

INCH-POUND

MIL-DTL-24784/4C(NAVY)

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SUPERSEDING

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DETAIL SPECIFICATION SHEET

COMMERCIAL OFF-THE-SHELF (COTS)
EQUIPMENT MANUAL REQUIREMENTS

This specification is approved for use by the Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-24784.

1. SCOPE

1.1 Scope. This specification covers the review of commercial off-the-shelf (COTS) manuals (see 6.4.1) and establishes requirements for supplemental data for COTS manuals. This specification is intended as a guide for reviewing personnel to determine the adequacy of existing COTS manuals, and for specifying additional data required to supplement an existing COTS manual. The acceptability of a COTS manual and the need for supplemental data is dependent upon the Government's usage philosophy for each particular item of equipment.

1.2 Application. This specification is applicable to manuals that support equipment designed and manufactured for commercial use. It applies to manuals that support commercial equipment used in a commercial or military environment. This specification is not applicable for acquisition of manuals that support developmental items.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-DTL-24784 - Manuals, Technical: General Acquisition and Development Requirements,
General Specification for

(Copies of this document are available online at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

Comments, suggestions, or questions on this document should be addressed to: Commander, Naval Sea Systems Command, ATTN: SEA 05M3, 1333 Isaac Hull Avenue, SE, Stop 5160, Washington Navy Yard DC 20376-5160 or emailed to CommandStandards@navy.mil, with the subject line "Document Comment". Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

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2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEFENSE LOGISTICS INFORMATION SERVICE CATALOGING HANDBOOKS

H4/H8 - Commercial and Government Entity (CAGE) Codes

(Copies of this document are available from the Defense Logistics Information Service, Battle Creek Customer Contact Center, 74 Washington Ave. N, Battle Creek, MI 49017-3084 or online at www.dlis.dla.mil/hseries.asp.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, (except for related specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Development. A copy of the existing COTS manual shall be required as specified by the acquiring activity for review [see Manuals Evaluation (Appendix A) and Acceptability Certification (Appendix B)] to determine whether or not the manual proves acceptable or non-acceptable (see 6.2). An acceptable commercial manual shall contain the data listed in the following subparagraphs, arranged in a sequence that provides continuity. If a manual covers different models, series, or configurations of the equipment, the differences shall be clarified by the use of different data sheets, errata sheets, change sheets, or be included in the text or table(s) in the manual. The manual shall precisely reflect the hardware configuration of the equipment or system acquired by the Government. The amount of data required shall be determined by the complexity or simplicity of the equipment and the usage philosophy of the Government for a particular item of equipment. Usage philosophy includes installation plans, maintenance concept, operational environment, and spare support approach. The manual shall consist of all data required for operation and maintenance of the equipment or system as determined by the Government.

3.1.1 Style and format. The existing COTS manual shall meet the following requirements:

3.1.1.1 Comprehensibility and readability. The text and text-graphics combination of the manual shall be at the level of understanding of the intended user. The reading grade level shall be that of the intended user.

3.1.1.2 Arrangement. The overall arrangement of content, even though vendor unique, shall be organized in a manner sufficient to provide continuity of descriptions, processes, and procedures.

3.1.1.3 Legibility. The entire publication shall be clear and easily read on paper or on a display device. Text shall be no smaller than 8-point (1 point = 1/72 inch). Parts lists shall be no smaller than 6-point. Lettering on diagrams shall be no smaller than 6-point.

3.1.1.4 Size. Manuals size shall be no smaller than 4 by 5½ inches and no larger than 17 by 11 inches.

3.1.1.5 Safety. The manual shall include safety information that is consistent with the safety standards established by Occupational Safety and Health Act (OSHA) standards (see MIL-DTL-24784).

3.1.1.6 Dangers, warnings, cautions, notes. The manual shall contain dangers, warnings, cautions, and notes similar to those specified in MIL-DTL-24784.

3.1.1.7 Federal environmental protection standards. Information concerning the use, transportation, handling, storage, or disposal of fuel, toxic or hazardous substances, chemicals, ordnance, and munitions shall be clearly stated and shall be consistent with Federal Environmental Protection Standards.

3.1.1.8 Illustrations. The manual shall contain illustrations similar to those specified in MIL-DTL-24784 to support the text. The illustrations shall be integrated with the text or their location shall be referenced in the text.

3.1.1.9 Maintenance. The manual shall reflect the maintenance philosophy of the hardware as established by the manufacturer, and the maintenance philosophy shall be such that it can be applied by the intended Government user.

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3.1.1.10 Copyrights release/rights in data. The manual shall include the appropriate copyright release or rights in data statements in accordance with the Federal Acquisition Regulation (FAR) (and its applicable supplements) and as established by the contract (see MIL-DTL-24784).

3.1.1.11 COTS manuals in portable document format (PDF). When specified by the acquiring activity that the COTS manual is to be delivered in PDF, the PDF requirements provided in MIL-DTL-24784 shall apply.

3.2 Content requirements. Unless otherwise specified by the acquiring activity (see 6.2), acceptable COTS manuals shall contain, but not be limited to the following:

- a. Front matter: Cover or title page, table of contents, and applicable safety precautions.
- b. Introduction.
- c. Preparation for use.
- d. Installation instructions.
- e. Principles of operation (at the level required to support maintenance).
- f. Operating instructions.
- g. Maintenance and servicing instructions (preventive and corrective).
- h. Reprogramming, as applicable.
- i. Preparation for shipment.
- j. Storage.
- k. Parts list.
- l. Illustrations and diagrams.
- m. Overhaul instructions (as applicable).

