. The division petty officer
3. The supply officer
4. The leading Ship's Serviceman

4-56. How long should the barbershop supervisor retain the used appointment sheets in the barbershop?

1. 1 month
2. 2 weeks
3. 5 days
4. 10 days

Learning Objective: Identify the principles and techniques used in maintaining barbershop sanitation.

4-57. What is the main purpose of barbershop sanitation?

1. To keep the barbershop clean
2. To prevent the spread of infectious diseases
3. To prolong the life of barbering equipment
4. To keep the barbering equipment clean

4-58. How often should a member of the medical department aboard ship inspect the barbershop?

1. Weekly
2. Twice weekly
3. Monthly
4. Quarterly

4-59. After barbers receive their initial physical examination, how often thereafter should they receive another one?

1. Each time they become ill
2. Monthly
3. Every 6 months
4. Annually

4-60. Barbershop sanitation is required to control what type of bacteria that produce diseases in the barbershop?

1. Nonpathogenic
2. Chromosome
3. Pathogenic
4. Photosynthetic

4-61. Which of the following disinfectants is/are used in the afloat barbershop for disinfecting metallic instruments?

1. Clippercide spray 4-in-1. approved by the EPA with an EPA registration number
2. Formalin solution (10 percent solution of formaldehyde)
3. Formaldehyde tablets
4. All of the above

4-62. When the workload in the barbershop is light and the disinfectant solution does not have to be changed daily, how often should it be changed?

1. Weekly
2. Twice weekly
3. Monthly
4. Bimonthly

4-63. Nonmetallic instruments such as combs should be immersed in a disinfectant solution for what minimum time period before reusing?

1. 10 minutes
2. 15 minutes
3. 20 minutes
4. 30 minutes

4-64. How often should metallic instruments in the barbershop be disinfected?

1. After each use between customers
2. Once daily
3. Twice daily
4. Twice weekly

4-65. How many combs at a minimum should each barber have in order to provide proper sanitation between customers?

1. Five
2. Two
3. Three
4. Seven

4-66. How many customers can be served with one individual neck strip?

1. One
2. Two
3. Three
4. Four or more

4-67. How often should the barber change the covering cloths in the barbershop?

1. Daily
2. Twice a week
3. Weekly
4. Twice a month

4-68. The pressure of the compressed air used to remove hair from the customer should be no greater than what psi?

1. 5 psi
2. 10 psi
3. 15 psi
4. 30 psi

4-69. A barber should not provide customer service to any individual who has any kind of sore or diseases on the scalp or the back of the neck within the hairline.

1. True
2. False

- Questions 4-70 through 4-75 refer to chapter 5 of the text.

Learning Objective: Explain the organization and administration of the afloat laundry. (cont'd)

4-70. What is the primary purpose of using the workflow concept in the ship's laundry?

1. To allow more time for training personnel
2. To reduce normal working hours
3. To provide good rotation for personnel
4. To provide efficient production

4-71. Based on Navy guidelines, how many laundry personnel would be sufficient to operate a ship's laundry serving 500 officer and enlisted personnel?

1. Five
2. Two
3. Three
4. Four

4-72. Which of the following personnel would be assigned such duties as preparing laundry schedules, seeing that equipment is properly maintained, ordering supplies, and training personnel in the ship's laundry?

1. The bulk storeroom custodian
2. The supply officer
3. The ship's store recordskeeper
4. The laundry supervisor

4-73. What publication or instruction should you use to find the safety precautions that apply to shipboard laundries?

1. NAVRESSOINST 4067.4
2. NAVMED P-5010
3. NAVSUP P-485
4. OPNAVINST 5100.19

4-74. What individual is responsible for preparing the sanitation requirements for the shipboard laundry?

1. The medical officer
2. The supply officer
3. The ship's store officer
4. The laundry supervisor

4-75. How often should the ship's store officer inspect the ship's laundry?

1. Each business day
2. Twice weekly
3. Weekly
4. Monthly

Assignment 5

Textbook Assignment: "The Ship's Laundry (continued)," chapter 5, pages 5-6 through 5-28.

Learning Objective: Explain the organization and administration of the afloat laundry. (cont'd)

5-1. What officer aboard ship may authorize the collection of monthly charges for services provided in the ship's laundry?

1. The ship's store officer
2. The supply officer
3. The commanding officer
4. Each of the above

IN ANSWERING QUESTIONS 5-2 THROUGH 5-5, SELECT FROM COLUMN B THE LOG THAT IS USED FOR THE PURPOSE SHOWN IN COLUMN A.

	A. PURPOSES	B. LOGS
5-2.	To record historical repair data	1. Heat stress
5-3.	To keep a record of the temperature in the ship's laundry	2. Bulk work
5-4.	To keep a record of divisional laundry	3. Equipment maintenance
5-5.	To record individual officer's and chief petty officer's lots	4. Press deck

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5-6. How often should the laundry summary sheet be prepared and submitted to the supply officer?

1. Daily
2. Weekly
3. Monthly
4. Quarterly

5-7. The ship's laundry should not be used after normal working hours unless final approval is obtained from what individual?

1. The ship's store officer
2. The duty supply officer
3. The duty Ship's Serviceman
4. The executive officer

Learning Objective: Identify the procedures for preventing heat stress injuries in the ship's laundry.

5-8. What publication or instruction should you reference for the requirements of the Navy heat stress program?

1. NAVSUP P-485
2. NAVRESSO Pub 17
3. OPNAVINST 3120.32
4. OPNAVINST 5100.20

5-9. A dry bulb thermometer should be permanently mounted near which of the following laundry areas?

1. The receiving area
2. The issuing area
3. The wash and press deck areas
4. All of the above

5-10. How often should temperatures in the laundry be taken and recorded in the heat stress log?

1. Once daily
2. Twice daily
3. Once every 6 hours
4. Once every 4 hours

5-11. You should evacuate the ship's laundry until a heat stress survey is conducted when the temperature in the laundry reaches what maximum temperature?

1. 85°F
2. 90°F
3. 95°F
4. 100°F

5-12. A heat stress survey was conducted in the ship's laundry by the medical officer. It was determined that the stay time would be 2 hours. How long should the recovery time be?

1. 8 hours
2. 2 hours
3. 6 hours
4. 4 hours

Learning Objective: Identify the procedures for stowing and handling supplies in the ship's laundry.

5-13. The supplies stowed in the laundry should be limited to the amount required for what time period?

1. 1 week
2. 2 weeks
3. 1 day
4. 1 month

5-14. How should the supplies in the ship's laundry be stowed?

1. In separate covered metal bins using a bin liner or plastic bag
2. In the receiving area in the original container
3. On the wash deck in a cardboard container near the washer extractor
4. On the wash deck in the original closed container

5-15. Which of the following actions should you take to prevent powdered laundry supplies from becoming hard or lumpy?

1. Store them in a cool space
2. Keep them well covered
3. Keep them dry
4. All of the above

5-16. What determination should you make before disposing of any laundry chemicals at sea or in port?

