MIL-STD-797B(SHIPS)
25 April 1969
SUPERSEDING
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30 November 1966
(See 12.2)

MILITARY STANDARD

DAMAGE CONTROL BOOKS FOR SUBMARINES PREPARATION AND REVISION OF

FSC TMSS

DEPARTMENT OF THE NAVY

NAVAL SHIP ENGINEERING CENTER

CENTER BUILDING

PRINCE GEORGE'S CENTER

HYATTSVILLE, MARYLAND 20782

Damage Control Books for Submarines, Preparation
and Revision of
MIL-STD-797B(SHIPS)

1. This military standard has been approved by the Naval Ship Engineering Center and is published to establish the requirements for damage control books for submarines.

2. Use of this standard by activities under the cognizance of the Naval Ship Engineering Center shall be mandatory, effective on date of issue.

3. Recommended corrections, additions, or deletions should be addressed to the Commander, Naval Ship Engineering Center, Department of the Navy, Center Building, Prince George's Center, Hyattsville, Maryland 20782.

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1. SCOPE

1.1 This standard covers the requirements for the preparation, reproduction, distribution and revision of damage control books for submarines (all types and sizes, including both conventional and nuclear powered).

2. REFERENCED DOCUMENTS

2.1 The issues of the following documents in effect on date of invitation for bids form a part of this standard to the extent specified herein.

GOVERNMENTAL

SPECIFICATIONS
L-F-340 - Film, Sensitized, Wash-Off Process Diazotype, Moist and Dry Process; Brownprint Roll and Sheet.

STANDARDS
MIL-STD-15-2 - Electrical Wiring Equipment Symbols for Ships' Plans, Part 2.
MIL-STD-15-3 - Electrical Wiring Symbols for Architectural and Electrical Layout Drawings, Part 3.
MIL-STD-17B-1 - Mechanical Symbols (Other than Aeronautical, Aerospacecraft and Spacecraft Use), Part 1.

PUBLICATIONS
NAVSHIPS 0901-988-0010 - Naval Ships Technical Manual, Section I - Damage Control.
NAVSHIPS 0901-988-0020 - Naval Ships Technical Manual, Section II - Damage Control
NAVSHIPS 0901-988-0030 - Naval Ships Technical Manual, Section III - Damage Control.

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

NONGOVERNMENTAL

UNITED STATES OF AMERICA STANDARDS INSTITUTE (USAS)
Y32.2-1967 - Graphic Symbols for Electrical and Electronics Diagrams.

(Application for copies should be addressed to the United States of America Standards Institute, 10 East 40th Street, New York, N.Y. 10016.)

POST OFFICE DEPARTMENT
Postal Manual Regulations.

(Application for copies should be addressed to the Post Office Department, Washington, D.C.)

3. DEFINITIONS

3.1 Apron. - The blank, page size left hand flap along the binding edge of a plate; it enables the reader to view the entire plate when it is unfolded with the book closed.

3.2 Back matter. - Pages following the main text of the book. This includes the appendix (ship characteristics), references, plates and addendum.

3.3 Binder. - The cover of the book, and associated hardware.

3.4 Classbook. - The book prepared by the lead activity for the first ship of a class.

3.5 Direct reading. - Direct reading applies to reading from left to right on the emulsion side of a plastic positive. Plastic positives shall always be direct reading.

3.6 Drafting plastic sheet. - An unsensitized plastic sheet which is receptive to ink. This material is used for drafting.

3.7 Drawings. - The term will apply to all single page book size illustrations. This includes graphs and figures.

3.8 Final book. - This applies to the final edition of the damage control book issued to a ship following construction, or to the final revised edition, issued to a ship following overhaul. Characteristic of final editions is the absence of an addendum.

3.9 Front matter. - Generally, pages preceding the main text of the publication. This includes the title page, record of page revision dates, table of contents, ships responsibility for revising and handling damage control book and preface. Individual sections also have front matter, such as table of contents and list of drawings, plates and tables.

3.10 Graph. - A graph is a drawing on a grid.

3.11 Group master copy plastic positives. - A set of contact plastic positives from the master copy plastic positives for each following yard and succeeding ships of lead activity.

3.12 Illustrations. - The term applies, in general, to all plates and drawings.

3.13 Klrtype. - A special name adopted for printed material having names, numbers, and symbols on acetate sheets. The sheets shall be backed by an adhesive that will not be affected by heat, will not deteriorate with age, and will permit easy removal of the images.

3.14 Master copy plastic positives. - A set of plastic positives for the first ship to be delivered that is intended to be used for the class.

3.15 Pica. - A printer's measure as used herein to specify the size of a typewritten letter.

3.16 Plastic negative sheet. - A sensitized plastic sheet which is exposed by contact with a positive. This material is used for making all duplicate positives. The image on the emulsion side is reverse reading.

3.17 Plastic positive sheet. - The original matter with a clear background on a sheet that was exposed by contact with a negative. The image on the emulsion side is direct reading. The material is used for all final illustrations.

3.18 Plates. - Plates are foldout illustrations whose reproduction requires a page wider than normal trim width and whose height, including border spaces, equals the trim height of the publication. It is always reproduced one side as a right hand page. It is folded so that the plate number, title, and classification (if applicable) appear on the last fold so that they are visible to the reader without unfolding.

3.19 Preliminary book. - An incomplete edition. A preliminary edition includes an addendum indicating the nature of the information missing from that edition. There are 3 types.

(a) Preliminary type A - unapproved class damage control book. - The damage control book prepared by the lead activity or building yard for the first ship of a class.
(b) Preliminary type B - approved class damage control book. - The class damage control book corrected in accordance with the approval letter from Naval Ship Systems Command.
(c) Preliminary type C - approved individual ship damage control book. - The approved class damage control book made applicable to and reflecting the characteristics of an individual ship of the class.

3.20 Reverse reading. - Reverse reading applies to from right to left, as observed in a mirror, on the emulsion side of a plastic negative. Plastic negatives shall always be reverse reading.

3.21 Running head. - The running head shall contain the section and title in upper right hand corner of each page above margin line.

3.22 Sensitized plastic sheet. - A plastic sheet which is coated with an emulsion sensitive to light.

3.23 Set of plastic plates. - A set of plastics for all required plates.

3.24 Ships master copy book. - The copy of the damage control book, set aside by the Commanding Officer, that shall be kept up-to-date for all ship changes (by the ships force, or at Navy bases, tenders, or other shipyards) effected between overhauls, and subsequently revised by the overhauling activity.

3.25 Ships master copy plastics. - The plastic positive of the damage control plates for an individual ship.

3.26 Single column. - The arrangement of one vertical row of lines of type on a page. The damage control book shall be single-column, as opposed to double column (two vertical series of lines side by side separated by a vertical space in the center).

3.27 Supervisor of Shipbuilding. - The term "Supervisor of Shipbuilding" as used in this standard shall be understood to apply to the Government activity responsible for the building, conversion or overhaul of a ship, such as Supervisor of Shipbuilding or Commander of a Naval shipyard.

3.28 Tab sheet. - A ledger sheet used as a section or part separator. These sheets shall be made with tab extensions containing the section number or printed matter arranged in banks. The sheet for section number shall be white, and for the part separators it shall be yellow.

3.29 Trim size. - The final sheet size of the publication; plates are larger than trim size, but shall be folded to trim size.

3.30 Turn page. - A page typed so that the book must be turned clockwise 90 degrees to read. Turn pages shall be used only when tabular matter or illustrations exceed normal page width but still do not warrant the use of a foldout.

3.31 Type book. - The "type book" is a damage control book for use as guidance in preparing the text, tables and illustrations.

4. GENERAL REQUIREMENTS

4.1 Lead activity (building yard). - When two or more yards are building ships from one set of working plans, one yard shall be designated as the lead activity. It is the responsibility of the lead activity to furnish each following yard the following material:

(a) One set of group master copy plastic positives.
(b) One set of master copy class offset text.
(c) Bound books for distribution to the ships and other activities in accordance with figure 1.

4.1.1 Building yard. - When a yard (not the following yard) is building only one ship the requirements for class material is waived and the following applies:

(a) 4.3.1 and 4.3.2 is applicable to the individual ship damage control book.
(b) 7.1.1 applies to the individual ship damage control book.
(c) 7.1.2 applies to the updated individual ship damage control book.