3.2.1 Front matter.

3.2.1.1 Cover/title page. The manual shall have a cover, title page, or first page showing the date the manual was issued, revision designator (if applicable), the manufacturer's identification name and address, the equipment name, the manufacturer's model designation, and serial or identification numbers for the equipment covered. See Federal Acquisition Regulations concerning contract numbers and markings on publications.

3.2.1.2 Table of contents. The manual shall include a table of contents. It shall list all parts, chapters, sections, and paragraphs, as applicable, in the order of presentation and with the same title used in the text. It shall include a list of illustrations and a list of tables.

3.2.1.3 Safety precautions. The manual shall contain safety precautions where hazards, such as high voltage or electrostatic discharge, may be present during installation, operation, or maintenance of the equipment. Health hazards, such as radio frequency radiation, radioactive materials, the presence of poisonous fumes or explosive gases, and the depletion of oxygen from the air in a closed environment, shall be preceded by a danger or warning at the point in the procedure where the hazard is likely to be encountered. See MIL-DTL-24784 for similar requirements.

3.2.2 Introduction. The manual shall contain an introduction, or introductory material, containing the following:

- a. Purpose and functions.
- b. Capabilities.
- c. Performance characteristics.
- d. Description (equipment model, dimensions, weight, volume, and center-of-gravity, when applicable).
- e. Power and utility information.
- f. Environmental information.
- g. List of items furnished.

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- h. List of additional items required for operation and maintenance, but not supplied with equipment.
- i. Tools and test equipment.
- j. Warranty information.
- k. Shipping and handling precautions.
- l. Storage data.

3.2.3 Preparation for use. The manual shall contain unpacking and assembling instructions. Inspection for in-shipment damage and instructions on how to handle damaged equipment shall be included.

3.2.4 Installation instructions. Special installation instructions shall include requirements for foundations, ventilation, clearances, plumbing and electrical connections, mountings, wiring runs, initial lubrication, and alignment as applicable.

3.2.5 Principles of operation. The manual shall contain principles of operation information at the technical level necessary for the intended user.

3.2.6 Operating instructions. Operating instructions shall include:

- a. Illustrations and explanations of the uses and functions of all controls and indicators (including settings and readings, if applicable).
- b. Initial adjustments and control settings.
- c. Start up procedures.
- d. Normal operation.
- e. Operation under emergency, adverse, or abnormal conditions (if different from normal operating procedures).
- f. Shut down procedures.
- g. Emergency shutdowns (if required).
- h. Interface instructions.

3.2.7 Maintenance and servicing instructions (preventive and corrective). Instructions shall include a list of test equipment, special tools, and materials needed for maintenance and service. This list shall include nomenclature, part and model number, application, range, and accuracy. Instructions or illustrations shall explain or show how test connections are made. Actions and normal indications shall be defined for each test.

3.2.7.1 Cleaning and lubrication. Periodic cleaning and lubrication information, covering types of cleaning agents or lubricants (commercial or military) shall be included. Frequency of lubrications and intervals (monthly, quarterly, and semiannually, hours of operation, mileage, and so forth) shall be presented. Lubrication points and required amounts shall be identified. When applicable, pictorial format for lubrication instructions shall be included to clearly illustrate location of each lubrication point. Cleaning and lubrication during repair, replacement, or reassembly shall be included in the instructions covering those actions (see 3.2.7.5).

3.2.7.2 Performance verification. Instructions for calibration of the test, measurement, and diagnostic equipment needed to restore the equipment to serviceable accuracy (performance verification) shall be provided. These instructions shall be complete step-by-step procedures which will enable the user to check the accuracy of the indications or readings. The location of test connections and the values expected at these points shall be included. Adjustment of built-in self test features shall be included when applicable. Data shall include the recommended frequency of adjustments and verification checks required. When appropriate, the data shall allow for the accomplishment of these adjustments by utilizing a wiring harness, test points, etc., that are accessible from outside the equipment case. Data shall include a list of the additional equipment, such as temperature, vacuum, pressure, hydraulic or pneumatic gauges, decade boxes, voltmeters, signal generators, required to accomplish the verification. The listing shall show methods of use or application, range of scales, and specific minimum tolerances or percentages of accuracy.

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3.2.7.3 Inspection. Instructions, including scheduling, for inspection of equipment for damage and wear shall be provided with emphasis on allowable service limits such as wear, backlash, end play, balance, and length and depth of scoring. Allowable service limits are acceptable wear tolerances which will not impair performance. They are not to be confused with manufacturing tolerances.

3.2.7.4 Troubleshooting. Malfunctions that might occur during operation of the equipment shall be identified. Troubleshooting data, and fault isolation techniques shall include:

- a. The indication or symptom of trouble.
- b. The instructions necessary, including test hookups, to determine the cause.
- c. Action or reference to action to restore the equipment to operating conditions.

Applicable information shall be in chart form, logic tree form, in tabular format with appropriate headings, or as logic, block, or schematic diagrams. The established maintenance concept for the associated equipment shall dictate the depth of the troubleshooting such as, localizing a defective circuit card assembly and ending the action by removing and replacing the circuit card assembly as contrasted with the carrying out the troubleshooting process on the defective circuit card assembly to determine the specific piece part that is defective.

3.2.7.5 Disassembly, repair, replacement, and reassembly. Sequential instructions for disassembling, repairing, replacing, and reassembling the equipment shall be provided. Test, adjustment, and check-out data after reassembly shall be provided. Illustrations, including exploded views, shall be used as necessary to support each of these functions.

