TECHNICAL MANUAL

OPERATOR, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

WATER PURIFICATION BARGES
(NSN 4610-01-234-2165)
Volume 20
SUPPLEMENTAL DATA

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and the content requirements normally associated with Army technical manuals. This technical manual does, however, contain all essential information required to operate and maintain the equipment.

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THIS PUBLICATION HAS BEEN REPRINTED FOR STOCK ONLY, AND INCLUDES NEW CHANGE 1 DATED 15 OCTOBER 1992.

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30 MAY 1991

CHANGE

NO. 2

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 3 AUGUST 1995

OPERATOR, UNIT, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL
FOR

WATER PURIFICATION BARGES
(NSN 4610-01-234-2165)
VOLUME 20
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NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
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OPERATOR, UNIT,
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MAINTENANCE MANUAL
FOR

WATER PURIFICATION BARGES
(NSN 1930-01-234-2165)
Volume 20
SUPPLEMENTAL DATA

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WARNINGS AND SAFETY NOTICES

WARNING

DANGEROUS VOLTAGES AND HAZARDOUS MATERIALS
ARE USED IN THIS EQUIPMENT.
DO NOT TAKE CHANCES!

GENERAL WARNINGS

- **Always redtag electrical equipment, controls, circuits, and switches before beginning repairs.**
- **Do not service or adjust high voltage electrical equipment when alone.**
- **Do not overload circuits.**
- **Always use authorized, insulated tools and test equipment when working on electrical equipment.**
- **Remove all jewelry before working on or around electrical equipment with exposed current-carrying areas.**
- **Do not wear clothing with exposed metal fasteners when working on electrical equipment.**
- **Always use approved breathing apparatus when working with chemicals.**
- **Avoid chemical contact with eyes, skin, and clothing.**
- **Always wear safety glasses, gloves, and rubber aprons when handling chemicals.**
- **Wear protective clothing and safety glasses as required when working on barge equipment.**
- **Always wear approved ear protection in noise hazard areas.**

SPECIFIC WARNINGS

- **Do not connect any new circuit to an existing circuit.**
- **Do not energize circuits if water condensation is present.**
- **If any sparks are seen, stop operation immediately. Determine cause and take corrective action.**
- **Never touch radio antennas of fixed-base radio transmitters. When transmitting, antennas contain high voltage.**
- **Always use approved breathing apparatus when handling material in multimedia filters and chlorination unit descaling acid crystals. Do not breathe dust from these materials.**
- **Avoid breathing vapors from coagulant aid chemicals. Use in a well-ventilated area. In case of chemical contact with skin, wash with water. For eyes, immediately flush at eyewash station and obtain medical help as soon as possible.**
- **Always wear work gloves and shirts with full-length, buttoned sleeves when handling fuel oil and gasoline.**
- **Smoking or open flames while handling fuel oil or gases is prohibited. Only minimum number of personnel required to conduct fueling operation is permitted in the fueling area.**

- **Before starting any repairs on compressed air system, always release pressure from air receiver and compressor and open and red tag circuit breakers.**
- **On air compressor, do not adjust automatic regulator switch (pressure switch) and pilot valve settings.**
- **To avoid flying particles lodging in eyes, do not use compressed air to "dust- off" clothing or workspace.**
- **Stay clear of anchor cables when operating anchor winches.**
- **Always wear safety glasses or face shield when using power tools.**
- **Always wear lifevests when on weatherdeck and throughout the barge during storm conditions.**
- **Lifevests are to be worn at all times aboard workboat.**
- **Only qualified persons will operate and maintain arc and fuel gas welders.**
- **When welding, always make sure those working with or near the welder wear proper clothing: heavy, hole-free gloves, heavy shirt, cuffless trousers, high shoes, and cap. Keep clothing dry and free of oil and other flammable substances.**
- **Use dry, heavy canvas drop cloth to cover work area and adjacent deck when arc welding.**
- **Before welding on bulkheads, deck plating and similar surfaces, always check carefully to make sure that the other side of the surface does not hide fuel, compressed materials, electrical equipment or wiring. Station a watch with fire extinguisher on the other side of the bulkheads and deck plating prior to welding.**
- **When welding, keep your head out of the fumes and make sure area is well ventilated.**
- **Before welding on surfaces which have been cleaned with cleaning solutions containing chlorinated hydrocarbons, always wash with water, dry, gas-free, and ventilate area thoroughly.**
- **Use shield with proper filter lens when welding. Do not allow others near welding operations to assist or observe without proper eye protection. This must include side shields during sag chipping operations.**
- **Warn personnel in area during welding operations not to look at arc or expose themselves to hot spatter or metal.**
- **Before welding on fuel oil or sludge tanks, make sure the tank is gas-free by:**
  - **Removing all liquid from tank.**
  - **Cleaning tank thoroughly.**
  - **Ensuring tank is thoroughly dry.**
  - **Testing to ensure tank is gas-free.**
  - **Forcing ventilation of tank.**
- **Connect arc welding work cable as close to welding area as possible. Work cables connected to barge framework or other locations far from welding site increase the possibility of the welding current passing through lifting chains, crane cables, or other possible circuit paths. This can create fire hazards or weaken lifting chains or crane cables until they break or fall.**
- **Always weld with all doors, portholes, and hatches propped open and necessary ventilation systems operating.**

- **Take frequent breaks away from the area where you are welding.**
- **Do not take oxygen and acetylene tanks into confined area when welding.**
- **Always use a friction lighter to start oxyacetylene torch.**
- **Always maintain all welding equipment in proper working condition. If you have any doubts about the safety of any welding equipment, do not use the welder.**

ELECTRICAL SHOCK SAFETY STEPS

Five safety steps to follow if someone is the victim of electrical shock.

a. Do not try to pull or grab individual.

b. Turn off electrical power when possible.

c. If you can not turn off electrical power, pull, push, or lift person to safety using a wooden pole, rope, or some other insulating material.

d. Get medical help as soon as possible.

e. After injured person is free of contact with source of electrical shock, move person a short distance away and, if needed, start CPR immediately.

INTRODUCTION TO

TM 55-1930-209-14&P-20

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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1. SCOPE

   TM 55-1930-209-14&P covers the Reverse Osmosis Water Purification Barges, Models 300-WPB-1, 300-WPB-2 and 300WPB-3, NSN 1930-01-234-2165. This manual consists of twenty-one volumes.

2. REVERSE OSMOSIS WATER PURIFICATION BARGES

   The Reverse Osmosis Water Purification Barges provide up to 300,000 gallons of drinking water per 24 hour period. The drinking water, converted from seawater or brackish water, is for use by a Rapid Deployment Force in a forward area. When needed, the drinking water can be pumped to a shore facility or to another vessel. This manual provides operation and maintenance procedures for all the component systems on the barges.

3. VOLUME 1 -- NORMAL OPERATIONS

   This volume provides information and procedures on normal Reverse Osmosis Water Purification Barge operations, including barge movement and deployment, communications and electrical power systems, drinking water production, shutdown, and required operational maintenance. Emergency shutdown procedures are also provided.

4. VOLUME 2 -- SEAWATER SYSTEM

   This volume describes operation and maintenance of the seawater system which supplies seawater to the Reverse Osmosis Water Purification Units (ROWPUs) for processing to the air conditioning unit for cooling to the ballast tank for barge trimming to the chlorination unit for priming and cooling, and to the diesel generators for cooling.

5. VOLUME 3 -- REVERSE OSMOSIS WATER PURIFICATION UNIT (ROWPU) SYSTEM

   Volume 3 provides operation and maintenance procedures for the ROWPU System which processes seawater or brackish water to produce drinking water. Normally, this system processes seawater supplied by the seawater system (TM 55-1930-209-14&P-2) to create product water. Chlorine is then added to this product water by the chlorination system (TM 55-1930-209-14&P-4). The resultant drinking water is discharged into four storage tanks that are part of the drinking water system (TM 55-1930-209-14&P-5).