4.2 Damage control book. - The damage control book shall be a single-volume publication. It shall consist of appropriate text, tables, drawings and illustrations.

4.2.1 Damage control book components. - A set of damage control book components shall consist of the following:

(a) Damage control plastic positives (ships master copy).
(b) Reproduced drawings.
(c) Text and tables.
(d) Binders (for reproduced illustrations, text and tables).

(Type damage control book may be obtained from the Supervisor of Shipbuilding of the building yard, or Lead activity, as applicable.)

4.3 Approval. -

4.3.1 Preliminary type A - unapproved class damage control book. - Six months prior to delivery of the ship the lead activity or building yard shall submit to the Naval Ship Systems Command, Attn: PMS 81, Washington, D.C. 20360, 15 copies for review and approval. Copies to be complete to the maximum extent practical, including an addendum section and indicating information that is missing. Concurrently, a copy of the book shall be forwarded to COMSUBLANT and COMSUBPAC.

4.3.2 Preliminary type B and C - approved class and individual ship damage control books. - Further approval by Supervisor of Shipbuilding for these books are only required for the first book prepared by a building yard, and for major revision affecting addendum, format or new requirement.

4.4 Illustrations. -

4.4.1 Plastic material sheets for illustrations. - Illustrations shall be prepared on plastic sheets. All of the material, for the positives and negatives, shall be in accordance with the following:

(a) Sensitized plastic sheet type I, subtype A or B, class 2, style 1A, 0.007 inch thick of L-F-340.

4.4.2 Size of plates. - The plates shall be drawn so that they fit on a sheet 10-1/2 inches high without any photo-reduction. The width shall be kept to a minimum, consistent with readability, and shall consist of a left-hand blank apron 8 inches wide plus the diagram portion consisting of foldouts in multiples of 6-1/2 inches. In no case shall the width of the apron, including the plate portion, exceed 52 inches.

4.4.3 Preparing the plastic for drafting. - Before drawing on plastic, the surface shall be cleaned with Freon TF or other solvent, and then rubbed with pounce. The entire plastic shall be covered with a sheet of cellophane to keep the surface clean.

4.4.4 Ink. - Only black ink, that will adhere to the plastics, will not flake off, and will reproduce a good image shall be used.

4.4.5 Klrtype symbols. - Symbols for all plates shall be Klrtype. The Commander, Philadelphia Naval Shipyard (code 243), will furnish a sample sheet of all symbols upon request.

4.4.6 Klrtype (letters, words and numbers) (by printing process). - All letters, words and numbers on plastics shall be Klrtype. The size and type of Klrtype shall be as shown in table I and as follows:

(a) NG - News gothic.
(b) MG - Monotone gothic.
(c) LG - Lining gothic.

Table I - Lettering and numbers, size and type.

Legend	Size and type
Upper title block:	10MG
"Confidential" (Omit if unclassified)	24LG
Ship Number	10MG
Ship Class	10MG
"DAMAGE CONTROL PLATE"	36LG
Plate number	14MG
Plate name	
Lower title block:	
"NAVAL SHIP ENGINEERING CENTER"	12MG
Date	8NG
"OVERHAUL ACTIVITY CORRECT MASTER PLASTICS"	8NG
Frame numbers	8NG
Compartment names	6NG or 8NG
Compartment numbers	6NG
Fitting numbers	6NG or 8NG
"KEY"	12MG
Description of symbols	6NG
"NOTE"	12MG
Description	6NG
Capacities (moment diagram)	8NG
Miscellaneous	1/

1/ Lettering, numbers, etc., not covered above shall be of such size that they are legible and consistent with space available on illustrations.

4.4.7 Klrtype (alternate to printing process). - The following Varityped fonts and headlines typemasters may be used for the corresponding size and style of printing process:

6NG - Varityper font - 2000-6C - Copper plate Gothic
8NG - Varityper font - 660-8C - Sans Serif Medium
10MG - Varityper font - 670-12A - Sans Serif Bold
12MG - Headliner typemaster - V12-121 - News Gothic
14MG - Headliner typemaster - V14-121 - News Gothic
18MG - Headliner typemaster - V18-121 - News Gothic
24LG - Headliner typemaster - V24-121 - News Gothic
36LG - Headliner typemaster - V36-121 - News Gothic

4.4.7.1 Equipment required. - The equipment required shall be as follows:

(a) Varityper model 704 or equivalent.
(b) Headliner model 360 or equivalent.
(c) Diazo machine - most yards have dry type ammonia developing machines in their blue print rooms.

4.4.7.2 Material required. - The material required shall be as follows:

(a) Cellulose acetate film, 1.5 mil (Lumarith P912A78)
(b) Diazo sensitized adhesive backed dryprint film 0.002 matte surface (Mylar) (Dietzgen GF247E-2-8-1/2 by 11 inches)
(c) 35 mm printing film adhesive backed or plain
(d) Varityper ribbon #1900
(e) Fonts for varityper
(f) Typemasters for headliner
(g) Headliner developing powder and hypo fixer
(h) Backing sheet Varityper paper 1111 or 1202.

4.4.7.3 Processing. - Figure 2 is the flow chart for preparation of Klrtype on Diazo film and 35 mm film.

4.4.8 Title and key. - Title block, key, symbols and other identification shall be provided on the right hand side of the plates. They shall be similar in location, format, and layout to those in the type book.

4.4.9 Overhaul record block. - An overhaul record block, as shown below, shall be provided on the plastic of each plate. It shall be located in the upper right hand, above the upper title block, close to, and inside of, the borderline.

SHIPYARD	REVISED TO SUIT OVERHAUL OF

OVERHAUL RECORD

4.4.10 Revision note. - The following revision note shall be shown in the lower right hand corner, and inside of borderline, of each plate plastic "OVERHAUL ACTIVITY CORRECT MASTER PLASTICS".

4.4.11 Security classification (illustrations). - Illustrations are either "unclassified" or "confidential". For illustrations that are classified "confidential", the word "CONFIDENTIAL" shall be shown as follows:

(a) For drawings:
  (1) In the upper part and lower part center of each plastic in the same locations as shown on figure 3.
(b) For all plates:
  (1) In the upper right hand corner, inside of border line, to the right of the overhaul block.
  (2) In the lower left hand corner, inside of border line.
  (3) On each plate plastic, outside of the cutting line.

4.4.12 Final "Ships Master Copy Plastics". - Upon completion of the work on the "Ships Master Copy Plastics", a new set of "Ships Master Copy Plastics" without Klrtype shall be prepared. Upon completion, the original plastics with Klrtype shall be destroyed. The final "Ships Master Copy Plastics" shall be legible and the symbols, letters and numbers shall conform with this standard.

4.5 Security classification. - Each damage control book, as it applies to a ship or group of ships, is considered as a unit for classification purposes. Damage control books are either unclassified or classified CONFIDENTIAL (DEFENSE INFORMATION). The following shall apply to classified damage control books:

(a) Text and tables shall be typed on sheets imprinted CONFIDENTIAL.
(b) Plastics and reproduced copies shall bear the word CONFIDENTIAL.
(c) The record of page revision dates shall be unclassified.

4.6 Navships number. - A Navships number shall be requested from the Naval Ship Systems Command for the damage control book of each ship.

5. DETAIL REQUIREMENTS

5.1 General. - The text, tables, plates and drawings shall be prepared as a cohesive unit. The text shall discuss damage control and associated problems peculiar to submarines. Tables shall be prepared to present factual data when this type of presentation is more efficient than a lengthy word-description. Plates and drawings shall be prepared to support the text and shall confine themselves to data not adequately covered elsewhere (training aid booklets, ship information books, general information books, etc.).

5.2 Contents. - Damage control books shall contain the following data, as applicable, arranged in an appropriate order to provide adequate information for an understanding of the ship's damage control capabilities:

Front Matter
Introduction
Damage control communications
Types and locations of damage control equipment
Loss of control surface response
Flooding
Fire
Electrical equipment casualties
Gas system casualties
Atmosphere contamination and ventilation
Casualties which restrict ships operational capabilities
Damage from external sources
Ship characteristics
Submarine/deep submergence rescue and salvage vehicle operations (DSRV/DSSV)
References

5.2.1 Front matter. - Standard front matter, listed in the normal sequence of appearance, shall be as specified in 5.2.1.1 through 5.2.1.8.