3.2.8 Reprogramming. A description of reprogrammable memory, reprogramming theory, program setup, program confidence check-out, program loading, and programming procedures shall be provided for equipment having a reprogrammable memory.

3.2.9 Preparation for shipment. Manuals shall contain instructions for the following, as applicable.

- a. Disassembly, removal, and separate packaging of electrostatic sensitive discharge devices or fragile components.
- b. Use of reusable shipping cases or containers.
- c. Special cradles.
- d. Mounting.
- e. Securing.
- f. Covering and preservation.
- g. Precautions for shipment.
- h. Shipment and unloading.

3.2.10 Storage. Manuals shall contain instructions for the following:

- a. Indoor and outdoor storage.
- b. Temperature and other environmental limitations.
- c. Storage facilities.
- d. Dunnage.
- e. Ventilation.
- f. Revetting.
- g. Drainage.
- h. Staking.
- i. Grounding.
- j. Covering.
- k. Preservation.

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3.2.11 Parts list. The manual shall include a parts list containing positive identification of parts for support of the equipment and shall include actual manufacturer or vendor part numbers or generic description necessary to obtain replacement parts.

3.2.11.1 Parts list illustrations. Clear and legible illustrations shall identify component parts and parts relationships.

3.2.11.2 Parts listings. Part numbers and part names shall be shown on illustrations or separately listed. When the illustrations do not contain part numbers and part names, both the illustrations and separate listings shall show either index, reference, or key numbers which will cross-reference illustrated parts to listed parts. The parts list shall cite the actual manufacturer or vendor and their part number or generic description. Parts in the listings shall be grouped by assemblies, subassemblies, and modules with the parts identified to the assembly from which they are components.

3.2.11.3 Common commercial parts. Common commercial hardware and items that are not of special design, such as bolts, washers, nuts, screws, fittings, keys, hinges, wire, cable, gasket material, tubing, hose, and so forth, and are obtainable from a wide range of sources, shall be identified by part number or the notation "Commercial" instead of a part number. The part name (nomenclature or description) shall be complete enough to facilitate substitution of equivalent items from existing Government stock as in table I.

TABLE I. Examples of part number descriptions.

Figure and index no.	Part no.	Part name (nomenclature or description)
2-4	Commercial	NUT, Hex head, plain steel 1/4-20 UNC-3B
2-5	Commercial	WIRE, Electrical, copper, tin plated, No. 14 AWG, 19 strands of No. 27 AWG, 0.250 in. dia.

3.2.12 Illustrations and diagrams.

3.2.12.1 Illustrations. Manuals shall contain illustrations (line drawings, photographs, or halftones) for locating and identifying all components significant to operation and maintenance and to show configuration and parts relationship for removal and disassembly procedures. When photographs are used, they shall be prescreened and shall be detailed and sharp, free of heavy shadows, distorted objects, cluttered foregrounds or backgrounds, and give good contrast from white, middle tones, and black. Free hand sketches shall not be acceptable.

3.2.12.2 Diagrams. As applicable, the following diagrams shall be included in the manual:

- a. Simplified functional block.
- b. Locator.
- c. Piping.
- d. Plumbing.
- e. Hydraulic.
- f. Schematic.
- g. Electrical.
- h. Digital.
- i. Other, as necessary.

3.2.12.3 Symbols. Symbols used on illustrations and diagrams shall be standard or common to the trade or commodity. Where nonstandard symbols are used, explanations shall be provided.

3.2.13 Overhaul instructions. When applicable, the manual shall include overhaul instructions to return the equipment to mission capable condition. As a minimum, the instructions shall include the following:

- a. List of support equipment, special tools, and facilities required.

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- b. List of mandatory parts.
- c. Preshop analysis, as applicable.
- d. Step-by-step procedures for performing all functions including disassembly, removing, replacing, diagnosing, installing, repairing, assembly, in-process testing, adjusting, and inspecting.
- e. Final tests to ensure satisfactory performance of the equipment or system overhauled.

3.3 Supplemental data. After it has been determined that the COTS manual meets the style, format, and content criteria of 3.1 and 3.2, and that supplemental data (see 6.4.2) is required, supplemental data shall be developed as specified by the acquiring activity (see 6.2) in contractor format and in accordance with the requirements on the Content/Format Selection Summary Sheet (Appendix C) or other applicable contractual document. This data shall supplement the basic COTS manual and shall not substantially duplicate any data contained in the existing COTS manual.

3.3.1 Identifying technical publication sheet (ITPS). Unless otherwise specified by the acquiring activity (see 6.2), an Identifying Technical Publication Sheet (ITPS) shall be prepared (examples are shown in figures 1 and 2). The ITPS shall be tailored to reflect only information applicable to the acquisition. The appropriate distribution statement, disclosure notice, destruction notice, and authority notice shall appear in accordance with MIL-DTL-24784, as specified by the acquiring activity. Other pertinent data shall be inserted by the contractor as provided by the acquiring activity.

3.3.2 Style, format, and form.

3.3.2.1 Style and format. Unless otherwise specified by the acquiring activity (see 6.2), supplemental data shall be in contractor style and format.

3.3.2.2 Form. Unless otherwise specified (see 3.3.2.3), supplemental data shall be a separately numbered and bound manual and shall be in one or more of the following forms as specified by the acquiring activity (see 6.2):

- a. Review draft copy.
- b. Preliminary technical manual.
- c. Final reproducible copy.
- d. Digitized media.