1. The stowage requirements of the chemical
2. The hazardous priorities of the chemical
3. The shelf life of the chemical
4. The age of the chemical

5-17. To what publication should you refer for the classification and stowage requirements for shipboard consumables?

1. NAVSUP P-485
2. NAVSUP P-487
3. NAVSUP P-4998
4. HMIS, DOD 6050.5

Learning Objective: Identify the basic procedures for receiving and identifying lots.

5-18. The receiving laundry person is responsible for which of the following duties?

1. Receiving lots
2. Marking lots
3. Classifying lots
4. All of the above

5-19. What individual will the receiving laundry person contact to resolve problems with the pickup of clean laundry?

1. The ship's store officer
2. The divisional laundry petty officer
3. The leading petty officer of each division
4. The leading Ship's Serviceman

5-20. The receiving laundry person should not accept divisional laundry bags over what weight limitation?

1. The washer extractor capacity
2. 60 pounds
3. 80 pounds
4. 100 pounds

5-21. What is the primary problem with handling lots in the ship's laundry?

1. Marking them
2. Identifying them
3. Classifying them
4. Damaging them

5-22. What individual is responsible for stenciling the clothing in divisional bulk lots?

1. The divisional laundry petty officer
2. The receiving laundry person
3. Each enlisted person
4. The laundry supervisor

5-23. What individual is responsible for making sure only properly stenciled clothing is accepted within each division?

1. The laundry supervisor
2. The leading petty officer of each division
3. The divisional laundry petty officer
4. The receiving laundry person

5-24. Personnel working on the wash deck should use identification markers or flags to identify which of the following types of laundry within the washer extractor?

1. Officers' uniforms
2. Bulk lots
3. Individual lots
4. All of the above

Learning Objective: Identify the basic procedures for receiving and identifying individual lots.

5-25. What should you do if you have more individual lots than you have assembly bins?

1. Set up two lots daily
2. Only do the lots you have enough assembly bins for
3. Increase the amount of times individual lots are delivered each week
4. Put two lots in each assembly bin

5-26. What form is used by officers and CPOs to identify the items they have sent to the laundry for processing?

1. NAVSUP Form 233
2. NAVSUP Form 235
3. NAVSUP Form 236
4. NAVSUP Form 238

5-27. The receiving laundry person will classify all items in the individual lots according to the wash formula that will be used.

1. True
2. False

5-28. Clothes may be effectively washed in nets providing what precaution is taken?

1. Use nylon net bags
2. Put several size items in each bag
3. Load the nets properly
4. Use woven nets

5-29. What is the maximum load for a 24-inch by 36-inch net bag?

1. 12 pounds
2. 10 pounds
3. 8 pounds
4. 5 pounds

5-30. What is the laundry mark for SHCS George D. Mills, 224-56-8757?

1. 224568757
2. M-224568757
3. D-8757
4. M-8757

5-31. What is the correct procedure for handling differences between the laundry's count of an individual lot of laundry and the customer's count?

1. The laundry supervisor checks the count, enters the correct count on the laundry list, circles and initials the customer's count, and informs the customer of the difference through the individual who delivered the lot
2. Three people in the laundry check the count, inform the laundry supervisor of the difference, and change and initial the changes on the laundry list
3. The laundry supervisor returns the individual lot to the customer for a recount
4. The laundry person discovering the difference notes it on the laundry list and logs it in the press deck log

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Learning Objective: Identify the procedures for using the marking machine in the ship's laundry.

5-32. Which of the following items are not marked individually in the laundry but are placed in a separate net bag?

1. Undershirts
2. Handkerchiefs
3. Trousers
4. Tropical shorts

5-33. While using the laundry marking machine, how should you bring the material you are marking in contact with the type?

1. By raising the inking arm
2. By raising the printing lever forward
3. By pressing the printing lever backward
4. By pressing the printing lever downward

5-34. What should the laundry person do to prevent wrinkling the ribbon while setting the type handles of the marking machine?

1. Use both hands
2. Have the printer arm in the downward position
3. Move the type handles with the printer arm in the center position
4. Keep the printer arm in the upright position

5-35. Which of the following tools should you use to clean the type on the marking machine?

1. Wire brush
2. Sponge
3. Chamois cloth
4. Scrub pad

5-36. What action, if any, should the laundry supervisor take when the marking machine in the ship's laundry breaks down?

1. Use a fine point ink pen to mark items
2. Use a laundry marking pen available through the retail store
3. Use identification markers and tags
4. None; no marking is done until the laundry marking machine is repaired

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Learning Objective: State the primary goal of the washing process and identify the various types of soil and the general precautions taken when washing different fabrics.

5-37. What is the primary goal of the washing process?

1. To wash the clothing and have zero laundry claims
2. To strengthen and beautify the appearance of clothing
3. To remove all soil from clothing being washed
4. To wash and return all the clothing to the owner within 24 hours

IN ANSWERING QUESTIONS 5-38 THROUGH 5-41, SELECT FROM COLUMN B THE TYPE OF SOIL THAT IS DESCRIBED IN COLUMN A.

	A. DESCRIPTIONS	B. SOILS
5-38.	Soil that includes a variety of substances such as starch, syrups, catsup, and so forth and is removed during the normal laundering process	1. Water soluble 2. Chemical soluble 3. Special 4. Insoluble
5-39.	Soil that includes such things as paint, ink, adhesives, and so forth, and cannot be removed during the normal laundering process but may possibly be removed using spotting operations	
5-40.	Soil that includes the majority of soils removed in the laundry; most of these types of soils are readily dispersed during the wash cycle, but they tend to contribute to fabric damage due to fiber abrasion	
5-41.	Soil that includes substances such as grease and oils, is usually not soluble or dissolvable when washing, and may require special treatment	

5-42. Color transfer is primarily caused on fabrics when the laundry person on the wash deck does not accomplish which of the following actions?

1. Loading the washer properly and according to weight limitations
2. Adding sour according to the wash formula
3. Extracting the clothes properly
4. Classifying the clothes properly

5-43. What action by the laundry person may cause the redepositing of soil on the clothing during the wash cycle?

1. Washing a light load of dungaree trousers with black socks
2. Washing white and colored fabrics together
3. Washing heavily soiled clothing with lightly soiled clothing
4. Washing lightly soiled fabrics together

5-44. When should the laundry chemicals come in contact with the fabrics in the washer extractor?

1. Before the water is added
2. After the first bath
3. As soon as the water is added
4. After the correct water level is reached

Learning Objective: Identify the various laundry chemicals, types of wash water, and the formulas used in washing fabrics in the ship's laundry.

5-45. What type of water is most suitable for washing clothes in the ship's laundry?

1. Soft water
2. Salt water
3. Hard water
4. Chlorinated water

5-46. What type of treatment is required for permanently hard water?

1. Exchanging the compounds contained in the water
2. Boiling it
3. Using lime soaps during washing
4. Distilling or adding special chemicals

5-47. How is seawater made usable aboard ship?