5.2.1.1 Title page. - The title page shall conform to figure 3.

5.2.1.2 Record of page revision dates. - The record of page revision dates page shall conform to figure 4 and shall be as follows:

(a) General. -
(1) A page without a backing page, such as 3-1 & 2, shall be indicated this way on the record page on an individual line.
(2) The number after the slant line indicates the page number backing the front of the sheet.
(b) When prepared for a class of ships. -
(1) First column headed "Page No." shall have each sheet, front and back page numbers, on an individual line; for example, 3-1 & 2, 3-3/3-4, 3-5/3-6, etc.
(2) Remaining columns left blank until preliminary class book is approved.
(3) Second column headed "Month and Year". Below this heading type "Approved for Class".
(4) Third column headed "Month and Year". In this column the letters "N", "R" and "V" shall be added, as noted on the form, opposite the retyped page numbers.
(5) The remaining columns to be headed by "Month and Year" with the letter "R", "N" and "V" added as required.
(c) When prepared for an individual ship. -
(1) Same as above with the following exception. Column 2 to be "Approved for Ship".

5.2.1.3 Table of contents. -

5.2.1.3.1 Book table of contents. - The table of contents shall conform to figure 5. It shall follow the title page of each section, appendix, and major division of the book.

5.2.1.3.2 Section table of contents. - The section table of contents shall conform to figure 6.

5.2.1.4 List of drawings. - An individual list of drawings shall appear with each section, appendix, and major division of the book.

5.2.1.5 List of plates. - An individual list of plates shall appear with each section, appendix, and major division of the book.

5.2.1.6 List of tables. - An individual list of tables shall appear with each section, appendix, and major division of the book.

5.2.1.7 Procedure for revising and handling damage control book. - This page shall conform to figure 7.

5.2.1.8 Preface. - This page shall conform to figure 8.

5.2.2 Introduction. - The introduction shall state the basic purpose, philosophy, and scope of the damage control book. In brief, it shall state that the book is not intended as a basic textbook to be used to qualify ship's personnel in the various aspects of damage control but, rather, presents facts which, when assimilated, will broaden its readers' understanding of the damage control capabilities and limitations of their ship. It shall emphasize that, from a submarine standpoint, damage control consists of actions which cope with an emergency yet enable the ships crew to retain submerged ship control or to return it to, and retain it in, a surfaced condition. The introduction shall list the casualties to be discussed in the remainder of the book. Normally, the introduction shall contain neither drawings nor tabular material.

5.2.3 Damage control communications. - This section of the book shall examine networks that are most likely to be used for damage control and casualty communication, and shall discuss their vulnerability to disruption and interference. Normally, this section shall not contain drawings since the physical configuration of the various communication and alarm circuits is adequately covered elsewhere and ships personnel are basically familiar with them.

5.2.4 Types and locations of damage control equipment. - This section of the damage control book shall list ships equipment that can be used to reduce the seriousness and extent of a casualty, protect the crew, or effect temporary repairs. The equipment list shall contain a double column with the following headings "Allowance" and "Amount onboard." It shall describe the equipment, including its capabilities and limitations, and give the stowage locations of portable equipment. However, no attempt shall be made to include equipment operating instructions; applicable training publications and manufacturers instructions shall be referenced for this purpose. The only plate for this section shall be an elevation (perspective line illustration) of the ship showing: compartments, levels, and actual locations of damage control equipment. Each item of damage control equipment shall be indicated by a readily identified symbol. The symbols shall conform to figure 9.

5.2.5 Loss of control surface response. - This section shall discuss possible causes of loss of plane and rudder response, and ways to reduce the possibility of such loss. It shall describe the submarines reaction to the loss of plane and rudder response, discuss recovery from plane casualties, and report the results of studies of procedures for recovering from plane jams at a speed that is considered to be maximum under normal operating conditions. Ships response to the loss of control surfaces shall be illustrated, (with or without) corrective action at various depths and speeds. Depths mentioned in the text or shown in accompanying tables or drawings shall be referenced to a specific point in the ship; drawings shall show the corresponding depth increase at various ship up-and down-angles. This section shall not include drawings of ship's systems, unless they present material of value to understanding damage control problems and are not repeated in other publications; e.g., a simplified drawing showing rudder and plane hydraulic pump power sources.

5.2.6 Flooding. - This section, one of the most important in the entire damage control book, shall outline steps that can be taken by the ship to reduce its flooding potential. It shall discuss ship evolutions that can be restricted to increase ships safety when maximum flooding resistance is required. Drawings shall be provided which show the reaction of the ship to various flooding casualties, with various types of recovery action being taken. This section shall also discuss the effect of secured sea systems on ship's operating characteristics, and steps that can be taken to recover from a flooding casualty. The discussion shall be supported by an adequate number of tables including sea valves, back up valves and curves. Flooding effects on surface studies should be included. A plate shall show locations and sizes of hull penetrations that may be open when the ship is submerged below periscope depth.

5.2.7 Fire. - Based on the premise that any fire can seriously damage or destroy the ship (if prompt corrective action is not initiated), this section shall discuss shipboard extinguishing agents and equipment, and locate areas where fire hazards are greatest.

5.2.8 Electrical equipment casualties. - This section shall discuss the reliability of the ships electrical systems, the component identification method used for electrical systems, and the mechanics of isolating specific items of electrical equipment. Tables shall be provided that identify and locate power sources (excluding small units in commissary, shop, etc.) and identify electrical loads that will be lost as a result of securing various components in the electrical systems. The drawings in this section shall be limited to those not duplicated in other publications; e.g., a simplified maximum-reliability lineup for the ship's power generation and distribution system.

5.2.9 Gas system casualties. - This section shall discuss possible effects of a high-pressure gas system casualty on equipment and personnel; steam system casualties (if applicable); and the cause and prevention of compression ignition in air systems and contamination of oxygen systems.

5.2.10 Atmosphere contamination and ventilation. - This section shall discuss toxic gases, aerosols, and radioactive contaminants (if applicable) that may exist in the atmosphere of a submerged submarine. It also shall discuss various items of shipboard contaminant control and detection equipment.

5.2.11 Casualties which restrict ship's operational capabilities. _ Damage to or failure of certain ships components or systems seriously increases the risk of unrestricted operation. In other cases, alternate flowpaths, duplicated components and services, or alternate power supplies make it possible to continue unrestricted operation without any direct limitation to depth, speed, or maneuverability; however, the hazard of the latter is that, if a source of service is missing, loss of its counterpart can present a serious problem. This section shall discuss these types of casualties, their causes, limitations imposed by them, and procedures to minimize their occurrence.

5.2.12 Damage from external sources. - This section shall identify areas of possible damage to the ship caused by: severe pressure changes resulting from explosion or excessive depth, faulty welding, improper drydocking, grounding or stranding, collision, fatigue, corrosion, and erosion. It shall include types of damage that can occur and how to recognize and assess them. The purpose of this section shall be to establish a realistic level of confidence for the ship and to alert the crew to the possible existence of perhaps not readily apparent side effects of specific hull casualties.

5.2.13 Ship characteristics. - This section shall tabulate basic ship characteristics: general, machinery plant, and electrical plant characteristics; floodable volume of compartments; bank and major tank capacities; and miscellaneous data. General characteristics shall include ships test depth, design collapse depth, length, breadth, height, mean draft, frame spacing, surfaced and submerged displacement, and mast and periscope heights (extended). Miscellaneous data shall include information which might be useful to users of the book; e.g., trim and drain pump capacities, thermal gradient effect on neutral bouyancy, plot of minimum GM while trimming down, ship in condition N (ballast tanks flooded one side only) equilibrium polygon, form characteristics curve, cross curves of stability, and diagram of location of draft marks.

5.2.14 Submarine/deep submergence rescue and salvage vehicle operations (DSRV/DSSV). - This section shall discuss the DSV mating and rescue operations relative to capabilities of the vehicle mother submarine/distressed submarine. It shall describe the initial conditions, survival capabilities and limitations, air revitalization, communications habitability and mating.

5.2.15 References. - All technical manuals, instructions, diagrams, reports, and other documentation referred to specifically in the damage control book shall be listed immediately following ship characteristics, whether or not this documentation is readily available. References shall be separated by section and shall be listed in the order of their appearance in each section. References may include documentation not directly referenced, but used as source material for information contained in the book.