3.3.2.3 Insert data. If supplemental data can be inserted into the existing COTS manual (that is, the manual is not permanently bound), supplemental data may be developed as specified by the acquiring activity (see 6.2), and issued with the changed/added material inserted into the existing COTS manual.

3.3.3 Content. Content of the supplemental data shall be as specified on the Content/Format Selection Summary (Appendix C), or other contractual document provided by the acquiring activity (see 6.2). Unless otherwise specified by the acquiring activity (see 6.2), the data shall be presented in accordance with the requirements specified and in the following order:

- a. Cover and title page (see 3.2.1.1).
- b. List of effective pages (see 3.3.10).
- c. Safety precautions (see 3.2.1.3).
- d. Table of contents (see 3.2.1.2).
- e. Reporting of errors statement, recommended changes, user activity comment sheet, or technical manual deficiency report applicable to the particular service, as provided by the acquiring activity (see 3.3.11).
- f. Maintenance forms and records.
- g. Administrative storage.
- h. Destruction of military material to prevent enemy use.
- i. Lubrication instructions (see 3.3.12).
- j. Preventive maintenance checks and services.

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k. Spare and repair parts (see 3.3.13).

l. Other requirements as specified (when using manuals evaluation checklist as a guide, other required data may be indicated thereon).

3.3.4 Copyrights and proprietary information credit line. The supplemental data shall include appropriate copyright release or rights in data statements, in accordance with the FAR (and its applicable supplements and as established by the contract (see 6.2 and see MIL-DTL-24784).

3.3.5 Warranty information. If applicable, the COTS manual supplemental data shall contain warranty information pertinent to the equipment covered. It shall include data such as duration of warranty and serial numbers of equipment covered. If warranty is covered separately or in another available document, reference shall be made to that document.

3.3.6 Advertising. Except for the identity of the manufacturer or contractor, supplemental data shall not contain advertising.

3.3.7 Equipment and model coverage. Only equipment and models, accessories, and components specified shall be covered in the supplemental data.

3.3.8 End item identification. Unless otherwise specified by the acquiring activity (see 6.2), the federal item name, national stock number (NSN), part number, model number, and applicable contract number shall be overprinted on the cover or the first page of the manual.

3.3.9 Publication number and date. The publication number, as assigned by the Government, and date shall be overprinted on the cover and first page of the supplement in accordance with MIL-DTL-24784 or as specified by the acquiring activity (see 6.2).

3.3.10 List of effective pages. A list of effective pages that will include the basic COTS manual and the supplemental data shall be in accordance with MIL-DTL-24784.

3.3.11 Reporting of errors statement. The manual shall provide current information on contacting distance support (anchor desk) via the web (<http://www.anchordesk.navy.mil/>) and via the toll free number (1-877-4-1-TOUCH [86824]). The following statement shall also be included:

“Ships, training activities, supply points, depots, Naval Shipyards and Supervisors of Shipbuilding are requested to arrange for the maximum practical use and evaluation of NAVSEA technical manuals (TMs). All errors, omissions, discrepancies, and suggestions for improvement to NAVSEA TMs shall be submitted as a Technical Manual Deficiency/Evaluation Report (TMDER). All feedback comments shall be thoroughly investigated and originators will be advised of action resulting there from.

(Use this statement for printed hard copy TMs)

Three copies of the NAVSEA/SPAWAR Technical Manual Deficiency/Evaluation Report form, NAVSEA 4160/1 are included at the end of each separately bound hardcopy TM.

(Use this statement for a TM on CD-ROM)

The NAVSEA/SPAWAR Technical Manual Deficiency/Evaluation Report form, NAVSEA 4160/1 is included as the last page of the TM.

(Include this statement for all TMs)

Copies of form NAVSEA 4160/1 may also be downloaded from:

https://nsdsa2.phdnswc.navy.mil/tmmp/forms/TMDER_BLANK_REV_7-2003.doc.

The following methods are available for generation and submission of TMDERs:

- The most expedient and preferred method of TMDER generation and submission is via the Technical Data Management Information System (TDMIS) website at: <https://mercury.tdmis.navy.mil>. TDMIS accounts can be requested at <https://nsdsa2.phdnswc.navy.mil/>.

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- Generate and submit TMDER via the Naval Systems Data Support Activity (NSDSA) website at: <https://nsdsa2.phdnswc.navy.mil/tmder/tmder-generate.asp?lvl=1>.
- When internet access is not available, submit TMDER via hardcopy to:
 COMMANDER
 CODE 310 TMDERs
 NAVSURFWARCENDIV NSDSA
 4363 MISSILE WAY, BLDG 1388
 PORT HUENEME, CA 93043-4307
- TMDERs against classified TMs must be submitted using the hardcopy method cited above.
- Urgent priority TM deficiencies shall be reported by Naval message with transmission to Port Hueneme Division, Naval Surface Warfare Center (Code 310), Port Hueneme, CA. Local message handling procedures shall be used. The message shall identify each TM deficiency by TM identification number and title. This method shall be used in those instances where a TM deficiency constitutes an urgent problem, (i.e., involves a condition, which if not corrected, could result in injury to personnel, damage to the equipment or, jeopardy to the safety or success of the mission).

Complete instructions for TMDER generation and submission are detailed on the NSDSA website at: <https://nsdsa2.phdnswc.navy.mil/tmder/tmder.asp?lvl=1>.”