1. Using the base exchange method of purification
2. Changing the compounds of sodium in the seawater to compounds of calcium and magnesium
3. Using the distillation method
4. Adding chloride and removing the sodium

5-48. Detergent/oxygen bleach is a powdered substance used safely for laundering which of the following types of fabrics?

1. Colored
2. Cotton
3. Synthetic
4. All of the above

5-49. Based on a washer extractor with a 100-pound washing capacity, how much detergent/oxygen bleach should be added to the wash cycle when using seawater?

1. 12 ounces
2. 16 ounces
3. 20 ounces
4. 32 ounces

5-50. The wash formulas should be posted in what area of the laundry?

1. The issue room
2. The wash deck
3. The press deck
4. The receiving area

5-51. What wash formula, if any, should you use when washing white certified Navy twill uniforms?

1. Washing formula #1
2. Washing formula #2
3. Washing formula #3
4. None; dry clean only

5-52. How many times per wash should you rinse the clothing?

1. Whatever the wash formula indicates
2. As many rinses as needed to get the clothes clean
3. Three times a wash
4. Four times a wash

5-53. What action should the laundry person take when the clothing is washed according to the wash formula and still does not come out clean?

1. Rinse them again manually
2. Soak them in the washer overnight and rinse and extract them in the morning
3. Wash them again increasing the amount of chemical additives
4. Wash them again according to the appropriate wash formula

5-54. Which of the following conditions should be eliminated when laundry sour is added to the wash cycle properly?

1. Remaining alkalies
2. Rust or yellow discoloration
3. Unsterilized clothes
4. All of the above

5-55. Laundry starch can be used to improve appearance and give body to which of the following types of fabrics?

1. Certified Navy twill products
2. Cotton products
3. Work clothes
4. All of the above

Learning Objective: Determine the procedures for using and operating the Dyna wash washer extractor.

5-56. Why is the cylinder on the washer extractor perforated?

1. To allow water and suds in the bottom of the shell to enter
2. To saturate the clothes
3. To clean the clothes during the washing process
4. To reduce the weight of the machine

5-57. What switch on the Dyna Wash energizes the power to the control panel and the programmer?

1. Master switch
2. Control switch
3. Wash switch
4. Timer switch

5-58. When loading or unloading the washer extractor, the washer cylinder door can be lined up with the outer shell door by depressing either the forward or reverse switch with what other switch?

1. Drum control switch
2. Signal switch
3. Jog switch
4. Extract switch

5-59. The timer wheel on the programmer will not begin to move until which of the following switches are energized?

1. Timer switch
2. Master switch
3. Control switch
4. All of the above

5-60. What indicator light will light up and alert laundry personnel when the automatic cycle is complete by sounding a bell?

1. Signal indicator light
2. Master indicator light
3. Wash indicator light
4. Timer indicator light

5-61. What safety device is installed on the inside of the washer extractor programmer to protect laundry personnel from electrical shock when the programmer door is opened?

1. Vibration switch
2. Interlock switch
3. Microswitch
4. Control switch

5-62. What source(s) is/are used as a guideline for cutting the program chart?

1. The Navy wash formula
2. Instructions provided by the Navy exchange
3. Instructions contained in the technical manual
4. Charts available from the supply system

● In answering questions 5-63 and 5-64, refer to the following paragraph.

You are setting the temperature control on a 100-pound washer extractor for a load of laundry that will be washed using Navy wash formula I.

5-63. At what temperature should the black pointer on the temperature control be set?

1. 90°F
2. 120°F
3. 130°F
4. 160°F

5-64. At what temperature should the red pointer on the temperature control be set?

1. 160°F
2. 140°F
3. 130°F
4. 120°F

5-65. What switch on the Dyna Wash washer extractor prevents the outer shell door from opening during extraction?

1. Jog switch
2. Interlock switch
3. Control switch
4. Vibration switch

Learning Objective: Determine the procedures for washing with the Dyna Wash washer extractor.

STEPS IN OPERATING
THE WASHER EXTRACTOR

A. Turn off the control switch.
B. Check and securely latch the door to each cylinder.
C. Energize the control switch, making sure no other switches are energized while doing so.
D. Close the outer shell door.
E. Open the shell door.
F. Load the washer extractor.
G. Rotate the cylinder by depressing the jog switch with the forward or reverse switch to adjust each cylinder door for loading.
H. Open the cylinder door.
I. Add the required supplies to the automatic dispenser.
J. Mark on the washer with chalk the contents of each pocket.
K. Adjust the drum control disk.
L. Energize the control switch, master switch, and timer switch in that order.

Figure 5A

IN ANSWERING QUESTION 5-66, REFER TO FIGURE 5A.

5-66. Figure 5A contains some of the steps used in the automatic operation of the Dyna Wash washer extractor, but not necessarily in the correct order. In what order should the steps be taken?

1. C, E, G, H, F, A, B, D, J, I, L, K
2. E, C, G, A, H, F, J, B, D, I, K, L
3. K, L, J, E, A, G, H, F, B, D, I, C
4. L, K, I, A, E, G, H, F, J, B, D, C

5-67. What safety precautions should you take when unloading the washer extractor?

1. Turn the controls off before placing your hands inside the washer cylinder or shell
2. Line up the openings in the shell and cylinder
3. Use the safety switches
4. Secure the door latches

5-68. When should you use the manual mode when washing clothing?

1. When the workload is very heavy
2. When washing heavily soiled clothing
3. When the automatic timer is inoperative
4. All of the above

5-69. What is the ideal steam pressure for operating the washer extractor?

1. 200 psi
2. 120 psi
3. 100 psi
4. 80 psi

5-70. When loading the Dyna Wash washer extractor, you should divide the wash load into three piles. The weight difference between each of these piles should not exceed what percent?

1. 5%
2. 10%
3. 15%
4. 25%

5-71. Which of the following safety precautions should you take before opening the outer shell door to the washer extractor?

1. Make sure the control switch is on
2. Open the shell door while the cylinder is moving only when all switches have been de-energized
3. De-energize all switches and wait for the cylinder to come to a complete stop
4. When the signal switch lights and sounds the bell, open the programmer door and then the shell door

Learning Objective: Determine the procedures for operating the Milnor washer extractor. (cont'd)

IN ANSWERING QUESTIONS 5-72 THROUGH 5-75, SELECT FROM COLUMN B THE CONTROL ON THE MILNOR WASHER EXTRACTOR THAT IS MOST SUITABLE FOR THE PURPOSE LISTED IN COLUMN A.

	A. PURPOSES	B. CONTROLS
5-72.	Controls the power to the wash, drain, and extract motors	1. Temperature control switches
5-73.	Controls the water temperature	2. Master switch
5-74.	Used to cancel and signal what has been called for on the program chart so the Milnor motor can resume operation	3. Motor switch
5-75.	Controls the power to the Milnor washer extractor	4. Signal switch

Assignment 6

Textbook Assignment: "The Ship's Laundry (continued)," chapter 5, pages 5-29 through 5-56.

Learning Objective: Determine the procedures for using the Milnor washer extractor. (Cont'd)

6-1. The thermometer on the Milnor washer extractor is used to control the water temperature. What does the green pointer on the thermometer control or indicate?