5.2.16 Addendums. - Addendums shall be kept to a minimum. There shall be an addendum only: (a) if information is unavailable for inclusion in any preliminary edition or (b) if its contents is detailed reference material which is considered difficult to acquire by the ship. When addendums are removed, due to inclusion of all information, the word "PRELIMINARY and type" shall be removed from the title page.

5.3 General writing guidelines. - The book shall be written for, and at the level of, the diving officer of the watch (officers and senior petty officers). The book shall give facts. It shall not tell the reader what to do and thereby digress into Type Commander's decisions. When making a point, it shall be substantiated either with text or drawings. Where design limitations exist, they shall be stated clearly. Where particular operations, although not exceeding design limitations, are potentially unsafe, the dangers shall be cited with substantiating text. Cartoons shall not be used in the damage control book; drawings and diagrams, already existing in training aid booklets, ship information books, general information books, or elsewhere, shall not be duplicated in the damage control book. The primary purpose of the damage control book shall be to outline the ships damage control capabilities and describe how these capabilities can best be used.

6. BOOK FORMAT REQUIREMENTS

6.1 Format size and paper. - Page size and paper shall be as follows:

(a) Page trim size . . . . . 8 x 10 1/2 inches.
(b) Paper. . . . . 100 pound white offset book paper.

6.1.1 Type required. - Typewritten copy of text and tables shall be prepared using a standard pica typewriter.

6.1.2 Typing format. -

6.1.2.1 General. - The typing format for the text and tables shall be as follows:

(a) The format for text and tables shall conform to figures 3 and 4. The typewritten area shall be within the dimensions indicated on figure 3.
(b) The text shall be one column unjustified; i.e. having the left side of the text lined up evenly, while the right side is uneven.

(c) Text spacing. -

(1)	Spacing between:	
	(a) Paragraphs	1 space
	(b) Heading and beginning of text	1 space
	(c) End of paragraph and heading	2 spaces
	(d) Text and NOTE, CAUTION, or WARNING (and vice versa)	3 spaces
	(e) Table entries	(Runover for an entry in single-spaced; doublespaced between entries.)
(2)	Lines	Single-spaced

(d) The running head shall be typed above the top border line.

(e) When footnotes are required, the symbol referring to the footnote shall be repeated outside the left-hand margin, immediately adjacent to the vertical line. The footnote shall be typed below the lower margin.

(f) Text indentation. -

(1)	Paragraphs	5 spaces
(2)	NOTES, CAUTIONS, and WARNING (captions)	Centered
(3)	NOTES, CAUTIONS, and WARNING (text)	15 spaces each line, average 45 characters per line
(4)	Table entry (left-hand margin)	Flush left
(5)	Side heads (1st through 4th order)	Flush left
(6)	Side heads (5th through 8th order)	5 spaces

(g) Paragraph division. - Paragraph headings (side heads) shall not stand alone as the last line of a page. At least two (preferably at least three) lines of text must follow the head.

(h) Headings. - Headings shall be typed as follows:

(1)	Main head	Centered, all caps
(2)	First-order side head	Flush left, all caps, on separate line
(3)	Second-order side head	Flush left, initial caps, on separate line
(4)	Third-order side head	Flush left, all caps, run in with first line of text
(5)	Fourth-order side head	Flush left, initial caps, run in with first line of text
(6)	Fifth-through eight-order side heads	Identical to items (2) through (5), except heads shall be indented 5 spaces instead of being flush left
(7)	Running heads	Each page shall have a running head.

(i) NOTES, CAUTIONS, AND WARNINGS. - In general, a NOTE shall be used to emphasize information; a CAUTION shall warn of danger to equipment; and a WARNING shall warn of danger to personnel.

(j) Table format. - Tabular material shall be typed single-spaced with double spacing between entries. Special attention shall be given to table format to conserve space and to present easily understood tables. Turn-page (page turned clockwise 90 degrees to read) or foldout tables shall be used only when required; the former is preferred to the latter. For a table longer than one page, the table number and complete title, followed by "(Cont)" shall appear in initial caps flush with the left-hand (bottom for a turn-page) margin of the table. Side rules are not required (the edge of the page is adequate separation) for tables; a bottom rule shall appear only at the end of the table.

(k) Ruling and underlining. - Underlining words and phrases (for emphasis) and ruling tables (horizontally and vertically) shall be accomplished with a straight edge. Pencil or ballpoint pen shall be used. All lines and rules shall be neat, uniform, and parallel with or vertical to the typed matter on the page.

6.2 Page, paragraph, and table numbering. -

6.2.1 General. - In general, page numbers for the book shall consist of two parts separated by a hyphen: the first keys the page to the section; the second represents the order of appearance of the page in that particular section (e.g., page 3-6 is the sixth page of text, tables, or drawings in section 3). The following indicates the "page numbering":

Section		Page No.
	Table of Contents	A
	Record of Page Revision Dates (A capital letter following the last letter of the "Table of Contents")	
	Procedure for Revising and Handling, Damage Control Books	1
	Preface	2
1 -	Introduction (Cover Page)	1-1&2
	Table of Contents.	1-3&4

6.2.2 Specific requirements for page numbering within sections. - Page numbering within sections shall conform with the following:

(a) Each section, as shown in 6.2.1, shall always start on an odd numbered page.
(b) When new pages are added in a section between odd and even numbered pages; for example 4-7 and 4-8, the new pages shall be assigned the same page number as the odd numbered page in addition to a suffix letter; for example, 4-7, 4-7A, 4-7B, 4-7C.
(c) When new pages are added in a unit after the end of an even numbered page, the new pages shall be assigned the same number as the even numbered page in addition to a suffix letter; for example, 4-6, 4-6A, 4-6B.

6.2.3 Special page numbering. - The "Book Table of Contents" shall be assigned capital letters as page numbers. The "Record of Page Revision Dates" shall also be assigned capital letters which are a continuation of the last letter of the "Table of Contents" page.

6.2.4 Paragraph and side head numbering. - Paragraph and side heads shall be numbered.

6.2.4.1 Ship identification. - The ship class number shall be typed in the block lower right hand corner. This shall be changed to the individual ship number when the book is revised to suit an individual ship.

6.2.4.2 Revision identification. - The revision date (month and year) shall be typed below ship identification block.

6.2.5 Table numbering. - Table numbering shall be identical to that for drawings; e.g. table 3-4 is the fourth table in section 3.

6.3 Format for drawings. -

6.3.1 Format. - The format for a drawing page shall conform to figure 3.

6.3.2 Placement of drawings. - Drawings shall be single page and shall be included as the next numbered page where first referenced. Where several figures are referenced on the same page, the figures shall be included in sequence on succeeding pages.

6.3.3 Page numbering. - Each drawing shall appear alone on a page numbered in accordance with normal text and table numbering requirements.

6.3.4 Drawing numbering. - Drawings shall be numbered as figures with two part designations, separated by a hyphen: the first part designates the section where it is first referenced; the second corresponds to the numerical sequence of a drawing in that particular section (e.g. figure 3-4 is the fourth drawing in section 3).

6.3.5 Drawing symbols. - Symbols used in drawings shall be neat, legible, and uniform in size. Symbols shall conform to USAS Y32.2, MIL-STD-15-2, MIL-STD-15-3 and MIL-STD-17B-1, as applicable, or as otherwise approved by the Naval Ship Engineering Center for similar shipboard publications or documentation.

6.4 Plate numbering. - All plates shall be numbered with three or four digit numbers: the last two digits represent the sequence in which the plate is referred within its particular section; the remaining digits (one or two) represent the section of the book in which the plate is first referenced (e.g. PLATE 301 is the first plate referenced in section 3).

6.5 Plate symbols. - Klrtype symbols for the damage control equipment location plate shall conform with figure 9.

6.6 Placement of plates. - All plates shall appear immediately following "References."

6.7 Use of color. - Color shall not be used in illustrations for the damage control book. Different shading and patterns shall be used if differentiation is required.

6.8 Tab sheets. - The tab sheet shall precede the title page of each section of the book. In addition, a suitably imprinted tab sheet shall precede each portion of the back matter. Additional suitably imprinted intra-section tab sheets may be used if they facilitate using the book.

6.9 Printing of book. -

(a) The printing of text, tables and drawings shall be, in general, on two sides of a sheet conforming with figure 3, for example, an even numbered page backs an odd numbered page.
(b) The printed copies shall be in accordance with high grade printing practice covering this class of work producing crisp, black, unbroken images.