6. VOLUME 4 -- CHLORINATION SYSTEM

   Operation and maintenance procedures for the chlorination system onboard the Water Purification Barges are contained in this volume. This system produces chlorine in a sodium hypochlorite solution, upon demand, to water processed by the ROWPU system just before the water enters the four drinking water storage tanks.

7. VOLUME 5 -- DRINKING WATER SYSTEM

The drinking water system provides storage for water produced by the ROWPUs and includes pumps and valves to move this water from onboard storage tanks to the shore discharge system, to another vessel, or overboard. The drinking water system also provides a pressurized water supply for drinking and washing onboard the barges.

8. VOLUME 6 -- SHORE DISCHARGE SYSTEM

This volume provides operation and maintenance procedures for the shore discharge system which transfers drinking water from barge storage tanks to holding/storage facilities ashore.

9. VOLUME 7 -- COMPRESSED AIR SYSTEM

Volume 7 describes the operation and maintenance of the compressed air system which provides compressed air to five air stations in the ROWPU space, one in the workshop, and one on stem weatherdeck. This system also provides compressed air to two air stations for blowdown of seachests in void 2 starboard and void 4 port. Compressed air is used on the barges to operate air-powered impact tools, to propel air through the shore discharge hose, to blowdown seachest, and for general cleaning blowdown.

10. VOLUME 8 -- FUEL OIL SYSTEM

This volume provides operation and maintenance procedures for the fuel oil system which functions as a centralized receiving storage and distribution system for diesel fuel used for barge operations. This onboard fuel system provides fuel for two 155 kW diesel ship service generators, a 20 kW ship auxiliary generator, two ROWPU high-pressure pump diesel engines, and a fueling station for the barge workboat.

11. VOLUME 9 -- ELECTRICAL POWER SYSTEMS

Operation and maintenance procedures for the two electrical power systems installed aboard the Water Purification Barges are contained in Volume 9. The normal electrical power system generates, controls and distributes all electrical power for operating the water purification system and its auxiliary systems. The emergency electrical system supplies 24 Vdc from a battery bank to 24 Vdc equipment and converts to 24 Vdc through an inverter to 120 Vac to power emergency lighting and equipment.

12. VOLUME 10 -- LIGHTING SYSTEM

Volume 10 contains operation and maintenance procedures for the onboard lighting systems for the Water Purification Barges. This system supplies interior and exterior lighting. Normal and emergency interior lighting is provided in the deckhouse ROWPU space, dayroom, workshop, and voids. Exterior lighting consists of searchlights and floodlights for use at night or during reduced visibility. Lights on the weatherdecks and standard navigation and status lights are for use during operation and towing.

13. VOLUME 11 -- EQUIPMENT MONITORING SYSTEM

This volume provides operation and maintenance procedures for the equipment monitoring system which monitors the operation of several equipment components onboard the Water Purification Barges. This system monitors operating conditions such as amount of drinking water in storage tanks and temperature of diesel engine cooling water. Sensors detect unacceptable operating conditions, the main processor flashes at double intensity and remote alarms (horns, strobe lights and buzzer alert crewmembers that corrective action is necessary.

14. VOLUME 12 -- COMMUNICATIONS SYSTEM

Operation and maintenance procedures for the communications system are provided in Volume 12. This system consists of three separate communications methods, radio communications, foghorn and intercom telephones.

15. VOLUME 13 -- HANDLING EQUIPMENT

This volume contains operation and maintenance procedures for handling equipment used for lifting, transporting and repositioning equipment and materials onboard the barges. The system includes a bridge crane, bow crane and a void 4 trolley hoist.

16. VOLUME 14 -- ANCHOR, MOORING, AND TOWING EQUIPMENT

Volume 14 describes the operation and maintenance procedures for the anchor mooring, and towing equipment on the Water Purification Barges. This equipment provides a method to hold (anchor) the barges in a fixed position offshore, at dockside, or next to another vessel and a method to move the barges from one location to another.

17. VOLUME 15 -- MISCELLANEOUS EQUIPMENT (DAYROOM, WORKSHOP, ACCESSES, AND SANITATION SYSTEMS)

Volume 15 addresses operation and maintenance procedures for miscellaneous equipment installed on the Water Purification Barges. This equipment includes the dayroom on the forward starboard side of deckhouse, the workshop on the forward portside of deckhouse, accesses such as deckhouse doors and portholes and various accesses to and from the voids, and two separate sanitation systems (toilets and bilge). Additional equipment addressed in this volume includes: guard rails, rubber fendering, removable floor mats, eyewash stations, component labels, caution, warning and danger signs, and storage areas.

18. VOLUME 16 -- VENTILATION, HEATING, AND AIR CONDITIONING SYSTEMS

This volume contains operation and maintenance procedures for the deckhouse and voids ventilation systems and the heating and air conditioning (HAC) system installed on the Water Purification Barges. The ventilation system provides fresh air circulation in the deckhouse and voids with 17 hatches and 10 ventilation fans. The HAC controls the temperature in the dayroom and deckhouse.

19. VOLUME 17 -- WORKBOAT, LIFESAVING, AND FIREFIGHTING EQUIPMENT

Volume 17 includes procedures for the operation and maintenance of:

a. Workboat -- provides water transportation for crew members and visitors, small cargo items, transportation of the messenger line for the shore discharge hose and similar work-related tasks associated with operating the Water Purification Barges.

b. Lifesaving Equipment -- Installed on the barges and consisting of 2 liferafts, 15 Type II and 24 Type V lifevests and 4 lifesaving rings.

c. Firefighting Equipment -- installed on the barges and consisting of Halon 1301 system, 2 CO_2 hose reel units, a smoke detector system, 17 portable CO_2 fire extinguishers, 5 dry chemical fire extinguishers, 5 self-contained breathing apparatuses, and a portable, engine driven firefighting pump. The workboat also has a 1 O0-pound, portable, dry chemical fire extinguisher.

20. VOLUME 18 -- SUPPORTING APPENDICES FOR VOLUMES 1-17

Volume 18 contains the Maintenance Allocation Chart, Components of End Item List, Tools and Test Equipment List, Expendable/Durable Supplies and Materials List and the Repair Parts and Special Tools List.

All of the information contained in this volume is common to volumes 1-17 and does not appear in each individual volume.

Appendix A in volumes 1-17 provides information unique to each volume. Appendix B in volumes 1-17 provides manufacturers manuals and instructions unique to the system described in each volume. Appendixes C-G are located in Volume 18.

21. VOLUME 19 -- PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Volume 19 contains PMCS pertinent to all onboard systems for the Reverse Osmosis Water Purification Barges.

22. VOLUME 20 -- SUPPLEMENTAL DATA

Volume 20 contains the Basic Issue Items List, and Additional Authorization List for all onboard systems for the Reverse Osmosis Water Purification Barges.

23. VOLUME 21 -- This volume contains operation and maintenance procedures for the 20-ton double drum diesel engine winch used on the Water Purification Barges.

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TOOLS AND TEST EQUIPMENT (TTEL)
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

NOTE

The following appendices, common to all TM's in this series, are in TM 55-1930-209-14&P-20.

COMPONENTS OF END ITEM LIST (COEIL)
ADDITIONAL AUTHORIZED ITEM LIST (AAL)
BASIC ISSUE ITEMS LIST

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CHAPTER 1 INTRODUCTION

Section I. General Information

1-1. Purpose. This technical manual (TM) provides the supplemental data for parts and material which supports the Water Purification Barge. Unless otherwise specialized, the data is applicable to Barges 1, 2, and 3. Location of major barge components is shown in Figures 1-1,1-2, and 1-3.