1. Indicates the actual water temperature
2. Controls the higher temperature
3. Controls the lower temperature
4. Indicates the higher temperature

6-2. What is the minimum air pressure required for the Milnor washer extractor to operate properly?

1. 160 psi
2. 120 psi
3. 100 psi
4. 80 psi

Learning Objective: Identify the controls and indicators for the tumbler dryer and what they are used for.

6-3. What control(s) on the tumbler dryer is/are used to regulate the length of time a load will be reduced in temperature?

1. Drying timer
2. Temperature regulator
3. Damper controls
4. Cooling timer

6-4. What control(s) on the tumbler dryer is/are used to regulate the inlet air temperature?

1. Temperature regulator
2. Damper controls
3. Thermometer
4. Drying timer

6-5. What control(s) on the tumbler dryer set(s) the desired outlet air temperature?

1. Thermometer
2. Temperature regulator
3. Drying timer
4. Damper controls

6-6. What would be the desired temperature range for the tumbler dryer during the drying process?

1. 100°F to 120°F
2. 120°F to 140°F
3. 140°F to 160°F
4. 160°F to 180°F

6-7. Under normal conditions, the drying timer should be set for how many minutes?

1. 10 minutes
2. 15 minutes
3. 20 minutes
4. 30 minutes

6-8. The cool-down timer should be set for what amount of time?

1. 5 minutes
2. 10 minutes
3. 15 minutes
4. 20 minutes

6-9. In addition to the cool-down timer, what control(s) on the tumbler dryer must be adjusted during the cool-down cycle?

1. Damper controls
2. Drying timer
3. Thermometer
4. Heating coils

6-10. Which of the following factors may cause the clothes to become wrinkled during the drying cycle?

1. Clothes were not starched during the washing process
2. Clothes were improperly washed
3. Dryer temperature is too low
4. Dryer is overloaded

6-11. You have just removed some freshly laundered heavy clothing items from the washer extractor. To make pressing of these items easier, you should partially dry them in the tumbler dryer for what maximum time period?

1. 10 minutes
2. 8 minutes
3. 6 minutes
4. 4 minutes

6-12. In what order, if any, should lots be delivered to the next processing station after drying them in the tumbler dryer?

1. In alphabetical order by division
2. By lot number
3. In the order in which they were received
4. None; no order is necessary

Learning Objective: Determine the precautions taken to prevent laundry tumbler dryer fires.

6-13. What is the primary cause of shipboard laundry fires?

1. Spontaneous combustion of residual soil in clothing
2. Human error or negligence
3. Improper washing, rinsing, or extracting of clothes
4. Improper cleaning of laundry lint traps

6-14. How often should the primary lint traps on the tumbler dryer be cleaned?

1. After each dryer load
2. Every 2 hours
3. Every 6 hours
4. Every 4 hours

6-15. What is the primary purpose of the secondary lint trap?

1. To cut down on the amount of lint entering the tumbler dryer
2. To keep the steam coils clean of lint and dirt
3. To protect the ship's exhaust blowers
4. To help cut down on the buildup of lint in the ducting

6-16. How often should the steam coils on the tumbler dryer be inspected for cleanliness?

1. Daily
2. Twice weekly
3. Monthly
4. Every 4 hours

6-17. How often should the exhaust ducts and vents in the ship's laundry be inspected and cleaned?

1. Quarterly
2. Monthly
3. Weekly
4. Daily

Learning Objective: Identify the parts of the flatwork ironer and the safety precautions that apply to their use.

6-18. For what pressing task is the flatwork ironer primarily used in a large afloat laundry?

1. Pressing khaki shirts
2. Pressing tablecloths and bed linens
3. Pressing khaki trousers
4. Pressing handkerchiefs, hand towels, aprons, and undershirts

IN ANSWERING QUESTIONS 6-19 THROUGH 6-22, SELECT FROM COLUMN B THE PART OF THE FLATWORK IRONER THAT IS USED FOR THE PURPOSE INDICATED IN COLUMN A.

	A. PURPOSES	B. PARTS
6-19.	Smooths and flattens the flatwork against the steam-heated cylinder	1. Feed ribbons
6-20.	Catches all finished material	2. Padded rolls
6-21.	Carries and leads the flatwork into the ironer over the cylinder	3. Return ribbons
6-22.	Holds the flatwork against the underside of the heated cylinder and passes it back to the front	4. Delivery table

6-23. Which of the following parts of the flatwork ironer prevent(s) the hand of the operator from getting near the padded pressure rolls?

1. The feed ribbons
2. The finger guard
3. The apron
4. The removable cover

6-24. What control on the flatwork ironer engages the compression roll?

1. The start button
2. The drive roll
3. The speed control lever
4. The foot pedal

6-25. How often should you check the safety finger guard on the flatwork ironer to make sure it is working properly?

1. Every shift
2. Twice weekly
3. Monthly
4. Quarterly

6-26. What will happen if you touch the safety finger guard on the flatwork ironer while the ironer is operating?

1. The flatwork ironer will adjust to the next lower speed
2. The compression roll will disengage
3. An alarm will alert the user
4. The flatwork ironer will stop

6-27. What action should you take if some linen becomes jammed in the flatwork ironer?

1. Disengage the compression roll and pull the linen out
2. Put on a pair of safety gloves, turn the speed control lever in reverse, and slowly pull the linen Out
3. Put on safety gloves and try to remove the linen while the flatwork ironer is running in the fast speed
4. Shut the ironer off at the power source, release the compression rolls, allow the ironer to cool, and remove the jammed linen

6-28. When, if ever, may you operate a flatwork ironer with a faulty safety finger guard?

1. When the workload is heavy and you are behind schedule
2. When there are two or more persons present at the flatwork ironer in case of an emergency
3. Only when a person is standing by the emergency stop button ready to cut the power off
4. Never

Learning Objective: Identify the procedures for operating the flatwork ironer.

6-29. What are the proper procedures for preheating the flatwork ironer?

1. Keep the main steam valve partially open for 20 minutes and then open it all the way for another 25 minutes
2. Open the steam valve one-half a turn first and gradually allow steam to enter the cylinder; continue to open the steam valve slowly until it is open all the way
3. Turn the steam valve on all the way and allow 45 minutes for the cylinder to heat
4. Bring the cylinder in contact with the padded rolls, keep the main steam valve partially open for 10 minutes, and then turn the steam on all the way

6-30. Which of the following actions should you AVOID to prevent damaging the variable speed mechanism?

1. Setting it to the lowest speed while warming the flatwork ironer
2. Engaging the compression roll while the ironer is on
3. Changing the speed of the ironer while the ironer is on
4. Decreasing the speed of the ironer while the ironer is off

6-31. What are the proper procedures for securing the flatwork ironer at the end of the day?