3.3.12 Lubrication instructions. If provided, separate lubrication charts or instructions shall be included in the manual. All lubricants, fluids, and associated products identified in the manual, supplemental data, or separate lubrication chart must have a Government identifier, (military specification number, NSN, and so forth) or manufacturer and part number which identify the product beyond the product name and provide the user with requisitioning information.

3.3.13 Spare and repair parts. If required, the COTS manuals shall be supplemented with applicable spare and repair parts breakdown information. Supplemental data shall not duplicate data in the existing manual. The parts breakdown data shall be presented in contractor format and in the following order:

- Introduction (Section I).
- Parts list and illustrations (Section II).
- Special support equipment list and illustrations (Section III).
- Cross-reference indices (Section IV).

3.3.13.1 Introduction - section I. The introduction shall contain how-to-use information. The introduction shall explain the use of the parts equipment breakdown listings and the reference indices. The column headings, symbols, abbreviations, codings, notes, and other data used shall be explained in detail.

3.3.13.2 Parts list and illustrations - section II. All spare and repair parts shall be listed by assembly. They shall be shown on the associated parts breakdown illustration. Unless otherwise specified by the acquiring activity (see 6.2), these assembly illustrations and parts lists shall be arranged in top-down breakdown (next higher assembly) sequence.

3.3.13.2.1 Illustrations. Illustrations shall be detailed line drawings and identify all repairable or replaceable parts. Each assembly illustration (or set of illustrations, if multi-sheets) shall precede the associated parts listing. Exploded views shall be provided when specified by the acquiring activity (see 6.2). Figures shall be numbered in ascending numerical sequence, and each item illustrated shall be assigned an item or index number. Item or index numbers shall be arranged in numerical clockwise sequence. Leader lines, with arrowheads, shall be drawn from each of the callouts (item or index no.) to the items.

3.3.13.2.2 Parts list. The parts list for the associated illustration shall bear the same title as the illustration and shall contain the columns listed below:

- Column (1), FIGURE-ITEM NO.
- Column (2), SOURCE, MAINTENANCE AND RECOVERABILITY (SM&R) CODE.

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- c. Column (3), CAGE (Commercial and Government Entity) Code per H4/H8.
- d. Column (4), PART NO. (actual manufacturers, vendors part, drawing, and military specification number).
- e. Column (5), DESCRIPTION AND USABLE ON CODE (UOC) (item name and provisioning nomenclature (if required) and UOC when more than one model or configuration is covered in the manual).
- f. Column (6), QTY (amount or number per figure or assembly).

3.3.13.3 Special support equipment - section III. This section shall include special tools, test equipment, and special support equipment. Each tool or equipment shall be illustrated and a list prepared in the same format as for the parts list in section II. The basis of issue (BOI) shall be stated for each kit or set on the last line of the "Description and Usable on Code" column. The BOI provided by the Government, shall state the quantity per unit, division, company (CO), battery, or other organizational structure or division, for example, BOI: 1 PER LETTERED CO. Items listed as part of a kit or set shall be shown as quantity per kit or set as applicable, and the BOI for the kit or set shall be stated for the kit or set line item entry.

3.3.13.4 Cross-reference indices - section IV. Unless otherwise specified by the acquiring activity (see 6.2), this section shall include the following indices in the order presented:

- a. Figure and item number index. This index, keyed on figure and item number in numerical sequence, shall cross-reference applicable CAGE Code number, part number, and the NSN.
- b. Part number index. This index shall key on part number in alphanumeric sequence and reference applicable CAGE Code, NSN, figure, and item number.
- c. NSN index. This index shall list the NSN by ascending national item identification number, (the last nine digits). The NSN shall reference the applicable figure and item number.
- d. Reference designator index. When figures or illustrations, such as electronic circuit diagrams, use reference designators in lieu of item numbers, an index listed by reference number in alphanumeric order shall cross-reference the applicable figure and item numbers.
- e. Original equipment manufacturer (OEM) or true vendor. When applicable, the OEM part number shall be cross-referenced to true vendor part number. The part numbers shall be in alphanumeric sequence.

3.4 Accuracy. Essential corrections or changes to the manual shall be included in the supplemental data.

3.5 Changes and revisions to supplemental data. When the Government determines that changes or revisions are required to correct or update supplemental data, the data shall be changed or revised. Unless otherwise specified by the acquiring activity (see 6.2), changes and revisions shall be final reproducible copy and in the same style and format as the original supplemental data.

3.5.1 Change packages. When specified by the acquiring activity (see 6.2), change packages shall be in accordance with MIL-DTL-24784.

3.5.2 Revisions. When specified by the acquiring activity (see 6.2), revisions shall be in accordance with MIL-DTL-24784.