6.10 Folding and punching. - Printed plates shall be folded (see 4.4.2). These plates and the balance of the reproduced books shall be punched to suit the binders.

6.11 Reproduced illustrations, text, and tables (insertion into binders). - The following shall apply:

(a) Building yards shall insert the reproduced illustrations, text and tables for the individual ship into permanent binders prior to delivery.
(b) Outfitting and post-shakedown activity shall deliver the superseding reproduced material for the individual ship to activities listed in figure 1A prior to departure.

6.12 Temporary binders. - The lead activity shall furnish all binders (a semi-cardboard loose leaf ring type) required for the distribution of types A and B preliminary damage control books (see 4.3.1 and figure 1).

6.12.1 Permanent binders. - Building yards shall furnish permanent binders for each individual ship preliminary damage control book, type C, in accordance with the following specifications:

(a) Binders shall be 18-ring one piece type, full length style, for filler size 10-1/2 x 8-inches (binding side first).
(b) They shall be multiple 18-ring metal loose-leaf type binding fastened to a fully concealed metal backing plate with hidden rivets, electronically sealed within 100 percent virgin 18 gauge non-migratory flexible vinyl plastic backbone. Individual metal elements shall be 7/32 inch wide by approximately 1/32 thru 1/16 inch thick depending on capacity of binder and with 9/16 inch ring spacing. All metal shall be corrosion resistant.
(c) Each binder shall have trigger opening devices to permit insertion of new pages.
(d) Binders shall be made of 100 percent virgin 18 gauge non-migratory flexible vinyl plastic material electronically sealed over a rigid chipboard forming serrated sealed edges. The binder board shall be no less than 1/8 inch thick or 0.125.
(e) A pocket of 15 gauge acetate electronically sealed and fused to the backbone with the top open to insert title cards shall be provided. The size of the pocket shall be no less than 3 inches long. (Binders of 1/2 inch-capacity are exempt from this requirement. However, in lieu thereof, a clear vinyl envelope shall be provided on the front cover, size 5 x 3 inches.)
(f) Binder colors shall be: (1) blue for unclassified with the Naval Ship Systems Command seal 3 inches in diameter, silkscreened in gold color on the face, sightly to the left and above center; (2) red for CONFIDENTIAL material with the Naval Ship Systems Command seal 3 inches in diameter - seal silkscreened in gold on the face slightly to the left and above center. In addition, the word "CONDIDENTIAL" shall be silkscreened in gold color, in 30 pt. alternate Gothic #3 type, all caps at the top left and bottom right of front and back covers.
(g) All binders shall be equipped with a set of 4 sheet lifters.

6.12.1.1 Backbone strip. - A backbone strip shall be prepared and shall include the "Title" and the "NavShips Number" of the book.

7. DELIVERY AND DISTRIBUTION

7.1 Delivery. - Each building yard shall furnish to the cognizant Supervisor of Shipbuilding all material required to make distribution in accordance with this standard.

7.1.1 Preliminary type B - approved class damage control book. - Prior to builders sea trials distribution shall be made in accordance with figure 1.

7.1.2 Preliminary type C - approved individual ship damage control book. - Prior to delivery of ship distribution shall be made in accordance with figure 1A.

7.1.3 Final damage control book. - Six months after delivery of ship final distribution shall be made in accordance with figure 1A.

8. REVISION REQUIREMENTS

8.1 General requirements. - Damage control books shall be revised: (a) as information becomes available, to add information indicated as being missing in the addendum of a preliminary damage control book; and (b) during overhauls, to reflect ship changes effected between and during overhauls.

8.2 Responsibility for revisions. -

8.2.1 Lead activity (building yard). - The lead activity (building yard) shall be responsbile for preparing, revising, reproducing and distributing all information indicated as being missing in the preliminary approved class damage control book, including addendum. This updated material shall be distributed in accordance with figure 1.

8.2.2 Building yard. -

(a) Each building yard shall be responsible for revising the text and diagrams to suit the individual ship.
(b) Each building yard shall be responsible for preparing, revising, reproducing and distributing information indicated as being missing in the preliminary approved individual ship damage control book issued for each ship it builds including addendum.

8.2.3 Overhaul yard. -

8.2.3.1 General. -

(a) The overhaul yard shall be responsible for preparing, reproducing and distributing revisions of the damage control book for each ship it overhauls. It shall revise the book to reflect changes indicated in the ships master copy, and associated change documentation, as well as changes effected during the overhaul.
(b) Changes scheduled, but not effected during the overhaul, shall not be reflected in the revision.
(c) If a shipboard check is required (see 12.1) to bring the information in the book in agreement with the installations in the ship, the book shall be revised accordingly.
(d) If any information is not available, an addendum indicating the missing information shall be added to the ship's damage control book before sea trials. The overhauling yard shall continue issuing revisions, as information becomes available or is developed, until all information indicated by the addendum has been included in the book.

8.2.3.2 Material for revision. - The "Ship's Master Copy Plastic" illustrations, and the Planning Yard book, shall be requested via the Industrial Manager, from the Planning Yard. The "Ship's Master Copy" damage control book shall be requested from the ship and is for changes noted by the ships force. The Planning Yard book is for checking and working purposes.

8.2.3.3 Care of "Ship's Master Copy Plastics." - The "Ship's Master Copy Plastics" shall be handled with extreme care during the revisions.

8.3 Procedure for revising. -

8.3.1 Change in ships classification or number on plates. - When the classification or ships number is changed, the upper identifying title block on the plate shall be changed in accordance with the following:

(a) Before change in classification:

	Size of Klrtype (see 4.4.6)
SSG 574	36LG
SS 574 Class	10MG

(b) After change in classification:

	Size of Klrtype (see 4.4.6)
APSS 574	36LG
(EX SSG 574)	10MG
SS 574 Class	10MG

8.3.2 Addition of new illustrations. - Addition of new illustrations shall conform to the requirements of this standard.

8.3.3 Drafting on illustrations. - The contractor shall perform all necessary drafting on the illustrations. All line work shall be drawn with pen and ink; no freehand shall be permitted. The width of lines shall match those on the illustrations.

8.3.4 Opaquing. - In the event that extensive changes are necessary to the plastics, a negative may be prepared and the affected areas opaqued in lieu of removing the image from the positive. A new positive will then have to be prepared and revised.

8.3.5 Klrtype. - All names, numbers and symbols on the plastics shall be in Klrtype; no freehand is permitted. Klrtype shall be in conformance with this standard. When there is any discrepancy between the Klrtype specified, and that existing on the plastics, Klrtype shall match that on the diagram. Klrtype shall be applied carefully to plastic positives and burnished firmly to prevent falling off during handling and shipping of plastics.

8.3.6 Revision date on plates. - The revision date (year only), including the overhauling activity name, shall be entered on each overhaul block of the damage control plate positives. The year of the overhaul date shall correspond to the date of the revision on the text.

8.3.7 Pages to be revised. - All pages, including the title page, having changes shall be retyped.

8.3.8 Page change in ships designation or number. - When the only change on a page, excluding the title page, is the ships designation or number, the page need not be retyped. However, the title page of the book shall indicate the old designation or number in addition of the new as follows:

APSS 574
(EX SSG 574)
SS 574 CLASS

8.3.9 Title page. - The title page shall be revised to indicate whether the revision is "partial" or "complete"; e.g., Partial Revision. Under these words shall appear the date (year only) of the overhaul.

8.3.10 Record of page revision dates. - The record of page revision dates shall be as follows:

(a) For a partial text. - The existing record of page revision dates shall remain. A new column (headed by the year of the overhaul, and corresponding to that on the revised title and text pages) shall be filled in by typing the notation for new, revised, or void pages in the blank column under the date. The date at the heading shall be indicated at the head of each corresponding column of the record page revision dates even though no changes are listed in that column.

(b) For a complete new text. - A new record of page revision dates shall be prepared with all previous records of revisions omitted. The column shall be headed with the year of the overhaul. Under this heading type "Complete revision".

(c) For revisions made to an addendum between overhauls. - For addendum pages removed, the letter "V" shall be typed in a block for the page. For addendum pages revised, due to certain information not available, the letter "R" shall be typed in a block for the page. These columns shall be headed by the month, year and "Rev"; e.g.., Feb 1966 Rev.