1. Turn the machine off and raise the compression roll so the machine can cool for 30 minutes
2. Close the steam supply, raise the compression roll and allow the machine to run for 20 or 30 minutes without steam to allow it to cool properly before you shut the power off
3. Turn the power off, secure the steam, and remain in the laundry until the ironer cools down
4. Raise the compression roll and allow the-machine to run for 10 to 15 minutes, gradually turning the steam off to allow the machine to cool, and then shut it off

6-32. The compression roll on the flatwork ironer should be raised when the ironer is left unattended for what minimum time period?

1. 5 minutes
2. 10 minutes
3. 15 minutes
4. 20 minutes

6-33. What is the purpose of feeding the flatwork into the ironer wrong side up?

1. To prevent scorching the right side
2. To prevent wearing through the smooth side
3. To exert more pressure on the rough side of the material
4. To give a smooth finish to the right side of the material

6-34. What procedure should be used to feed large items into a 75-inch ironer?

1. One person only feeds the items into the ironer
2. Two persons feed all the items into the ironer
3. Two persons feed the large items into the ironer folded
4. Three persons feed all the items into the ironer

6-35. Into what part of the cylinder of the flatwork ironer should small items be fed?

1. Center
2. Left end
3. Right end
4. Along the entire length

Learning Objective: Identify the various laundry presses used in the shipboard laundry, the controls used to operate them, and the safety precautions applicable to their use.

6-36. What part of the press is used as your worktable when you press uniform items?

1. The rigid metal frame
2. The buck
3. The press head
4. The manifold

6-37. What type of press would be best suited for pressing flatwork when a flatwork ironer is not available?

1. A taper press
2. A triple head press
3. A sleeve press
4. A rectangular press

6-38. What is/are the purpose(s) of using the spray gun with the laundry press to press uniform articles?

1. To keep the laundry press pad and cover cool
2. To prevent articles from sticking to the laundry press head
3. To compensate for moisture loss while the other parts of the uniform are pressed
4. All of the above

6-39. What control button(s) must you depress to make the laundry press head lower onto the items you are pressing?

1. Both red buttons
2. Both green buttons
3. One of the green buttons only
4. One green button and one red button

6-40. How do you release the laundry press head from the item being pressed?

1. By pushing one or both of the green buttons
2. By pushing both red buttons
3. By pushing one of the red buttons
4. By pushing one red button and one green button

6-41. What procedure should you use to check the head pressure on the laundry press?

1. Insert a bedding sheet on the press, leaving a portion of it exposed, and try to pull it out after the press head is closed
2. Place a piece of paper under the press head, leaving a portion of it exposed, and try to pull it out after the press head is closed
3. Place a piece of cardboard under the press head, leaving a portion of it exposed, and try to pull it out after the press head is closed
4. Roll a bedding sheet up into a round cylinder and try to close the press head on it

6-42. What is the correct procedure for heating the laundry press head?

1. Turn the steam valve on all the way and check the press head in 20 minutes
2. Open the steam valve gradually for 2 minutes and then open it completely
3. Turn the steam valve partially open for 20 minutes and then open it all the way
4. Gradually open the steam valve for 5 minutes and then open it completely

6-43. When you are pressing under normal conditions, how long should you keep the press head down on clothing articles?

1. 15 seconds
2. 30 seconds
3. 45 seconds
4. 60 seconds

6-44. What safety feature on the laundry press prevents you from getting your hand caught under the press head?

1. You must press both green buttons to lower the press head
2. There is an emergency release button by your foot
3. You must press both red buttons to lower the press head
4. There is a antilocking device located in the press head adjustment

● In answering question 6-45, refer to the following paragraph.

SH3 Brown and SH3 Lewis are working in the ship's laundry pressing khaki shirts and trousers. They are both working at the same three press operator station because all the other operator stations are being used. Petty Officer Lewis is pressing khaki trousers and Petty Officer Brown is pressing khaki shirts. Petty Officer Lewis is having difficulty with the trousers because they keep slipping off the press. To eliminate this problem, Petty Officer Lewis plugs one of the red buttons so it is always in the DOWN position. This allows him to hold the trousers steady with one hand to prevent them from slipping and at the same time use his other hand to press the other red button. Petty Officer Brown does not have this problem pressing the shirts because one of the red buttons on the press he is working on is already stuck and inoperative. SH1 Moore walks through the ship's laundry making rounds, sees what is going on, and stops both of them from working.

6-45. The reason SH1 Moore stopped both SH3 Brown and SH3 Lewis from working was because they were violating some of the rules of safety while using the laundry press. How many safety precautions did SH3 Brown and SH3 Lewis violate?

1. Five
2. Two
3. Three
4. Four

6-46. The press head should lower and lock on a thick object if it is adjusted properly.

1. True
2. False

Learning Objective: Determine the procedures for pressing various uniform articles in the ship's laundry.

6-47. When determining the sequence in which you press a uniform article, you should consider which of the following factors?

1. The best sequence of lays to make the job quicker and easier
2. The fewest amount of lays to do the uniform article
3. The portion of the uniform article you should press last to prevent damage to the rest of the finish
4. All of the above

A. Back left
B. Left shoulder
C. Collar
D. Yoke
E. Right shoulder

Figure 6A

● IN ANSWERING QUESTION 6-48, REFER TO FIGURE 6A.

6-48. Figure 6A lists the first five lays ordinarily used in pressing shirts, but not necessarily in the order given. Select the arrangement that lists the sequence in which lays are performed when pressing a shirt?

1. A, E, B, D, C
2. C, B, D, E, A
3. C, E, B, D, A
4. D, E, B, C, A

6-49. What is the first step in pressing a pair of trousers?

1. Straighten the pockets out
2. Straighten the waistband
3. Pull the trouser legs taut
4. Match the inseams

6-50. What is the primary purpose of using a hanger equipped with a trouser guard to hang trousers after pressing them?

1. To protect them from fabric damage
2. To prevent them from slipping off
3. To prevent lines from setting in on the legs of the trousers
4. To prevent the trouser legs from sticking together

6-51. Which of the following items must be pressed on a covered head press?

1. Khaki pants
2. Dungaree shirts
3. Wool worsted ties
4. Cotton handkerchiefs

6-52. What is the primary difference between pressing khaki trousers and dungaree trousers?

1. Dungaree trouser pockets do not need to be straightened; khaki pockets do
2. The top portion of dungaree trousers does not require pressing; in khaki trousers it does
3. Inseams on dungaree pants must be matched separately; khaki inseams do not
4. Dungaree trouser legs are pressed inside out with the creases going inward on the seam instead of the middle of the leg; khaki trouser legs are pressed with the crease in the middle of the leg

Learning Objective: Identify the procedures used by laundry personnel when performing general maintenance on laundry equipment in the ship's laundry.

6-53. Which of the following personnel may perform mechanical and/or electrical maintenance on the washer extractor?

1. The damage control petty officer of supply
2. The laundry supervisor
3. Qualified shipboard maintenance personnel
4. All of the above

6-54. Which of the following conditions may occur if lint deposits are allowed to accumulate on the air passages and heat chambers on the tumbler dryer?

1. Spontaneous heating
2. Restricted airflow
3. Clothes not drying properly
4. All of the above

6-55. The flatwork ironer should be waxed for which of the following purposes?