1-2. Scope. This chapter contains general information concerning the use of this TM and its data. Chapter 2 contains reference information for operation and maintenance for the Reverse Osmosis Water Purification Unit (ROWPU) barge. Chapter 3 refers to preventive maintenance information, and the Appendices contain detailed components of end item, and basic issue item list, additional authorization list, and expendable/durable supplies and materials list.

1-3. Maintenance forms and records. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1-4. Reporting equipment improvement recommendations (EIR's). If your ROWPU barge needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF-368 (Quality Deficiency Report). Mail it to us at USATROSCOM, 4300 Goodfellow Blvd., ATTN: AMSTR-MMTS, St. Louis, MO 63120-1798.

1-5. Destruction of Army material to prevent enemy use. This shall be as directed in TM 750-244-3.

1-6. Abbreviations and terms. Definition of abbreviations and unusual terms used in this TM are contained in the glossary and in MIL-STD-12 Abbreviations for Use on Drawings, and in Specifications, Standards, and Technical Documents.

1-7. Warranty information. Authorized commercial equipment or system components assigned to the ROWPU barge may be warranted against operating defect or failure for a specific period of time (e.g., 12 months or 500 hours of operation). Warranty starts on the date found on DA Form 2410 or DA Form 240-816 in the logbook. Report all defects in material or workmanship to your supervisor who will take appropriate action.

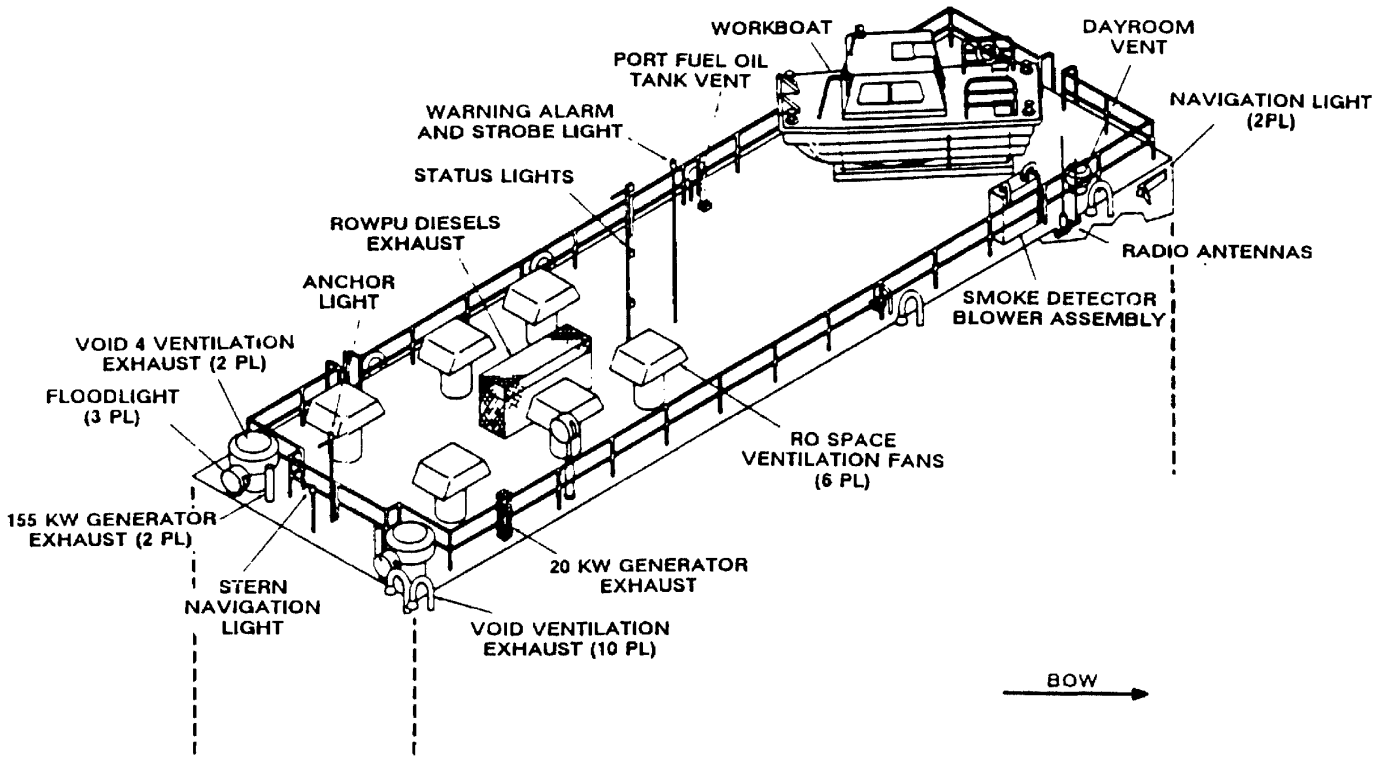

Figure 1-1. Major Components of ROWPU Barge Systems and Equipment - Deckhouse Roof (Sheet 1 of 3)