8.3.11 Numbering and identification of manuscript. - Numbering and identification of manuscript shall be as follows:

(a) The page number and ship number shall be typed in the blocks with the revision date (month and year) or overhaul date (year only) below the ship number.
(b) For pages in the addendum that are retyped and still have certain information not yet available, the month and year shall be typed below the ship number.
(c) When one or more new pages are added between two existing pages, the new pages shall be assigned numbers derived by adding capital letters (starting with "A") to the number of the preceding existing page (see 6.2.2).
(d) When one or more new tables, drawings, or plates are added, the new tables, drawings, or plate numbers shall be derived by adding capital letters (starting with A) to the number of the preceding existing table, drawing, or plate.

8.3.12 Preparation of a complete new text. - In the event a text is completely re-typed (it should be retyped if any single revision affects more than 75 percent of the pages or if, as the result of many revisions, the book becomes too cluttered for efficient use), it shall be prepared in accordance with section 6 of this standard. Numbering of pages, tables and drawings shall be revised during the retyping to eliminate alphabetical suffixes added (or deletions effected) during prior revisions.

8.3.13 Final revised "Ship's Master Copy Plastics". - Upon completion of the revisions, a new set of "Ship's Master Copy Plastics", without Klrtype, shall be prepared from the negatives for the Planning Yard. All plastic positives and negatives shall be made emulsion to emulsion. Upon completion, the original plastics with Klrtype shall be destroyed.

8.3.14 Reproduction of revised material. - The reproduction of the revised material shall be in accordance with high grade printing practice covering this class of work producing crisp, black, unbroken images.

8.3.15 Folding and punching. - Reproduced plates shall be folded (see 4.4.2). These plates and the balance of the reproduced revised material shall be punched to suit the binders.

8.4 Review of revisions. - All overhaul revisions of the damage control book shall be submitted to the Supervisor of Shipbuilding for review and approval prior to distribution.

9. DELIVERY REQUIREMENTS FOR REVISED BOOK

9.1 General. - All material required by this standard shall be furnished to the cognizant Supervisor of Shipbuilding for distribution in accordance with figure 10.

9.2 Overhaul yard. - The ships overhaul shall not be considered as complete until all changes effected during the overhaul (and those made since the previous overhaul) have been incorporated in the damage control book. In the event that information, required as the result of a change effected during one overhaul is not available by the time of the following overhaul, responsibility for incorporating the change shall remain with the yard performing the overhaul during which the change was effected. A revised copy of the ships damage control book shall be delivered to the ship prior to its departure on sea trials.

10. QUALITY ASSURANCE PROVISIONS

10.1 Responsibility for inspection. - Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

10.2 Examination. - The activity preparing or revising the damage control book is responsible for completeness, technical accuracy, legibility, reproducibility, distribution and for conformance to the requirements specified herein.

11. PREPARATION FOR DELIVERY

11.1 Packaging. - Damage control illustration plastics shall be rolled or packaged flat. Reproduced copies of plates shall be folded. Original copy, and reproduced copy, of text and tables shall be packaged flat. Material shall be packaged in accordance with the supplier's commercial practice.

11.2 Packing. - Material shall be packed in containers of the type, size and kind commonly used for the purpose and in a manner which will insure acceptance by a common carrier and safe delivery at destination. Shipping containers shall comply with the carrier rules and regulations applicable to the mode of transportation.

11.3 Shipping. -

11.3.1 Classified material. - Classified material shall be packed in totally enclosed shipping containers. All boxes or cartons containing classified material shall be sealed in such a manner that the contents of the container cannot be examined without evidence of forcible opening. All containers, except registered mail packages, shall be strapped perpendicular and parallel to the length of the container. The intersection of the strapping shall be joined with sealed strapping seals so constructed and located that tampering would cause mutilation, readily detected by examination.

11.3.2 Registered mail. - Registered mail packages containing classified material shall be limited to size and weight and securely bound in accordance with the Postal Manual Regulations.

11.3.3 Shipping security regulations. - Classified materials shall be shipped in accordance with the Departmental Security Regulations which are available in the Government Inspection Office.

11.4 Marking. -

11.4.1 Classified material. - When classified material is being shipped, marking shall be as specified by the cognizant activity concerned. Except for any markings indicating the nature of the classified material, its confidential classification shall not appear on the outside of the container.

11.4.2 Unclassified material. - Shipment marking information shall be provided on interior packages and exterior shipping containers in accordance with the contractor's practice including the following:

(a) Nomenclature.
(b) Contractor's name.

12. NOTES

12.1 Ordering data. - Procurement documents shall include the following:

(a) Title, number and date of this Standard.
(b) Overhaul change information and partial shipboard check.
(c) Overhaul change information and complete shipboard check.
(d) "The Contractor is responsible for the delivery of the "Ship's Master Copy Plastic", and reproduced books in good condition at its destination. If damaged, it shall be replaced by the contractor at no cost to the Government. In this connection, the plastic negatives, used in making the "Ships Master Copy" positives, shall be retained until information is received from the Consignee that the material has been received in satisfactory condition".

12.2 CHANGES FROM PREVIOUS ISSUE. - THE OUTSIDE MARGINS OF THIS DOCUMENT HAVE BEEN MARKED "#" TO INDICATE WHERE CHANGES (DELECTIONS, ADDITIONS, ETC.) FROM THE PREVIOUS ISSUE HAVE BEEN MADE. THIS HAS BEEN DONE AS A CONVENIENCE ONLY AND THE GOVERNMENT ASSUMES NO LIABILITY WHATSOEVER FOR ANY INACCURACIES IN THESE NOTATIONS. BIDDERS AND CONTRACTORS ARE CAUTIONED TO EVALUATE THE REQUIREMENTS OF THIS DOCUMENT BASED ON THE ENTIRE CONTENT AS WRITTEN IRRESPECTIVE OF THE MARGINAL NOTATIONS AND RELATIONSHIP TO THE LAST PREVIOUS ISSUE.

Preparing activity:
Navy - SH
(Project TMSS-N018)

Lead Activity (Building Yard)

Bound printed book for class
10 (20 FBM's) for ship 1 - COMSUBPAC 1 - COMSUBLANT 1 - NAVSHIPS 1 - NAVSEC 3 - For each following Yard for each ship for Yard's use

Figure 1 - Flow chart for preliminary approved class damage control book.

All Building Yards

Bound printed book for each ship
10 (20 FBM's) for ship 1 - COMSUBPAC 1 - COMSUBLANT 1 - Parent SQUADRON 1 - Sub School New London 1 - Naval Safety Center 1 - Planning Yard 1 - NAVSEC 1 - NAVSHIPS 15 - CO NAVPUBFORCEN Phila.

Ship's Master Copy Plastics and Text should be forwarded to Planning Yard after distribution of final DCB.

Figure 1A - Flow chart for preliminary approved individual and final ship damage control book.