1. To prolong ribbon life
2. To prevent linen from sticking to the heated cylinder
3. To give a smooth finish to flatwork
4. All of the above

6-56. How often should you wax the flatwork ironer?

1. Twice weekly
2. Each morning
3. After 6 to 8 hours of work
4. Both 2 and 3 above

6-57. What is the first action laundry personnel should take after new ribbons have been installed on the flatwork ironer?

1. Heat the flatwork ironer up and check for tension
2. Run the flatwork ironer with the compression roll engaged for a period of 20 to 30 minutes
3. Wax the ironer
4. Adjust the compression roll so it engages properly and seats smoothly

6-58. When, if ever, should the friction material on the return ribbon drive roll be replaced?

1. Monthly
2. When it becomes smooth and worn
3. When the return ribbons move faster than the heated cylinder and the padded compression roll
4. Never

6-59. What action should you take when the flatwork ironer padding is changed and one end of the ironer is thicker than the other end?

1. Pass some heavy towels or other thick material through the thicker end of the flatwork ironer
2. Remove the padding and replace according to manufacturer's instructions
3. Engage the compression roll, turn the steam on, and run the flatwork ironer for approximately 15 minutes
4. With the compression roll engaged, run the flatwork ironer for about 20 minutes without steam

6-60. What is the ideal steam pressure for operating conventional presses?

1. 75 psi
2. 80 psi
3. 90 psi
4. 100 psi

6-61. What general maintenance should you perform on the laundry press every morning before you begin to press uniform items?

1. Clean the press
2. Change the pad and covers
3. Do a hydrostatic test
4. Wax the press head

6-62. What is the primary purpose of using press head mitts when you clean the press heads?

1. To scrub the dirt off the press head
2. To apply press head cleaner
3. To protect your hands from being burned by the press head
4. To apply press head wax

MATERIALS USED TO PAD THE BUCK OF THE LAUNDRY PRESS

A. Flannel pads
B. Steel wool pad
C. Press cover

Figure 6B

● IN ANSWERING QUESTION 6-63, REFER TO FIGURE 6B WHICH LISTS THE MATERIALS THAT ARE USED TO PAD THE BUCK OF A LAUNDRY PRESS, BUT NOT NECESSARILY IN THE ORDER GIVEN.

6-63. In what sequence should the materials be applied to the buck of the press?

1. A, B, C
2. B, A, C
3. B, C, A
4. C, B, A

6-64. How do you change the flannel layers on the press?

1. Change both the top and bottom layers weekly
2. Change one layer a week putting the new layer on the top
3. Change one layer a week putting the new layer on the bottom
4. Change one layer every 2 weeks putting the new layer on the bottom

6-65. How often should the steel wool pad be changed?

1. Annually
2. Every 6 months
3. Monthly
4. Weekly

Learning Objective: Determine the procedures required to issue and assemble finished laundry.

6-66. Where should the individual laundry ticket, NAVSUP Form 233, be placed before the individual lots are received into the assembly area?

1. In the press deck log
2. Inside the appropriate net bag
3. In the assembly bin in alphabetical order
4. In a drawer in the assembly area for safekeeping until the individual bags are received

6-67. Where should the individual laundry list, NAVSUP Form 233, be placed after articles from an individual lot have been checked in and verified after being cleaned and pressed?

1. Attached to each individual laundry bag with a laundry pin
2. Attached to one of the khaki shirts or trousers with a staple gun
3. Retained in the ship's laundry for record
4. Attached to the suit wrapper covering the press work belonging to that lot with glue or tape

6-68. An individual lot of laundry should be checked for which of the following conditions before it is returned to the owner?

1. Cleanliness
2. Stains and blemishes
3. Proper creasing and smoothness
4. All of the above

6-69. When clean bulk laundry is picked up by the responsible division, which of the following procedures should the laundry person follow?

1. Weigh the bulk laundry and note the weight in the bulk work log
2. Sign the bulk work log for issuing the laundry
3. Have the person receiving the laundry sign the bulk work log
4. All of the above

6-70. A bag of laundry weighing 50 pounds is finished and sent back to the divisional compartment weighing 49 pounds. What does this weight loss indicate when there are complaints of lost clothing?

1. The complainers are merely troublemakers
2. The loss probably is occurring in the living compartment
3. It is a mistake because the laundry never loses clothing
4. The laundry put 1 pound of clothing in the wrong bag

6-71. When should finished laundry be issued?

1. According to the schedule
2. When completed
3. After normal working hours
4. Early in the morning

6-72. What is the primary purpose of obtaining the proper signatures and making sure the count reflected on the NAVSUP Form 233 is correct before issuing the laundry?

1. To establish accurate records for future reference
2. To establish validity in laundry claims
3. To establish the weekly summary sheet
4. To establish a report required at the end of the accounting period

6-73. When should you reprocess articles that have been returned to the ship's laundry because they were unsatisfactory?

1. The next time lots are delivered to the laundry
2. When the laundry finds time to reprocess them
3. Immediately so that delivery will not be delayed
4. After the day's workload has been completed

Assignment 7

Textbook Assignment: "The Dry-Cleaning Operation," chapter 6, pages 6-1 through 6-30.

Learning Objective: Identify the organization of the dry-cleaning plant and the factors relating to the scheduling of operations.

7-1. The number of personnel assigned to the dry-cleaning plant is based on which of the following factors?

1. The number of enlisted personnel aboard ship
2. The amount of dry cleaning to be handled and the amount of equipment
3. The number of officers and chief petty officers assigned to the ship
4. All of the above

7-2. The final approval of what individual is required before any work is authorized in the dry-cleaning plant after normal working hours?

1. The dry-cleaning supervisor
2. The ship's store officer
3. The leading Ship's Serviceman
4. The duty supply officer

7-3. Aboard ship, the dry-cleaning plant should be able to process how many pounds of dry cleaning per person per week?

1. 1 pound
2. 6 pounds
3. 12 pounds
4. 24 pounds

7-4. What is the purpose of scheduling work by material groups in the dry-cleaning plant?

1. To save on drying time
2. To set up uniform schedules more easily
3. To make sure similar items are cleaned together
4. To make the job of the divisional laundry petty officer easier

7-5. Under normal conditions, how long should it take to dry-clean one load of articles at rated capacity?

1. 30 minutes
2. 50 minutes
3. 60 minutes
4. 90 minutes

Learning Objective: Identify the procedures for receiving and identifying lots in the dry-cleaning operation.

7-6. Work received in the dry-cleaning plant should be completed within what maximum time period?

1. 1 day
2. 2 days
3. 3 days
4. 1 week

7-7. What is the maximum amount of work you should receive in the dry-cleaning plant daily when operating under normal conditions?

1. The amount of work that can be completed in 1 workday
2. 2 days' work
3. 3 days' work
4. 1 week's work

7-8. To eliminate delays in processing dry-cleaning articles, what action is required of each division in regard to the delivery of dry-cleaning articles?