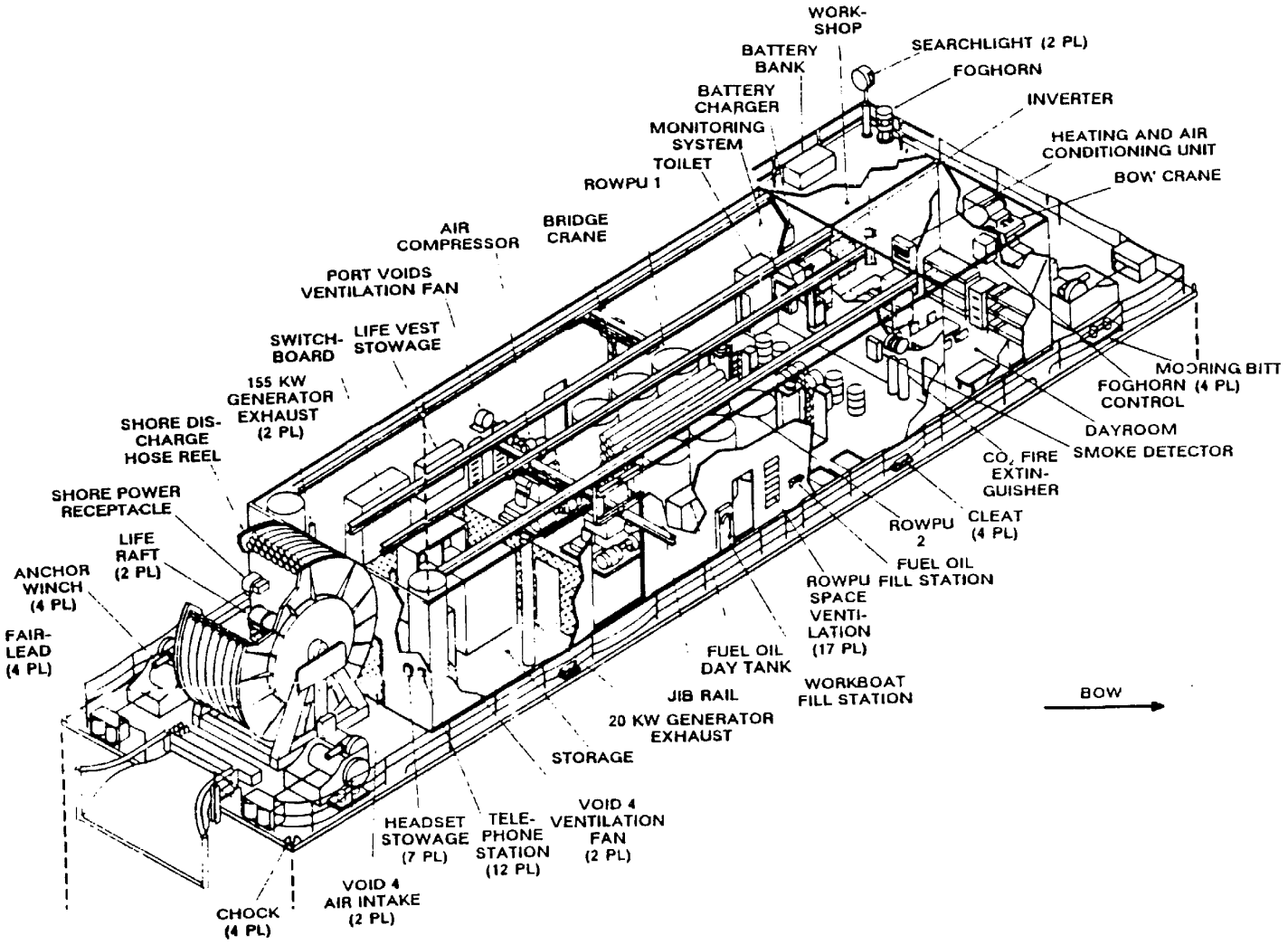

Figure 1-1. Major Components of ROWPU Barge Systems and Equipment - Deckhouse (Sheet 2 of 3)

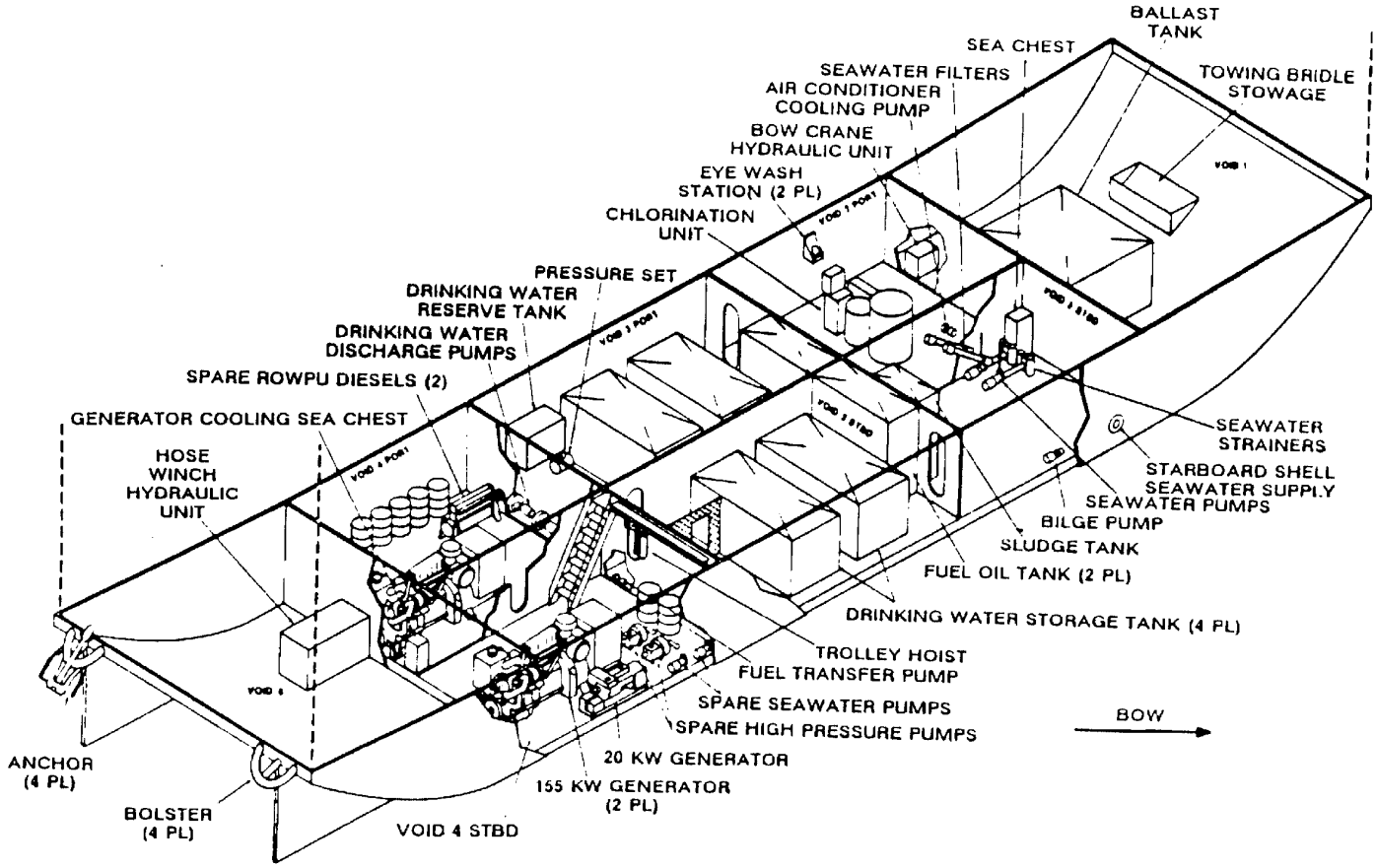

Figure 1-1. Major Components of ROWPU Barge Systems and Equipment - Voids (Sheet 3 of 3)

Section II. Equipment Description and Data

1-8. Equipment description, safety, case, and handling

a. Description

1. A ROWPU barge consists of two 150,000 gpd reverse osmosis water purification units installed onboard a nonpropelled deck cargo barge modified to permanently house and support these water purification units, processing and support equipment, necessary supplies and material, and operating personnel.

2. Drinking water can be produced from seawater, or other water sources such as estuaries, rivers, or inland bodies of water to which a ROWPU barge may be towed.

b. Performance characteristics. Under ideal conditions and with both onboard ROWPUs operating at least 10 hours out of every 12 (average 2 hours per unit for periodic maintenance and servicing), drinking water production should be:

1. Each ROWPU unit - 150,000 gal per 24 hours.

2. Total barge capacity - 300,000 gal per 24 hours.

c. Equipment specifications

1.	Length overall	120 ft
2.	Beam, molded	33 ft
3.	Depth, molded	10.5 ft
4.	Displacement:	
	(a) Light	425 tons
	(b) Loaded	505 tons
5.	Draft:	
	(a) Light	5 ft
	(b) Loaded	5 ft 8 in.
6.	Tank capacities:	
	(a) Drinking water storage tanks (4)	15,000 gal total
	(b) Water reserve tank	250 gal
	(c) Fuel oil storage tanks (2)	7,200 gal
	(d) Fuel oil day tank	320 gal
	(e) Sludge tank	500 gal
	(f) Ballast tank	10,000 gal
	(g) PE-250 fire & bilge pump gasoline tank	6 gal

7. Personnel allowance:

(a) Assigned TO/E manning per barge 15

(b) Support personnel as directed

d. Special limitations

1. Barge cannot operate where water depth is less than 15 ft at low tide.

2. Barge cannot be safely anchored in waters deeper than 50 ft.

3. Barge cannot provide drinking water to a shore facility if anchored more than 2000 ft from shoreline.

4. Barge cannot operate in sea conditions exceeding Sea State 3. Barge may weather Sea State 4 if riding on one anchor rigged with bridle to bow winches and shore discharge hose is retrieved.

5. Barge cannot be towed in Sea State 3 at speeds in excess of 8 knots.

6. Barge cannot operate beyond 7 days without refueling. Other consumables onboard may last about 90 days.

7. Barge crews must be billeted ashore and transported to barge as crews change.

8. Barge bilge and waste matter must be contained for disposal in accordance with regulations and environmental requirements.

9. Barge personnel must follow all safety procedures and requirements while attending to the ROWPU barge and its operations.