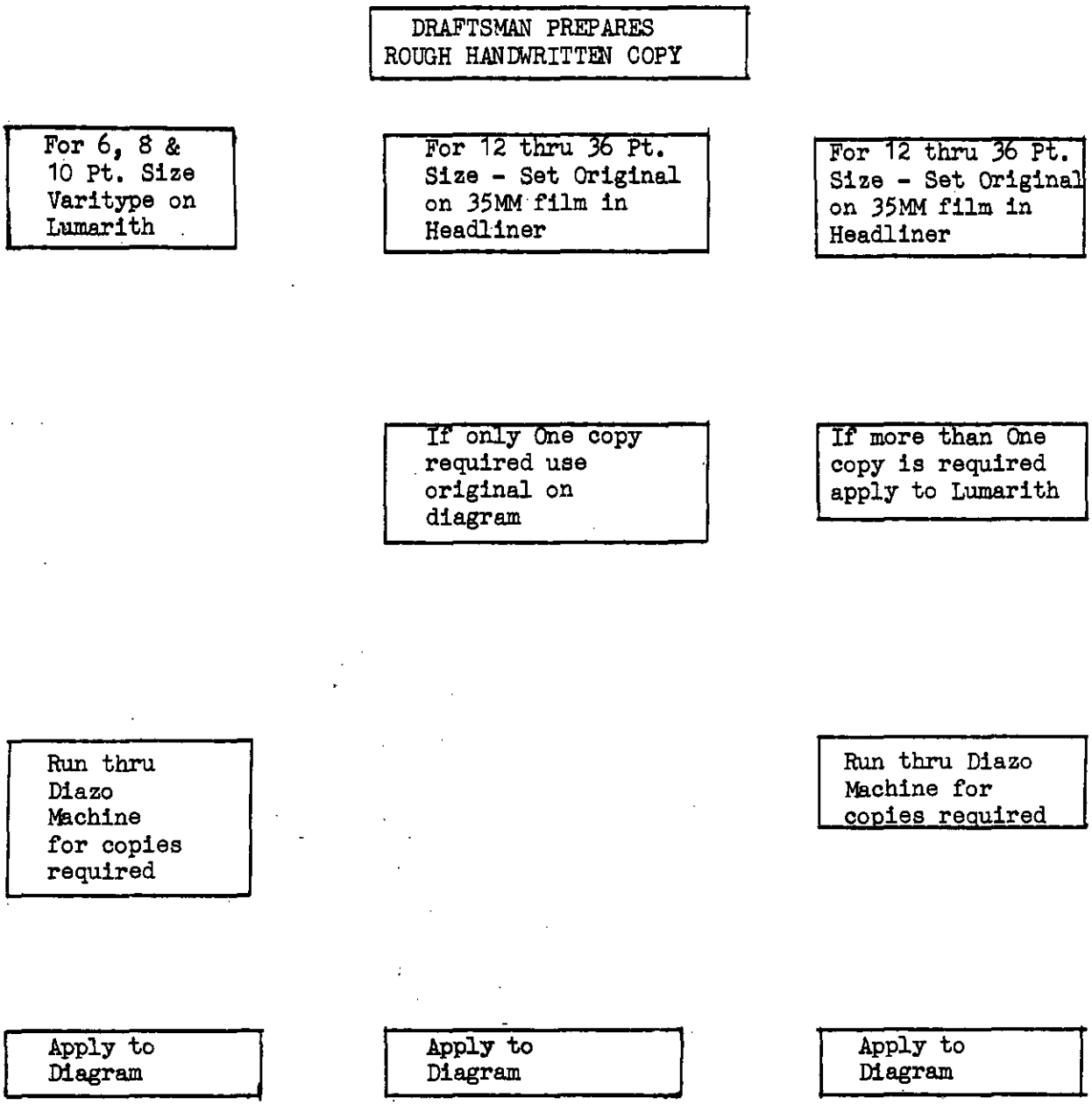

Figure 2 - Flow chart for preparation of Klrtype on Diazo film and 35MM film.

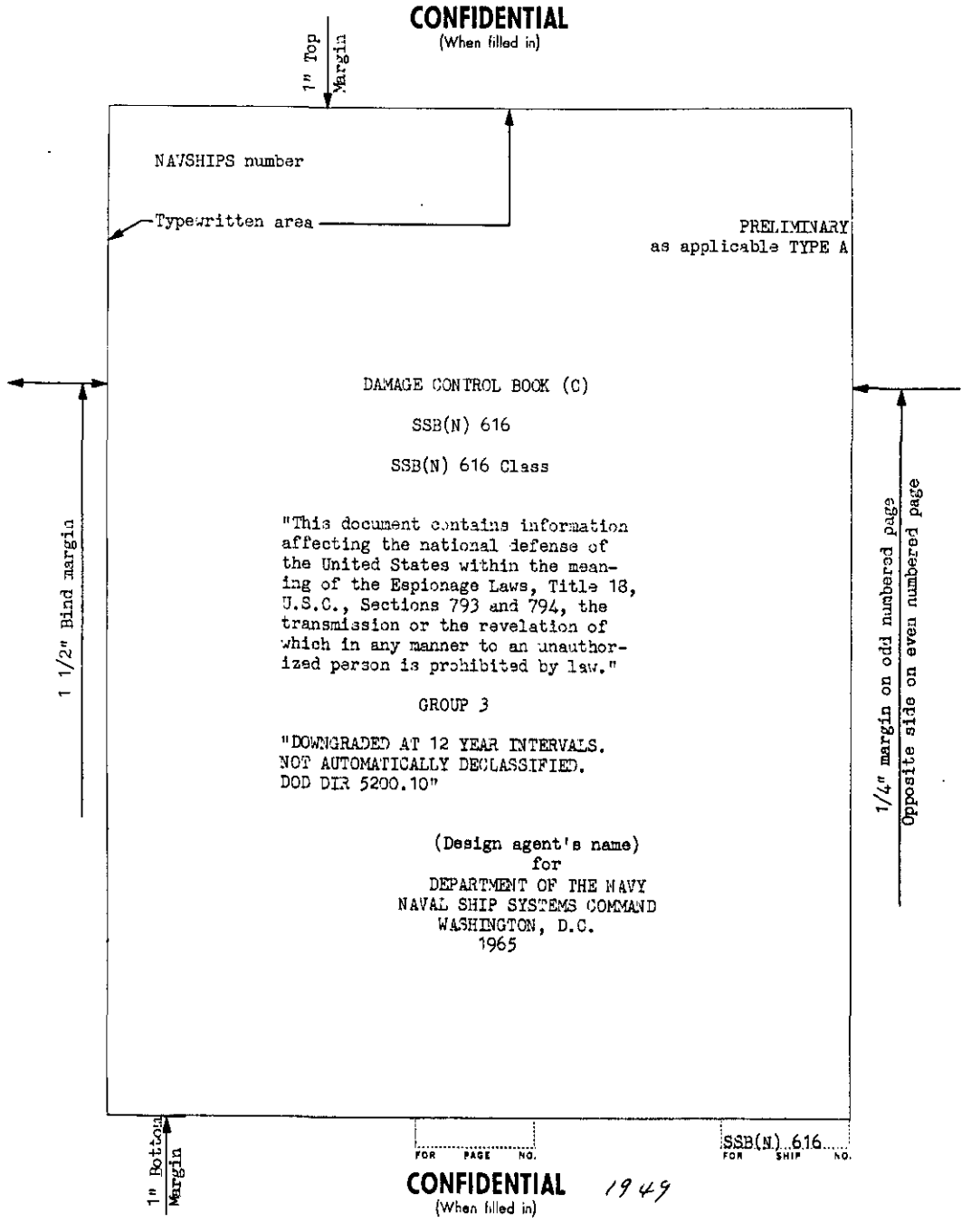

Figure 3 - Sample "Damage control book title page".

RECORD OF PAGE REVISION DATES

PAGE NO.	12-66	8-67	PAGE NO.	12-66	8-67
Title page	APPROVED FOR CLASS			APPROVED FOR CLASS	
A/B					
C/D					
E/F			3-1 & 2		
G			3-3/3-4		V
			3-5/3-6		
1/2			3-7		
		V			
1-1 & 2			4-1 &2		
1-3 & 4			4-3/4-4		
1-5/1-6			4-5/4-6		
1-7		N	4-7/4-8		
			5-1 & 2		
		R	5-3/5-4		
2-1 & 2			5-5/5-6		R
2-3 & 4			5-7/5-8		R
2-5/2-6			5-9		N
2-7			6-1 & 2		
			6-3/6-4		
			6-5/6-6		
			6-7/6-8		

R — REVISED PAGES
N — NEW PAGES
V — VOIDED PAGES

— — FOR PAGE NO.

SSB(N) 616 FOR SHIP NO

Figure 4 - Sample "Record of page revision dates".

CONFIDENTIAL
(When filled in)
PROCEDURE FOR REVISING AND
HANDLING DAMAGE CONTROL BOOK

The Damage Control Book shall be revised and handled in accordance with Naval Ships Technical Manual, Section I, II and III, NAVSHIPS 0901-988-0010, 0901-988-0020 and 0901-988-0030, respectively, and MIL-STD-797(SHIPS), "Damage Control Books for Submarines, Preparation and Revision of"

FOR -1- PAGE NO.

FOR SSB(N) 616 SHIP NO.

CONFIDENTIAL
(When filled in)

Figure 7 - Sample "Procedure for revising and handling damage control book".

CONFIDENTIAL
(When filled in)

PREFACE

The three basic objectives of damage control -- to take all practicable preliminary measures before damage occurs, to minimize and localize such damage when it occurs, and to accomplish emergency repairs or restorations after damage occurs -- are cited in Naval Ships Technical Manual, Sections I, II and III, NAVSHIPS 0901-988-0010, 0901-988-0020 and 0901-988-0030, respectively.