4. VERIFICATION

4.1 Verification. The verification requirements for delivery of review draft copies, preliminary technical manuals, final TMs, supplemental data, changes and revisions shall be in accordance with MIL-DTL-24784.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

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6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. COTS manuals and supplemental data are intended for support of COTS equipment used by the Department of Defense. The intent of this specification is not to standardize the style, format, size, or content of COTS manuals, but to provide evaluation criteria for acceptance of COTS manuals and provide the requirements for supplemental data for selection by the Government.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of the specification (or any TMCR referencing this specification).
- b. Issues of documents to be cited in the solicitation (see 2.2.1).
- c. A copy of the COTS manual for Government reproduction and use is required to determine whether it is acceptable (Appendix A) for use or whether supplemental data is required (see 3.1).
- d. When an existing COTS manual is reviewed, the acceptability certificate (Appendix B) should be provided (see 3.1).
- e. Content requirements other than those specified in 3.2.
- f. Specification tailoring requirements for supplemental data by selection of content and format requirements (Appendix C) (see 3.3 and 3.3.2.3).
- g. An ITPS is other than as specified (see 3.3.1).
- h. Supplemental data in other than contractor style and format (see 3.3.2.1).
- i. Deliverable products as specified (see 3.3.2.2 and 3.3.2.3).
- j. When supplemental data is required, contents should be specified (see 3.3.3).
- k. If a copyright license has been granted to the COTS manual or data, obtain permission for Government reproduction and use (see 3.3.4).
- l. Overprint the end item identification information, when specified, and publication number and date (see 3.3.8 and 3.3.9).
- m. Illustrated parts lists are other than as specified (see 3.3.13.2).
- n. If exploded views are not required (see 3.3.13.2.1).
- o. If cross-reference indices are not required (see 3.3.13.4).
- p. Changes to the supplemental manual should be specified only when they pertain to technical manual corrections resulting from a hardware change or modification. They may also be specified if it has been determined that significant omissions of technical data or information have been identified. Do not specify a change to correct minor or editorial corrections. When changes are justified on the above basis, the change package should include the correction of all outstanding temporary or interim changes and may include minor changes (see 3.5.1).
- q. When revisions are required (see 3.5.2).
- r. Packaging requirements (see 5.1).

6.3 Technical manual acquisition. This specification (or a TMCR based on this specification) should be listed on the Contract Data Requirements List (DD Form 1423) in order to acquire the technical manuals and supplemental data described by this specification. An alternate acquisition strategy should be devised by contracting officers for those solicitations or contracts which are exempted from using the Uniform Contract Line Item Numbering System (UCLINS).

6.3.1 Sample COTS manual. When COTS manuals are required for evaluation to determine their acceptability, the solicitation should state how many samples of the COTS manuals should be included in the bid package.

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6.3.2 Qualification. Sample COTS manuals should be evaluated by use of Appendix A, Manuals Evaluation Checklist or other applicable document(s) determined by the acquiring activity. It should be noted that pre-established checklists may not contain all requirements, but each manual's content requirements depend on the item(s) covered by the manual. As well, the same concept applies when using the Content and Format Selection Summary, Appendix C or other equivalent contractual document(s) to solicit or contract for supplemental data to augment the acceptable COTS manual.

6.4 Definitions. The words or phrases used throughout this specification are defined in MIL-DTL-24784 and as follows:

6.4.1 COTS manuals. Manuals available off-the-shelf from the commercial source which include operation, maintenance, and other instructions for commercial equipment. Commercial manuals are developed to support the equipment in the commercial market.

6.4.2 Supplemental data. Supplemental data is any data whether by change, addition, or separately numbered manual that augments or complements a COTS manual to make the manual acceptable for the use by the Department of Defense.

6.5 Subject term (key word) listing.

Supplemental data

6.6 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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PUBLICATION NUMBER
DATEIDENTIFYING TECHNICAL PUBLICATION SHEET FOR COMMERCIAL MANUAL
(Supersedure note, or other special notes, if any)

1. **PURPOSE:** To identify an authorized commercial manual for Navy use. *(Modify statement as appropriate.)*

MANUFACTURER: *(Name and address)*

PURCHASE ORDER OR CONTRACT NO.:

REQUISITION NO.: *(If furnished by the acquiring activity)*EQUIPMENT: *(Type, model, part number, nomenclature, Federal Item Name, serial numbers)*FEDERAL STOCK NO: *(If furnished by the acquiring activity)*NATIONAL STOCK NUMBER: *(If furnished by the acquiring activity)*TITLE: *(Operating Instructions, Maintenance Instructions, Parts List, as appropriate)*ADDITIONAL IDENTIFICATION (if any): *(Volumes, Parts, and so forth)*DATE: *(If any)*

2. **ADDITIONAL COPIES:** Additional copies are available from _____. *(Preparing activity will furnish information, but if no information is furnished, this paragraph will be omitted and the following paragraph moved up into its place.)*

3. **FILE LOCATION:** The above described commercial manual is filed in _____. *(Each library will fill this in if this identifying technical publication sheet is filed separately from the commercial manual.)*

4. **AUTHORITY NOTICE, DISTRIBUTION STATEMENT, DISCLOSURE NOTICE** (as applicable, in accordance with MIL-DTL-24784).

FOR UNCLASSIFIED MANUALS

NOTICE: Reproduction for non-military use of the information or illustrations contained in this publication is not permitted.

FOR CLASSIFIED MANUALS

NOTICE: This material contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C., Section 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

5. **REPORTING OF ERRORS:** Submit technical manual deficiencies via the Technical Manual Deficiency/Evaluation Report (TMDER) form. The most expedient and preferred method of TMDER generation and submission is via the Technical Data Management Information System (TDMIS) website at: <https://mercury.tdmis.navy.mil>. TDMIS accounts can be requested at <https://nsdsa2.phdnswc.navy.mil/>. For additional assistance, contact the distance support (anchor desk) via the web (<http://www.anchordesk.navy.mil/>) and via the toll free number (1-877-4-1-TOUCH [86824]).

FIGURE 1. Identifying technical publication sheet for commercial manual (example).