1. Set a required delivery time
2. Have the dry cleaning delivered in separate laundry net bags
3. Have divisional laundry delivered twice daily
4. Have divisional laundry delivered every day

7-9. What is a difference between methods A and B for receiving and identifying dry-cleaning articles?

1. The customer fills out the dry-cleaning list in A; the receiving clerk in B
2. The receiving clerk tags the articles in B; no tagging is done in A
3. The receiving clerk fills out the dry-cleaning list in B; the customer in A
4. The customer tags each article in A; no tagging is done in B

7-10. To help save time and work and prevent the possibility of misplacing items of clothing, which of the following actions should dry-cleaning personnel take?

1. Train each other in only one phase of the dry-cleaning operation
2. Receive and issue dry-cleaning articles in a space other than the assembly room
3. Use a dry-cleaning list
4. Process one individual's bundle at a time

7-11. Occasionally, uniform accessories are left on the dry-cleaning articles sent to the dry-cleaning plant. During what portion of the dry-cleaning process will these accessories be removed?

1. Classification
2. Receipt
3. Inspection
4. Marking

7-12. What should be done with foreign objects found in the pockets of articles sent for dry-cleaning?

1. Give them to the immediate supervisor
2. Notify the customer to pick them up
3. Put them in an envelope and staple the envelope to the dry-cleaning list
4. Remove them but put then back in the pocket before returning the uniform article to the customer

7-13. When classifying articles for dry cleaning, which of the following factors should you give the most consideration?

1. The age of the article
2. The weight of the material
3. The color and lint quality
4. The size of the article

7-14. How many pounds of dry-cleaning work should be cleaned for each gallon of dry-cleaning solvent?

1. 200 pounds
2. 350 pounds
3. 400 pounds
4. 450 pounds

Learning Objective: Identify the procedures for safe use and handling of dry-cleaning solvent.

7-15. The safe handling and use of dry-cleaning solvents are described in which of the following instructions?

1. BUMEDINST 6260.12A
2. NAVRESSOINST 4067.4
3. OPNAVINST 3120.32
4. OPNAVINST 5100.20

7-16. In using or handling dry-cleaning solvent, which of the following actions would be considered hazardous?

1. Not inhaling the solvent vapors
2. Stowing the solvent in a well-ventilated space
3. Using solvent in a space with no ventilation
4. Keeping exhaust vents in the dry-cleaning plant clean and free of dirt and lint

7-17. Smoking is permitted in areas where dry-cleaning solvent is being handled.

1. True
2. False

7-18. When a solvent spill occurs in the dry-cleaning plant, what actions should you take to ventilate the space?

1. Close all doors, turn on the supply vent, and secure the exhaust vent
2. Open all doors and secure both the supply and exhaust vents
3. Close all doors and turn on the supply fan
4. Open all doors and turn on the exhaust fan

7-19. Small solvent spills should be cleaned up using which of the following materials?

1. A rag
2. A paper towel
3. A sorbent
4. A mop

7-20. Once a solvent spill is cleaned up, the solvent-laden material will be placed in a closed container and the container disposed of in which of the following ways?

1. Dumped in the dumpster on the pier
2. Disposed of at sea
3. Released to a licensed reclaimer
4. Flushed down the commode

7-21. To eliminate hazards associated with the use of dry-cleaning solvent, which of the following precautions should you take in the dry-cleaning plant?

1. Use the buddy system
2. Operate and maintain dry-cleaning equipment properly
3. Guard against the hazardous properties of the solvent
4. All of the above

IN ANSWERING QUESTIONS 7-22 THROUGH 7-24, SELECT FROM COLUMN B THE MOST APPROPRIATE ACTION TO TAKE FOR THE HEALTH HAZARD ENCOUNTERED IN COLUMN A.

	A. HAZARDS	B. ACTIONS
7-22.	Inhaling the solvent	1. Flush or rinse with water and obtain medical care
7-23.	Contacting the skin with the solvent liquid	2. Wash affected area with plenty of soap and water
7-24.	Splashing solvent liquid into the eyes	3. Remove person from contaminated area to fresh air and start artificial respiration if person stops breathing

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7-25. Dry-cleaning solvents should not be stowed near strong alkalies.

1. True
2. False

7-26. Dry-cleaning personnel should receive a physical examination on a schedule determined by what individual?

1. The supply officer
2. The medical officer
3. The ship's store officer
4. The commanding officer

Learning Objective: Identify the general operating procedures for the dry-cleaning machine.

7-27. What is the primary purpose of the distilling unit on the dry-cleaning machine?

1. Cleans the inside of the machine
2. Purifies the solvent
3. Cleans the load of articles
4. Makes solvent

7-28. During what phase of the dry-cleaning cycle is the solvent shut off?

1. At the end of the wash/rinse cycle
2. After the clothes are extracted
3. At the end of the drying cycle
4. After the washer drum fills up with solvent

7-29. What is the desired temperature setting for the dry-cleaning machine?

1. 170°F to 180°F
2. 160°F to 170°F
3. 150°F to 160°F
4. 140°F to 150°F

7-30. What part of the dry-cleaning cycle removes any remaining odors or solvent vapor that may still be in the clothing?

1. Rinse
2. Drying
3. Extract
4. Deodorizing

7-31. What factor determines the length of time the drying cycle will last?

1. The amount of solvent left on the clothing
2. The temperature setting
3. The type of clothing
4. The amount of clothes

Learning Objective: Identify the general operating procedures for the dry-cleaning press.

7-32. Why does the head of the dry-cleaning press have a covering on it?

1. To obtain a smoother pressing job
2. To protect the metal surface of the press head
3. To prevent a gloss finish on pressed articles
4. To protect the buck from scorching

7-33. What action must the operator of the dry-cleaning press perform to supply steam and vacuum to the buck?

1. Push both table-mounted buttons
2. Depress both foot pedals
3. Press the steam handle on the press head in the DOWN position
4. Open the steam vacuum supply line

7-34. The operator of the dry-cleaning press must use both hands to perform which of the following actions?

1. Provide steam to the press head
2. Provide vacuum to the buck
3. Open the press head
4. Close the press head

7-35. When pressing the seat of trousers, where should you place the back seam?

1. Near the front of the buck
2. In the center of the buck
3. Toward the rear of the buck
4. Drawn over the large end of the buck

7-36. When pressing the front portion of the leg, you must make sure the trousers are arranged in what position?

1. The crotch is at the small end of the buck
2. The leg is lying well to the front of the buck
3. The outside of the leg is facing upward
4. The side seams are lying one on the other

7-37. What procedure should you use to press the collar of an officer's uniform coat?

1. Press the inside of the collar first and then the outside
2. press the sides of the collar on the large end of the buck and the center of the collar on the small end
3. Press the inside of the collar center only; leave the ends alone
4. Press each side of the collar with the lapel and press the center separately

7-38. When pressing the right side of the coat back, you should place the bottom seam at least how many inches from the front edge of the buck?

1. 1 inch
2. 2 inches
3. 3 inches
4. 4 inches

7-39. The enlisted men's jumper is always pressed inside out.