CHAPTER 2

OPERATING INSTRUCTIONS

Operating and maintenance instructions for each operating system on the ROWPU barge are contained in TM 55-1930-209-14&P-1 thru TM 55-1930-209-14&P-17. See Appendix A of this TM for a complete system-by system listing of these TM's.

CHAPTER 3

PREVENTIVE MAINTENANCE INSTRUCTIONS

Preventive maintenance checks and services instructions for each operating system or component on the ROWPU barge is contained in TM 55-1930-209-14&P-19. See Appendix A of this TM.

APPENDIX A

REFERENCES

A-1. Scope

This appendix lists all forms, field manuals, technical manuals, and miscellaneous publications referenced in this manual.

A-2. Forms

Equipment Inspection and Maintenance Worksheet	DA Form 2404
Quality Deficiency Report	SF-368
Recommended Changes to Publications and Blank Forms	DA Form 2028
Recommended Changes to Equipment Technical Publications	DA Form 2028-2 DA Form 2410 DA Form 2408-16

A-3. Field Manuals

First Aid for Soldiers FM 21-11

A-4. Technical Manuals

Destruction of Material to Prevent Enemy Use	TM 750-244-3
Water Purification Barges 300-WPB-XXX Technical Manuals:	
Normal Operations	TM 55-1930-209 14&P-1
Seawater System	TM 55-1930-209 14&P-2
Reverse Osmosis Water Purification Unit (ROWPU) System	TM 55-1930-209 14&P-3
Chlorination System	TM 55-1930-209 14&P-4
Drinking Water System	TM 55-1930-209 14&P-5
Shore Discharge System	TM 55-1930-209 14&P-6
Compressed Air System	TM 55-1930-209 14&P-7
Fuel Oil System	TM 55-1930-209 14&P-8
Electrical Power Systems	TM 55-1930-209 14&P-9
Lighting System	TM 55-1930-209 14&P-10
Equipment Monitoring System	TM 55-1930-209 14&P-11
Communications System	TM 55-1930-209 14&P-12
Handling Equipment	TM 55-1930-209 14&P-13
Anchoring, Mooring, and Towing Equipment	TM 55-1930-209 14&P-14

Miscellaneous Equipment: Dayroom, Workshop,	
Accesses, and Sanitation Systems	TM 55-1930-209 14&P-15
Ventilation, Heating, and Air Conditioning Systems	TM 55-1930-209 14&P-16
Workboat, Lifesaving, and Firefighting Equipment	TM 55-1930-209 14&P-17
Supporting Appendices	TM 55-1930-209 14&P-18
Preventive Maintenance Checks and Services	TM 55-1930-209 14&P-19
Supplemental Data	TM 55-1930-209 14&P-20
Shore Winch	TM 55-1930-209 14&P-21

A-5. Miscellaneous Publications

The Army Maintenance Management System (TAMMS)	DA PAM 738-750
Abbreviations for Use on Drawings, and in Specifications, Standards, and Technical Documents	MIL-STD-12

APPENDIX B

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

Section I. Introduction

B-1. Scope

This appendix lists all components of end item and basic issue items for ROWPU barge 300-WPB-XXX to help you inventory items required for safe and efficient operation.

B-2. General

The Components of End Item and Basic Issue Items Lists are divided into the following sections:

a. Section II. Components of End Item COEI). This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts.

b. Section III. Basic Issue Items (BII). These are the minimum essential items required to place the ROWPU barge in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the ROWPU barge during operation and whenever it is transferred between property accounts. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings:

a. Column (1) Item Number. This column contains sequential item numbers assigned to the alphabetical COEI and BII Lists and used for reference purposes.

b. Column (2) National Stock Number (NSN). Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

c. Column (3) Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. Items listed are used with ROWPU barges 1, 2, and 3.

d. Column (4) Unit of Measure (U/M). Indicates the measure used in performing the actual operational/ maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr).

e. Column (5) Quantity required (Qty rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
1		ALARM, CHEMICAL AGENT, AUTOMATIC: PORTABLE MANPACK	EA	1
2		BINOCULAR, MODULAR CONSTRUCTION, MIL SCALE RETICLE 7 X 50 MM W/E	EA	1
3		CHARGER RADIAC DETECTOR: PP-15781 PD	EA	1
4		INSTL KIT MK-1445/VRC-47 F/VRC-47 (INSTL NOT COVERED BY SPEC KIT)	EA	1
5		INSTL KIT MK-1865/VRC F/KY-57 W/AN/VRC-12 OR AN/VRC-47 IN S250/S280	EA	1
6		LAUNCHER, GRENADE, 40 MILLIMETER SGLE SHOT, RIFLE MTD (DTCHBLE W/E)	EA	1
7		MACHINE GUN, CALIBER .50 HB FLEX (GROUND & VEHICLE) W/E	EA	1
8		MOUNT GUN RING CAL .50	EA	1
9		POWER SUPPLY: PP-6224/U	EA	1
10		POWER SUPPLY VEHICLE: HYP-57frSEC	EA	1
11		RADIAC METER: IM-93/UD	EA	1
12		RADIAC METER: IM-174/PD	EA	1
13		RADIAC SET: AN/PDR-27	EA	1
14		RADIAC SET: AN/VRC-47	EA	1
15		RIFLE, 5.56 MILLIMETER: M16A1	EA	1
16		SPEECH SECURITY EQUIPMENT: TSEC/KY-57	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
1	5120-00-596-1034	ADJUSTING TOOL BRAKE SHOE: OPPOSITE ENDS HOOK STYLE (0791) 2566	EA	1
2	6350-01-264-6795	ALARM SMOKE 9 VOLT (56914) 2001	EA	2
3	8415-00-082-6108	APRON RUBBER CHEMICAL PROTECTION (81349) MIL-A-41829	EA	4
4	4240-01-225-7910	AXE, FIREMAN'S, TYPE11, FEDERAL SPECIFI-CATION GGG-A-926	EA	4
5	8460-00-606-8366	BAG, FIRE FIGHTER'S ENSEMBLE (81349) MIL-K-41835	EA	4
6	5120 00-224-1384	BAR, PINCH: BENT CHISEL AND TPR, 1 IN DIA STOCK, 36 IN LG (81348) 666B101TYP351ZE5	EA	1
7	6135-00-930-0030	BATTERY, SIZE D ALKALINE (80058) BA3030V	EA	2
8	6135-00-050-0915	BATTERY BATTLE LANTERN (81349) MIL-B-1815	EA	6
9	6140-00-635-3824	BATTERY FILLER, GRAVITY: JUG TYPE W/PITCH-ER TYPE HDL, 4 QT PLUS 2 PT OTMINUS 1 PT, 18 IN LG X1/4 IN DIA HOSE, 8 IN LG X 8 IN W X12 IN H (72853) 74-4	EA	1
10	5110-00-277-4591	BLADE, HAND HACKSAW: HSS, FLEX TYPE, 24 TEETH PER IN, 0.025 IN THK. 12 IN LG OA (10 BLADES PER BDL) (81348) 666-B-451	BD	1
11	2040-00-268-9250	BOAT HOOK 10 FT (98897) 3P21582-111	EA	2
		BOOTS FIRE FIGHTER		
12	8340-00-753-5935	SIZE 5, (58536) A-A-50371	PR	4
13	8340-00-753-5936	SIZE 6, (58536) A-A-50371	PR	4
14	8340-00-753-5937	SIZE 7, (58536) A-A-50371	PR	4
15	83400-753-5938	SIZE 8, (58536) A-A-50371	PR	4
16	8340-00-753-5939	SIZE 9, (58536) A-A-50371	PR	4
17	8340-00-753-5940	SIZE 10, (58536) A-A-50371	PR	4
18	8340-00-753-5941	SIZE 11, (58536) A-A-50371	PR	4
19	8340-00 753-5942	SIZE 12, (58536) A-A-50371	PR	4
20	8340-00-753-5943	SIZE 13, (58536) A-A-50371	PR	4
21	8340-00-753-5944	SIZE 14, (58536) A-A-50371	PR	4