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PUBLICATION NUMBER
DATEIDENTIFYING TECHNICAL PUBLICATION SHEET FOR COMMERCIAL MANUAL
(Supersedure note, or other special notes, if any)

1. **PURPOSE:** To identify an authorized commercial manual for Navy use and for providing supplemental technical information thereto. *(Modify statement as appropriate.)*

MANUFACTURER: *(Name and address)*

PURCHASE ORDER OR CONTRACT NO.:

REQUISITION NO.: *(If furnished by the acquiring activity)*EQUIPMENT: *(Type, model, part number, nomenclature, Federal Item Name, serial numbers)*FEDERAL STOCK NO: *(If furnished by the acquiring activity)*NATIONAL STOCK NUMBER: *(If furnished by the acquiring activity)*TITLE: *(Operating Instructions, Maintenance Instructions, Parts List, as appropriate)*ADDITIONAL IDENTIFICATION (if any): *(Volumes, Parts, and so forth)*DATE: *(If any)*

2. **ADDITIONAL COPIES:** Additional copies are available from _____. *(Preparing activity will furnish information, but if no information is furnished, this paragraph will be omitted and the following paragraph moved up into its place.)*

3. **FILE LOCATION:** The above described commercial manual is filed in _____. *(Each library will fill this in if this identifying technical publication sheet is filed separately from the commercial manual.)*

4. **AUTHORITY NOTICE, DISTRIBUTION STATEMENT, DISCLOSURE NOTICE** (as applicable, in accordance with MIL-DTL-24784).

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SUPPLEMENTAL DATA

1. **LIST OF AFFECTED PAGES IN BASIC MANUAL.** This list will identify pages by number, and date thereon that have been deleted and added by incorporation of supplemental data.
2. **SUPPLEMENTARY INFORMATION.** The information contained in the above identified commercial manual is supplemented as follows *(data will be inserted by the contractor as required by the acquiring activity)*:
 - a. Introduction and description.
 - b. Preparation for use and installation.
 - c. General theory of operation.
 - d. Operating and maintenance instructions.
 - e. Parts list.

FIGURE 2. Identifying technical publication sheet for commercial manual/supplemental data (example).

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APPENDIX A

COTS MANUALS EVALUATION

A.1 SCOPE

A.1.1 Scope. This appendix may be used by contracting activities to evaluate COTS manuals to determine their acceptability for use by Department of Defense activities. This appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

A.1.2 Application. This appendix is intended to be copied or reproduced and completed to determine whether or not the reviewed manuals prove to be acceptable or non-acceptable. Appendix A, Manuals Evaluation Checklist and Appendix B, Acceptability Certification are companions in that decisions reflected on the completed certification reflect evaluations shown on the completed checklist.

A.1.3 Limitations. This appendix is limited in that it provides evaluation results and recommended actions(s) to be taken concerning the use and acquisition of COTS manuals only. In itself, it is not to be construed as an acquisition document, but may be helpful in selecting applicable supplemental data.

A.2 COTS MANUAL EVALUATION

A.2.1 Explanations of columns - manuals evaluation checklist.

- a. The REQUIREMENTS - (PARAGRAPH) column contains the name of the requirement followed by the number of the paragraph where the requirement is located.
- b. The ACCEPTABLE column has four subcolumns. If the manual contains the adjacent requirement and it is acceptable, mark an "X" in the YES column. If the manual does not contain the requirement or it is not acceptable, mark an "X" in the NO column. If the manual does not completely contain the requirements, or if the material is incorrect, mark an X in the INCOR/IMCOMP (INCORRECT/INCOMPLETE) column and make appropriate comments in the REMARKS column. If the listed requirement is not needed, mark an "X" in the NA (NOT APPLICABLE) column.
- c. Make necessary comments in REMARKS column. If more space is needed, add extra sheet(s) of paper.

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APPENDIX A

MANUALS EVALUATION CHECKLIST
(Commercial-off-the-Shelf)

Procurement/Contract No: _____ Equipment model no: _____					
Manual pub no: _____ Equipment name: _____					
REQUIREMENTS - (PARAGRAPH)	ACCEPTABLE				REMARKS
(Make an "x" in applicable blocks. Fill in additional requirements, if applicable)	YES	NO	INCOR/ INCOMPL	NA	
Comprehensibility and readability - (3.1.1.1)					
Arrangement - (3.1.1.2)					
Legibility - (3.1.1.3)					
Size - (3.1.1.4)					
Safety - (3.1.1.5)					
Dangers, warnings, cautions, notes - (3.1.1.6)					
Federal environmental protection standards - (3.1.1.7)					
Illustrations - (3.1.1.8)					
Maintenance - (3.1.1.9)					
Cover, title page - (3.2.1.1)					
Table of contents - (3.2.1.2)					
Safety precautions - (3.2.1.3)					
Introduction - (3.2.2)					
Preparation for use - (3.2.3)					
Installation instructions - (3.2.4)					
Principles of operation - (3.2.5)					
Operating instructions - (3.2.6)					
Maintenance and servicing instructions (preventive and corrective) - (3.2.7)					
Cleaning and lubrication - (3.2.7.1)					
Performance verification - (3.2.7.2)					
Inspection - (3.2.7.3)					
Troubleshooting - (3.2.7.4)					
Disassembly, repair, replacement, reassembly - (3.2.7.5)					

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APPENDIX A

MANUALS EVALUATION CHECKLIST – (Cont'd)
(Commercial-off-the-Shelf)