1. True
2. False

Learning Objective: Identify the general procedures for operating and using the steam air finisher and automatic pants topper.

7-40. The steam air finisher is used to finish which of the following items?

1. Uniform coats
2. Shirts
3. Trousers
4. Linens

7-41. What control on the steam air finisher is used to control the amount of time air is blown on the clothing article in the manual mode?

1. The air control timer
2. The steam toggle switch
3. The air toggle switch
4. The steam control timer

7-42. What control on the steam air finisher is used to control the amount of time steam is blown through the clothing in the automatic mode?

1. The steam control timer
2. The steam toggle switch
3. The neon signal indicator
4. The air control timer

7-43. In the automatic mode, the air timer on the steam air finisher should be set for what amount of time for most clothing items?

1. 10 seconds
2. 12 seconds
3. 15 seconds
4. 20 seconds

7-44. In the automatic mode, what will occur if the steam or air timer on the steam air finisher is set for 0 or 30?

1. The steam air finisher will not operate
2. The article will be finished slightly wet
3. The article may become damaged
4. The alarm will sound to alert the user to change the timer

7-45. The steam air finisher will stop during the automatic cycle any time the operator steps on the foot switch.

1. True
2. False

7-46. The automatic pants topper is used to finish which of the following items?

1. Trouser legs
2. Shirts
3. Peacoats
4. Trouser tops

7-47. The automatic pants topper uses which of the following pressing aids to press items?

1. Water
2. Air
3. Steam
4. Both 2 and 3 above

Learning Objective: Determine the general procedures for maintaining equipment in the dry-cleaning plant.

7-48. To prevent the buildup of dust and dirt on the dry-cleaning machine, what maintenance action should you take?

1. Apply a light coat of wax to the machine
2. Use a synthetic soap when washing the machine
3. Apply a light coat of silicone to the machine
4. Use a safe solvent to wash the machine

7-49. How often should the foam filter on the dry-cleaning machine be cleaned?

1. After each wash
2. Daily
3. Weekly
4. Monthly

7-50. What is the proper way to clean the foam filter on the dry-cleaning machine?

1. Brush off the excess lint on the foam material, wash with an all-purpose detergent, and squeeze dry
2. Brush off the excess lint from the foam material, wash with clear water, and squeeze dry
3. Vacuum off all excess lint and replace
4. Vacuum off all excess lint, wash with a cleaning solvent, and squeeze dry

7-51. How often should the pump lint strainer be cleaned on the dry-cleaning machine?

1. Weekly
2. Twice monthly
3. Monthly
4. Quarterly

7-52. How many flannel pads should be used to pad the dry-cleaning press?

1. One
2. Two
3. Three
4. Four

Learning Objective: Identify the characteristics of spots and stains, the job of the spotter, and the tools used to remove spots and stains.

7-53. What is the difference between a spot and a stain?

1. A stain cannot be removed without damage to the fabric; a spot can
2. A stain must be treated before the clothing is cleaned; a spot need not be
3. A stain can be removed without additional treatment; a spot cannot
4. A stain is the result of dry cleaning before spot treatment; a spot is the result of food, blood, grease, and so on

7-54. What should the spotter do if he or she is not certain whether a spot or stain can be removed?

1. Inform the owner it cannot be removed
2. Send the article back to the owner and advise the owner to file a laundry claim
3. Contact the supervisor and obtain advice
4. Return the article to prevent further damage

7-55. The owner of spotted clothing can best assist the dry-cleaning plant by identifying the spot in what manner?

1. Drawing a chalk circle around the spot on the clothing
2. Washing the clothing before it is sent to the dry-cleaning plant
3. Tagging the clothing with a label bearing the word SPOT
4. Attaching a note to the clothing telling the cause of the spot

7-56. The screened area of the main spotting board is used for which of the following purposes?

1. Tamping
2. Applying spotting agents
3. Flushing
4. All of the above

7-57. How often should the screened area on the main spotting board be taken apart and cleaned?

1. Daily
2. Twice weekly
3. Weekly
4. Monthly

7-58. What is the spatula used for?

1. To manipulate chemicals
2. To soften the stain
3. To help the chemical penetrate the stain
4. Each of the above

7-59. What spotting equipment has a flushing and tamping area like the main spotting board and is used when working out stains on sleeves and other small areas?

1. The sleeveboard
2. The garment tray
3. The chemical tray
4. The blotter

7-60. What material is used to pick up the remaining moisture around a spot that was removed?

I. Cheesecloth
2. Toweling
3. Blotter
4. Chamois

7-61. What material is used by the spotter to test the resistance of dyes in fabrics to the chemicals on the spotting agents?

1. Cheesecloth
2. Toweling
3. Blotter
4. Chamois

Learning Objective: Identify spots and stains and explain the procedures used for removing them.

7-62. The location of the spot or stain may be beneficial to the spotter in identifying what caused it.

1. True
2. False

7-63. What is the purpose of performing a solvent test?

1. To determine if a spot or stain should be removed by water or dry solvent
2. To determine what type of spot is on the clothing
3. To test the resistance of dyes on the clothing
4. To soften the spot or stain for easier removal

IN ANSWERING QUESTIONS 7-64 THROUGH 7-67, SELECT FROM COLUMN B THE SPOTTING METHOD DESCRIBED IN COLUMN A.

	A. DESCRIPTIONS	B. METHODS
7-64.	Two or more substances combined to produce one or more new substances	1. Emulsification 2. Chemical action 3. Solution
7-65.	The adding of substances to help the solvent in the removal of stains	4. Mechanical action
7-66.	The mixing of two substances, one of which is the solvent	
7-67.	The use of a brush, spatula, and so forth, to work a cleansing agent into the fabric to remove a stain	

SPOTTING CHEMICALS

A. Oxalic acid
B. Sodium chloride
C. Acetone
D. Ammonia

Figure 7A

● IN ANSWERING QUESTIONS 7-68 THROUGH 7-71, REFER TO FIGURE 7A, WHICH LISTS CHEMICALS USED TO REMOVE SPOTS AND STAINS.

7-68. What chemical is useful in removing rust?

1. A
2. B
3. C
4. D

7-69. What chemical should the spotter use to remove fruit stains?

1. A
2. B
3. C
4. D

7-70. When the spotter has removed a stain with hydrochloric acid, what chemical should be used to neutralize the action of the acid?

1. A
2. B
3. C
4. D

7-71. Toremove stains resulting from resins, paints, or nail polish, what chemical is used?

1. A
2. B
3. C
4. D

7-72. Before using a solvent to treat a spot or stain, you should first determine whether the solvent will harm the article by testing it in a hidden portion of the clothing.

1. True
2. False

7-73. When using chemical agents, you should remove the agent immediately after applying it to the clothing.

1. True
2. False

7-74. What part of the spatula should be used by the spotter in removing spots?

1. The front end
2. The rounded end
3. The flat center
4. The tip of the point

7-75. A spatula may NOT be safely used on which of the following materials?

1. Synthetic
2. Cotton
3. Linen
4. Wool