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
22	8340-00-753-5945	SIZE15, (58536) A-A-50371	PR	4
23	4240-01-297-5986	BREATHING APPARATUS OXYGEN GENERATING NAVY TYPE A4 (2J495) 120320	EA	4
24	4240-01-333-3495	BREATHING APPARATUS, 336-890-302HC	EA	2
25	4220-00-276-9826	BUOYANT VEST WORK TYPE (76155) 160.052	EA	6
26	2040-01-162-3206	CABINET, NON SHOCK RATED (EEBD) (53711)	EA	6
	515-SK8126 ONE	HOLE		
27		CABLE, WIRE ROPE, GALVANIZED, 1/16 IN (33525) 345OT24	FT	AR
28	7125-00-330-0130	CABINET, STORAGE: VEHICLE REPAIR PARTS AND TOOLS BODY WAWOODEN TOP, W/11 DRAW-ERS, 35 1/2 IN H X 25 IN W X 27 IN DEEP (81349) MIL-C-4009	EA	1
29	4240-00-174-1365	CANISTER OBA (81349) MIL-C-17671	EA	36
30	4240-00-238-9959	CANISTER TRAINING (55799) 454013	EA	1
31	5120-00-570-4316	CARRIER, STORAGE BATTERY: HAND, C/O TONGS, W/CARRYING HDL AND BTRY CASE GRIPPINGS PADS, 3/4 IN MIN HJDL DIA (75204) B62	EA	1
32	6140-00-831-3449	CLEANER, BATTERY TERMINAL: CIRC WIRE BRUSH FOR TERM AND CONICAL SHARE, FOR CLAMP W/COVER (50888) A6H3024	EA	1
33		C02 HOSE/REEL, MODEL HR-1 CO2 BOTTLE WEIGHT, 200 LB (62142) HR-1	EA	2
34	8415-01-300-6557	COVERALL, FIRE FIGHTER (81349), MIL-C-24935	EA	1
35	8415-01-300-6558	COVERALL, FIRE FIGHTER (81349), MIL-C-24935	EA	2
36	8415-01-300-6559	COVERALL, FIRE FIGHTER (81349), MIL-C-24935 COVERALL, FIRE RETARDANT ARMID BODY	EA	1
37	8405-01-286-6336	SIZE 36 SHORT, (81349), MIL-C-24945,	EA	3
38	8405-01-286-6337	SIZE 36 REGULAR, (81349), MIL-C-24945	EA	3