Although these objectives apply basically to all naval ships, some ramifications are of secondary importance when applied to submarines. Because the normal habitat of submarines is below, rather than on, the ocean surface, the prime consideration of this book is retaining control of the ship or returning the ship to, and maintaining it in, a surfaced condition. Once recovery is effected, it is assumed that the ship's force will carry out corrective maintenance which will restore the ship's capability to complete its mission.

WARNING

The data presented represents the best available information on submarine damage control. Some of the material is theoretical. Specific examples of casualty control methods have been included. The procedures must be modified to suit the needs and conditions of the ship. Users are cautioned against rigid adherence without study, evaluation and analysis.

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FOR PAGE NO.

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FOR SHIP NO

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Figure 8 - Sample "Damage control book preface".

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TABLE OF CONTENTS

NOTE

Each Section of this Book has a separate Table of Contents, List of Drawings, List of Plates, and List of Tables.

-A-
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Figure 5 - Sample "Damage control book table of contents."

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TABLE OF CONTENTS

FOR 5-3 PAGE NO.

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\# Figure 6 - Sample "Section table of contents page".

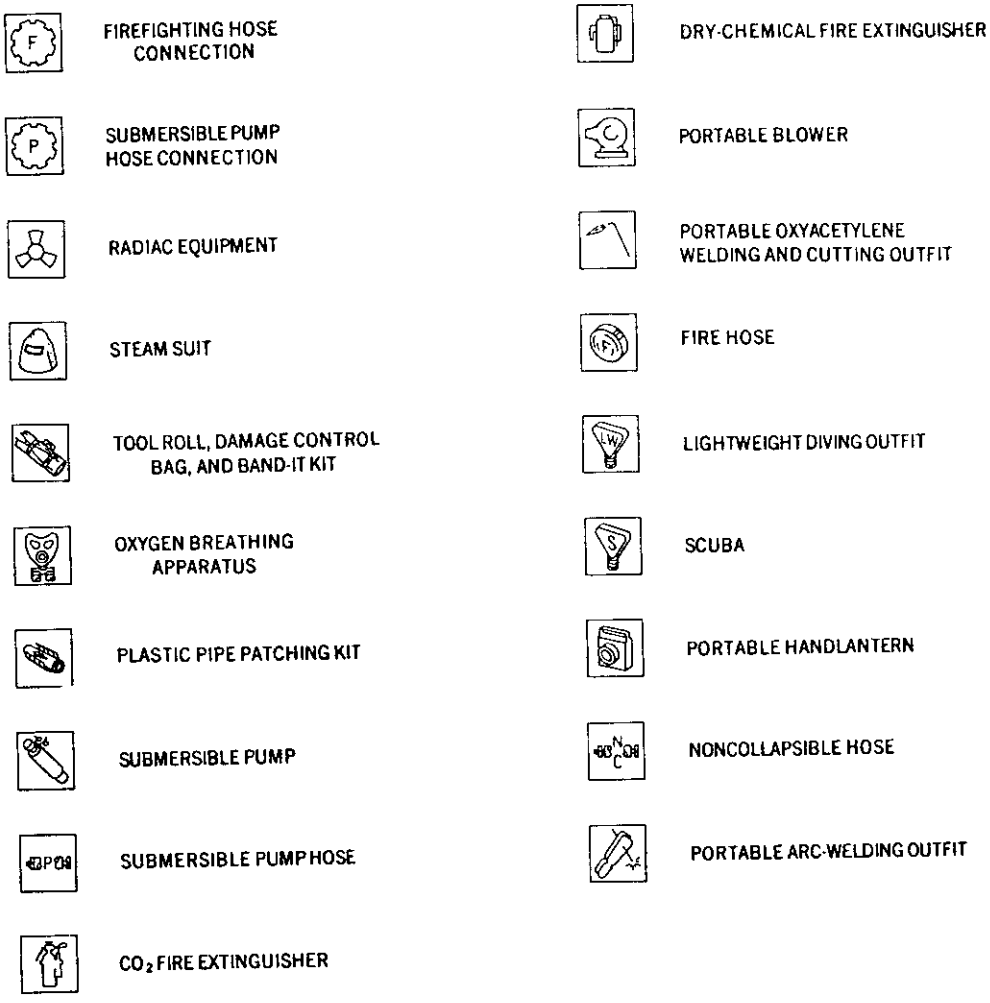

Figure 9 - Damage control equipment location plate symbols.

OVERHAUL OR CONVERSION ACTIVITY

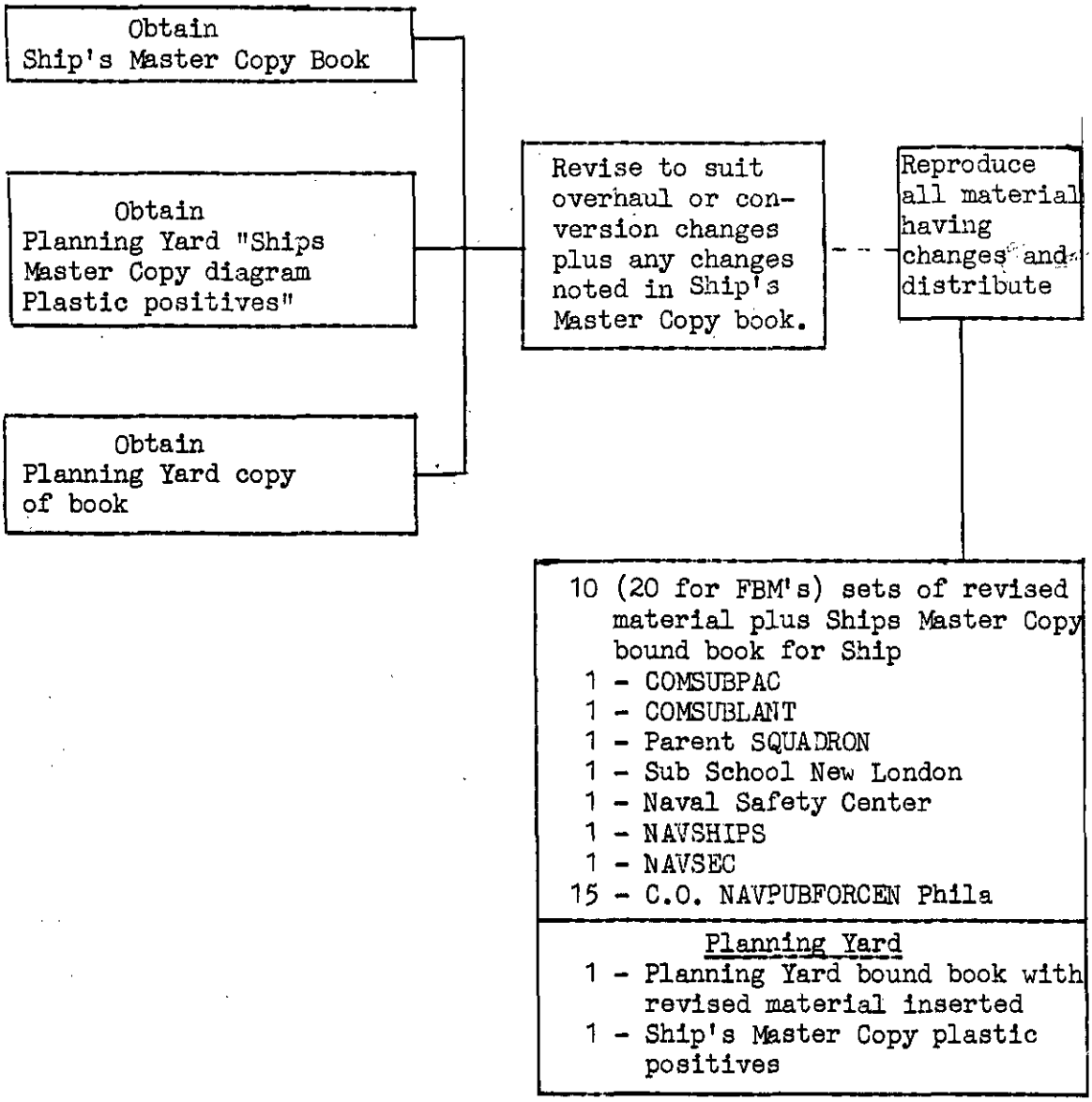

Figure 10 - Flow Chart for damage control book overhaul revisions.

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