REQUIREMENTS - (PARAGRAPH)	ACCEPTABLE				REMARKS
(Make an "x" in applicable blocks. Fill in additional requirements, if applicable)	YES	NO	INCOR/ INCOMPL	NA	
Reprogramming - (3.2.8)					
Preparation for shipment - (3.2.9)					
Storage - (3.2.10)					
Parts list - (3.2.11)					
Illustrations and diagrams - (3.2.12)					
Illustrations – (3.2.12.1)					
Diagrams - (3.2.12.2)					
Overhaul instructions - (3.2.13)					

APPLICABLE REQUIREMENTS HAVE BEEN EVALUATED AS INDICATED ABOVE

PUBLICATIONS REVIEW ACTIVITY:

ACTIVITY REVIEWER:

(signature)

DATE:

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APPENDIX B

COTS MANUAL ACCEPTABILITY CERTIFICATION

B.1 SCOPE

B.1.1 Scope. This appendix may be used as required by the Government to certify the acceptability or non-acceptability of COTS manuals. This appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

B.1.2 Application. This appendix is intended to be copied or reproduced and completed when the COTS manuals are evaluated by use of Appendix A. It will reflect the evaluations shown on the Manuals Evaluation Checklist, Appendix A

B.2 ACCEPTABILITY

B.1.1 Certification. If the COTS manual is determined to be acceptable, the ACCEPTABLE block will be marked with an "X", and one of the sub-boxes must be marked to indicate any further action required. When the COTS manuals are not acceptable, the NOT ACCEPTABLE block will be marked.

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APPENDIX B

COTS MANUAL ACCEPTABILITY CERTIFICATION

Procurement/Contract No: _____
Equipment Model No: _____
Equipment Name: _____
Manual Publication No: _____

- ☐ - ACCEPTABLE:
- ☐ No further action required - use as is.
 - ☐ Make corrections/substitutions - (attach sheet specifying details).
 - ☐ Supplement manual in accordance with Appendix C - use completed COTS Manual Evaluation Checklist to fill in the Content/Format/Selection Summary Sheet (Appendix C).
- ☐ - NOT ACCEPTABLE (Prepare TM per applicable military specification).

The above recommendation(s) are based on the completed COTS Manual Evaluation Checklist.

PUBLICATIONS REVIEW ACTIVITY: _____

ACTIVITY REVIEWER: _____ DATE: _____
(signature)

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APPENDIX C

CONTENT AND FORMAT SELECTION SUMMARY

C.1 SCOPE

C.1.1 Scope. Completion of the Content and Format Selection Summary Sheet may be used for acquisition of supplemental data for COTS manuals. This appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

C.2 SELECTION SUMMARY

C.2.1 Content and format selection summary sheet(s). The summary sheet(s) (the following pages) may be reproduced or adapted for specific application; however, the content and format should remain unchanged.

C.2.2 Completion of summary sheets. The Government is responsible for filling in the pertinent information (contract number, manufacturer, model number, acquiring or contracting activity, and so forth) at the top of the sheet and for indicating data required. All supplemental data required by this specification for a specific acquisition should be indicated by an "X" in the "Selected Content" column.

C.2.3 Explanation of columns - content and format selection summary sheet. Column (1) is self-explanatory. Columns (2) and (3) are the names of requirements and their respective paragraph numbers in this specification. Column (4a) should be marked with an "X" for each item or requirement applicable to the solicitation or acquisition. Column (4b) is provided to allow for remarks when explanations of selected requirements are needed.

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APPENDIX C

CONTENT/FORMAT SELECTION SUMMARY SHEET

SUPPLEMENTAL DATA FOR: _____

MANUFACTURER: _____

CONTRACT NO: _____

NOTE: Applicable requirements are indicated by an "x" in column 4a or explanation in column 4b.

(1) Item no.	(2) Requirements	(3) Applicable paragraph no.	(4) Selection	
			(a) Selected content	(b) Explanation/remarks
1	Identifying technical publication sheet	3.3.1		
2	Style, format, form	3.3.2		
3	Safety precautions	3.3.3c 3.2.1.3		
4	Cover/title page	3.3.3a 3.2.1.1		
5	List of effective pages	3.3.3b 3.3.10		
6	Table of contents	3.3.3d 3.2.1.2		
7	Reporting of errors statement	3.3.3e 3.3.11		
8	Maintenance forms and records	3.3.3f		
9	Administrative storage	3.3.3g		
10	Destruction of military material	3.3.3h		
11	Lubrication instructions	3.3.3i 3.3.12		
12	Preventive maintenance, checks and services	3.3.3j		
13	Spare and repair parts	3.3.3k 3.3.13		

Sheet 1 of ____

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APPENDIX C

CONTENT/FORMAT SELECTION SUMMARY SHEET (Cont'd)

CONTRACT NO: _____

(1) Item No.	(2) Requirements	(3) Applicable Paragraph No.	(4) Selection	
			(a) Selected Content	(b) Explanation/Remarks
14	Recommend changes, user activity comment sheet, TM deficiency report	3.3.3l		
15	Other requirements as indicated on Appendix A Manual Evaluation checklist	3.3.3m		
16	Copyrights and proprietary information credit line	3.3.4		
17	Warranty information	3.3.5		
18	Advertising	3.3.6		
19	Equipment and model coverage	3.3.7		
20	End item identification	3.3.8		
21	Publication number and date	3.3.9		
22	Accuracy	3.4		
23	Changes packages	3.5.1		
24	Revisions	3.5.2		

Sheet 2 of ____

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Custodian:
Navy – SH

Preparing Activity:
Navy – SH
(Project TMSS-N243-000)

Review Activity:
Navy – EC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.