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
39	8405-01-286-6338	SIZE 38 SHORT, (81349), MIL-C-24945	EA	3
40	8405-01-286-6339	SIZE 38 REGULAR, (81349), MIL-C-24945	EA	3
41	8405-01-286-6340	SIZE 38 LONG, (81349), MIL-C-24945	EA	3
42	8405-01-286-6341	SIZE 40 SHORT, (81349), MIL-C-24945	EA	3
43	8405-01-286-6342	SIZE 40 REGULAR, (81349), MIL-C-24945	EA	3
44	8405-01-286-6343	SIZE 40 LONG, (81349), MIL-C-24945	EA	3
45	8405-01-286-6344	SIZE 42 SHORT, (81349), MIL-C-24945	EA	3
46	8405-01-286-6345	SIZE 42 REGULAR, (81349), MIL-C-24945	EA	3
47	8405-01-286-6346	SIZE 42 LONG, (81349), MIL-C-24945	EA	3
48	8405-01-286-6347	SIZE 44 SHORT, (81349), MIL-C-24945	EA	3
49	8405-01-286-6348	SIZE 44 REGULAR, (81349), MIL-C-24945	EA	3
50	8405-01-286-6349	SIZE 44 LONG, (81349), MIL-C-24945	EA	3
51	8405-01-286-6350	SIZE 46 SHORT, (81349), MIL-C-24945	EA	3
51	8405-01-286-6351	SIZE 46 SHORT,(81349), MIL-C-24945	EA	3
52	8405-01-286-635	SIZE 46 REGULAR, (81349), MIL-C-24945	EA	3
53	8405-01-286-6353	SIZE 46 REGULAR, (81349), MIL-C-24945	EA	3
54	8405-01-286-6354	SIZE 48 LONG , (81349), MIL-C-24945	EA	3
55	8405-01-286-6354	SIZE 48 LONG, (81349), MIL-C-24945	EA	3
56	5110-00-224-7057	CUTTER, BOLT: RIGID HD TYPE, ANGULAR CUT, 9/16 IN DIA, 36 IN LG (81348) 666-C-740	EA	1
57		CYLINDER, FIRE SYPPRESSION, HALON 1301 (33525)	EA	2
58	5130-00-889-8993	DRILL, ELECTRIC PORTABLE: 1/4 IN SIZE, HVY-DUTY, KEYED JAW CHUCK, STR DR, CLOSED END HDL, AC/DC, 115V, 25/60 HZ, SGL-PH, ELECTRO-MAGNETIC INTERFERENCE SUPPRESSION, FUN-GUS RESISTANT TREATED, 2000 RPM NO LOAD SPEED, 3 PRONG PLUG CONNECTOR (75347) 1070	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
59	5130 00-889-9004	DRILL, ELECTRIC, PORTABLE: 112 IN SIZE, KEYED JAW CHUCK, HVY-DLTY, STR DR, DETACHABLE D-HDL AND SIDE HDL, 650 RPM NO LOAD SPEED, NONREVERSIBLE, AC/DC, 115V, 3 PRONG PLUG CONNECTOR TYPE, SUPPRESSED FOR RADIO INTERFERENCE, FUNGUS RESISTANT TREATED W/CHUCK KEY THREE PRONG PLUG CONNECTOR (81348) WD00661	EA	1
60	5133-01-047-0258	DRILL SET, TWIST: W/25 COMPONENTS AND METAL BOX CONSISTS OF THE FOLLOWING:	SE	1
61	5133-01-112-9537	DRILL TWIST: 11.0 MM DIA	EA	1
62	5133-01-112-9538	DRILL, TWIST: 11.5 MM DIA	EA	1
63	5133-01-112-9539	DRILL, TWIST: 12.0 MM DIA	EA	1
64	5133-01-112-9540	DRILL, TWIST: 12.5 MM DIA	EA	1
65	5133-01-112-9533	DRILL, TWIST: 13.0 MM DIA	EA	1
66	5133-01-115-7994	DRILL, TWIST: 2.0 MM DIA	EA	1
67	5133-01-115-7995	DRILL, TWIST: 2.5 MM DIA	EA	1
68	5133-01-116-0621	DRILL, TWIST: 3.0 MM DIA	EA	1
69	5133-01-118-0720	DRILL, TWIST: 3.5 MM DIA	EA	1
70	5133-01-113-6229	DRILL, TWIST: 4.0 MM DIA	EA	1
71	5133-01-113-6300	DRILL, TWIST: 4.5 MM DIA	EA	1
72	5133-01-113-6301	DRILL, TWIST: 5.0 MM DIA	EA	1
73	5133-01-113-4350	DRILL, TWIST: 1.0 MM DIA	EA	1
74	5133-01-115-7993	DRILL, TWIST: 1.5 MM DIA	EA	1
75	5133-01-112-9535	DRILL, TWIST: 10.0 MM DIA	EA	1
76	5133-01-112-9536	DRILL, TWIST: 10.5 MM DIA	EA	1
77	5133-01-113-6302	DRILL, TWIST: 5.5 MM DIA	EA	1
78	5133-01-113-6303	DRILL, TWIST: 6.0 MM DIA	EA	1
79	5133-01-113-0464	DRILL, TWIST: 6.5 MM DIA	EA	1
80	5133-01-113-6304	DRILL, TWIST: 7.0 MM DIA	EA	1
81	5133-01-113-6305	DRILL, TWIST: 7.5 MM DIA	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
82	5133-01-113-6306	DRILL TWIST: 8.0 MM DIA	EA	1
83	5133-01-113-6307	DRILL, TWIST: 8.5 MM DIA	EA	1
84	5133-01-113-6308	DRILL, TWIST: 9.0 MM DIA	EA	1
85	5133-01-113-9534	DRILL, TWIST: 9.5 MM DIA (80204) ANSI-B94-11M	EA	1
86	5133-00-596-8088	DRILL SET, TWIST: HSS, NO. 2 MORE TAPER FRACTIONAL SERIES, RH, W/CASE CONSISTS OF THE FOLLOWING	SE	1
87	5133-00-228-1331	DRILL, TWIST: 11/16 IN DIA, 5 3/8 IN FLUTE LG, 9 1/4 IN OA LG	EA	1
88	5133-00-189-9324	DRILL, TWIST: 17/32 IN DIA, 4 5/8 IN FLUTE LG, 8 1/2 IN OA LG	EA	1
89	5133-00-228-1325	DRILL, TWIST: 19/321N DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG	EA	1
90	5133-00-228-1329	DRILL, TWIST: 21/32 IN DIA, 5 1/8 IN FLUTE LG, 9 IN OA LG	EA	1
91	5133-00-228-1333	DRILL, TWIST: 23/32 IN DIA, 5 5/8 IN FLUTE LG, 9 1/2 IN OA LG	EA	1
92	5133-00-228-1335	DRILL, TWIST: 3/4 IN DIA, 5 7/8 IN FLUTE LG, 9 3/4 IN OA LG	EA	1
93	5133-00-189-9323	DRILL, TWIST: 33/64 IN DIA, 4 5/8 IN FLUTE LG, 8 1/2 IN OA LG	EA	1
94	5133-00-189-9325	DRILL, TWIST: 35/64 IN DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG	EA	1
95	5133-00-189-9327	DRILL, TWIST: 37/64 IN DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG	EA	1
96	5133-00-228-1326	DRILL, TWIST: 39/64 IN DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG	EA	1
97	5133-00-228-1328	DRILL, TWIST: 41/64 IN DIA, 5 1/8 IN FLUTE LG, 9 IN OA LG	EA	1
98	5133-00-228-1330	DRILL, TWIST: 43/64 IN DIA, 5 3/8 IN FLUTE LG, 9 1/4 IN OA LG	EA	1
99	5133-00-228-1332	DRILL, TWIST: 45/64 IN DIA, 5 5/8 IN FLUTE LG, 9 1/2 IN OA LG	EA	1
100	5133-00-228-1334	DRILL, TWIST: 47/64 IN DIA, 5 7/8 IN FLUTE LG, 9 3/4 IN OA LG	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
101	5133-00-228-1327	DRILL, TWIST: 5/8 IN DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG	EA	1
102	5133-00-189-9326	DRILL, TWIST: 9/16 IN DIA, 4 7/8 IN FLUTE LG, 8 3/4 IN OA LG, (81348) 666-D-751	EA	1
103		EXTENSION 1/2 IN DRIVE, 20 IN LG (11243) 2914442-1	EA	2
104	5120-00-540-4273	FACE, HAMMER, INSERTED: 2 IN DIA, SCREW-IN TYPE, HARD PLASTIC, FL (UIW HOLDER, IN-SERTED, HAMMER FACE, NSN 5120009038553 (81348) 666-H-33	EA	2
105	4240-00-202-9473	FACESHIELD, INDUSTRIAL: REPLACEABLE CLEAR PLASTIC MASK W/FOREHED GUARD, EDGES UN-BOUND, TILTABLE HD GEAR SUPPORTED, 0.040 IN THK VISOR, 7 IN TO 9 IN LG, 10 1/2 IN TO 12 1/2 IN W (81348) L-F-36	EA	12
106	6230-00-163-1856	FLASHLIGHT: TWO CELL: WATERTIGHT, NON-ROLL, INCLUDES SPOT LENS, SPARE BULB, AND FLASHING POSTION SWITCH (81348) DOD-F-416	EA	3
107	4210-00-775-0127	FIRE EXTINGUISHER, PORTABLE, C02, MIL-SPEC MIL-E-24269	EA	17
108	4210-00-889-2491	FIRE EXTINGUISHER, PORTABLE, C02, DRY CHEMICAL (62142)	EA	5
109	5110-00-289-9657	FRAME, HAND HACKSAW: ADJ, OPEN PISTOL GRIP HDL, 0 IN TO 3 7/8 IN DEEP THROAT, 10 IN AND 12 IN LG BLADES ACCOMMODATED (90808) 163-20	EA	2
110	5210-01-503-0083	GAGE SET, BOLT AND THREAD: 2.3 MM TO 24 MM IN INCH/DECIMAL EQUIVALENTS BOLT DIA GAGE RANGE AND 0.35 TO 3 MM THD GAGE SIZES (55719) TDM-101	EA	1
111	5210-01-018-2832	GAGE, FORCE, MECHANICAL: S, 8 IN LG, 2 IN SQ DIAL INDICATOR, PUSH OR PULL FORCE, 0 TO 500 GRAMS (08292) L20	EA	1
112	5210-01-045-4781	GAGE, IGNITION, GAP SETTING: 6 WIRE SIZES, 0.89 MM, 1.02 MM, 1.12 MM, 1.37 MM, AND 2.03 MM (55719) FB-360A	EA	2
113	5210-00-221-1893	GAGE, TWIST DRILL AND DRILL ROD: 5 1/2 IN LG, 1 1/2 IN W, 0.07 IN THK OA, NO. SIZE SERIES 1 TO 60 (81348) 66-6-86	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
114	5210-00-273-9865	GAGE, TWIST DRILL: 6 1/4 IN LG, 2 5/16 IN W, 3132 IN THK OA, FRACTIONAL SIZE SERIES 1/16 IN TO 1/2 IN BY 64TH IN RANGE, DECIMAL EQUIV-ALENTS OF HOLE SIZED STAMPED ON FRONT SIZE (81348) 66-6-86	EA	1
115	8412-00-641-4601	GLOVES, CHEMICAL AND OIT PROTECTIVE: RBR, GAUNTLET CUFF, DESIGNED FOR MEN, 14 IN LG, SIZE 11 NRF	PR	12
116	4240-00-052-3776	GOGLES VENTED INDUSTRIAL, ONE PC FRAME AND LENS, SQL APERATURE, PLSTC, MOULDED, LENS TYPE APERTURE ELEMENT, COVER AND FILTER TYPE LENS, HEADGEAR SUPPORT METH-OD, USAGE OVER SPECTACLES DESIGN IN-CLUDED (74936) WA60-540746-0315	PR	4
117	3415-00-517-7754	GRINDING MACHINE, UTILITY: BENCH MTG, 5/8 IN DIA DBL-END SPDL, 3400 RPM, 7 IN MAX DIA, 1 IN -, IMAX THK WHEEL, TILT TYPE WORKREST, ELECT MOTOR, 1/2 HP, AC, 115V, CONSISTS OF THE FOL-LOWING:	EA	1
118	3460-00-882-1228	WHEEL, ABRASIVE: 36 GRIT SIZE	EA	1
119	3450-00-187-8680	WHEEL, ABRASIVE: 90 GRIT SIZE (8134) B74.2TY1	EA	1
120	4930-00-222-2680	GUN, FLUID DIRECT DELIVERY: 11 OZ CAP, ME-TALLIC HOSE AND RIGID GOOSENECK TUBE EXT, 11 IN MIN AND 12 IN MAX EXT LG, PUSH HDL DIS-ENGAGEMENT FROM FOLLOWER FEATURE IN-CLUDED (04043) 620	EA	1
121	5120-00-061-8546	HAMMER, HAND: MACHINISTS, BALL-PEEN, 2 LB HD WT, W/FIBERGLASS HDL (55719) BPN 32A	EA	2
122	5110-00-595-8325	HANDLE, FILE: ADJ S JAWS, 4 1/8 IN LG, 1 IN DIA, 15/16 IN DIA, 4 5/8 IN LG (73792) 890	EA	6
123	5120-00-903-8553	HOLDER, INSERTED HAMMER FACE: 2 IN DIA AC-COM, 13 IN LG (81348) 6566-H-33	EA	2
124		HANDLE, RATCHET, 1/2 IN DRIVE (11243) 291445-1	EA	1
125	4720-00-356-8557	HOSE ASSEMBLY, NONMETALLIC: NATURAL AND/ OR SYNTH, SM BORE INNER SURFACE, NATURAL AND/OR SYNTH MOLDED OUTER COVERING, 2 BRS 1/4-18 NPSM FEMALE THD END CONNEC-TIONS, 1/4 IN ID, 5/8 IN OD, 25 FT LG, 150 PSI WPR, 700 PSI BURTST PRESSURE (81348) 22-H-461	EA	6
126	5120-01-046-5079	KEY SET, SOCKET HEAD SCREW: S, HEX TYPE, L-STYLE W/BAG, CONSISTS OF THE FOLLOWING:	SE	2

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
127	5120-01-045-4886	KEY, SOCKET HEAD SCREW: S, L-HDL, 2.0 MM EXTERNAL HEX WRENCHING SIZE, 49.6 MM NOM OA LG	EA	1
128	5120-01-045-4887	KEY, SOCKET HEAD SCREW: S, L-HDL, 2.5 MM EXTERNAL HEX WRENCHING SIZE, 56.6 MM NOM OA LG	EA	1
129	5120-01-045-4888	KEY, SOCKET HEAD SCREW: S, L-HDL, 3.0 MM EXTERNAL HEX WRENCHING SIZE, 63.3 MM NOM OA LG	EA	1
130	5120-01-045-4889	KEY, SOCKET HEAD SCREW: S, L-HDL, 4.0 MM EXTERNAL HEX WRENCHING SIZE, 72.2 MM NOM OA LG	EA	1
131	5120-01-0454892	KEY, SOCKET HEAD SCREW: S, L-HDL, 7.0 MM EXTERNAL HEX WRENCHING SIZE, 102.3 MM NOM OA LG	EA	1
132	5120-01-045-4893	KEY, SOCKET HEAD SCREW: S, L-HDL, 8.0 MM EXTERNAL HEX WRENCHING SIZE, 111.1 MM NOM OA LG	EA	1
133	5120-01-045-4894	KEY, SOCKET HEAD SCREW: S, L-HDL, 9.0 MM EXTERNAL HEX WRENCHING SIZE 117.0 MM NOM OA LG	EA	1
134	5120-01-045-4895	KEY, SOCKET HEAD SCREW: S, L-HDL, 10.0 MM EXTERNAL HEX WWRENCHING SIZE, 125.9 MM NOM OA LG	EA	1
135	5120-01-045-4896	KEY, SOCKET HEAD SCREW: S, L-HDL, 12.0 MM EXTERNAL HEX SIZE, 156.4 MM NOM OA LG	EA	1
136	5120-01-045-4897	KEY, SOCKET HEAD SCREW: S, L-HDL, 14.0 MM EXTERNAL HEX WRENCHING SIZE, 158.4 MM NOM OA LG	EA	1
137	5120-01-045-4898	KEY, SOCKET HEAD SCREW: S, L-HDL, 17.0 MM EXTERNAL HEX WRENCHING SIZE, 191.6 MM NOM OA LG	EA	1
138	5120-02-045-4899	KEY, SOCKET HEAD SCREW: S, L-HDL, 19.0 MM EXTERNAL HEX WRENCHING SIZE, 222.2 MM NOM OA LG	EA	1
139	5120-01-045-4890	KEY, SOCKET HEQD SCREW: S, L-HDL, 5.0 MM EXTERNAL HEX WRENCHING SIZE, 82.7 MM NOM OA LG	EA	1
140	512001-045-4891	KEY, SOCKET HEAD SCREW; S, L-HDL, 6.0 MM EXTERNAL HEX WRENCHING SIZE, 91.7 MM NOM OA LG	EA F3	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
141	5120-00-935-4641	KEY SET, SOCKET HEAD SCREW: HEX DR, L-TYPE HDL, W/CASE, CONSISTS OF THE FOLLOW-ING:	SE	1
142	5120-00-555-2639	KEY, SOCKET HEAD SCREW: 0.028 IN W ACROSS FLATS, 1 7/32 IN ARM LG	EA	1
143	5120-00-198-5400	KEY, SOCKET HEAD SCREW: 0.035 IN W ACROSS FLATS, 1 7/32 IN ARM LG	EA	1
144	5120-00-198-5401	KEY, SOCKET HEAD SCREW: 0.050 IN W ACROSS FLATS, 1 21/32 IN ARM LG	EA	1
145	5120-00-198-5398	KEY, SOCKET HEAD SCREW: 1/16 IN W ACROSS FLATS 1 3/4 IN ARM LG	EA	1
146	5120-00-198-5391	KEY, SOCKET HEAD SCREW: 1/2 IN W ACROSS FLATS, 5 1/4 IN ARM LG	EA	1
147	5120-00-224-4659	KEY. SOCKET HEAD SCREW: 1/4 IN W ACROSS FLATS, 3 1/4 IN ARM LG	EA	1
148	5120-00-240-5292	KEY, SOCKET HEAD SCREW: 1/8 IN W ACROSS FLATS, 2 1/4 IN ARM LG	EA	1
149	5120-00-240-5300	KEY, SOCKET HEAD SCREW; 3/16 IN W ACROSS FLATS, 2 3/4 IN ARM LG	EA	1
150	5120-00-242-7410	KEY, SOCKET HEAD SCREW: 3/32 IN W ACROSS FLATS, 2 IN ARM LG	EA	1
151	5120-00-222-1489	KEY, SOCKET HEAD SCREW: 3/4 IN W ACROSS FLATS, 7 1/4 IN ARM LG	EA	1
152	5120-00-198-5390	KEY, SOCKET HEAD SCREW: 3/8 IN W ACROSS FLATS, 4 1/4 IN ARM LG	EA	1
153	5120-00-240-5274	KEY, SOCKET HEAD SCREW: 5/16 IN W ACROSS FLATS, 3 3/4 IN ARM LG	EA	1
154	5120-00-198-5392	KEY, SOCKET HEAD SCREW: 5/32 IN W ACROSS FLATS, 2 3/4 IN ARM LG	EA	1
155	5120-0-224-2504	KEY, SOCKET HEAD SCREW: 5/16 IN W ACROSS FLATS, 1 7/8 IN ARM LG	EA	1
156	5120-00-224-2510	KEY, SOCKET HEAD SCREW: 5/8 IN W ACROSS FLATS, 61/4 IN ARM LG	EA	1
157	5120-00-240-5277	KEY, SOCKET HEAD SCREW: 7/16 IN W ACROSS FLATS, 4 3/4 IN ARM LG	EA	1
158	5120-00-242-7411	KEY, SOCKET HEAD SCREW: 7/32 IN W ACROSS FLATS, 3 IN ARM LG	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
159	5120-00-889-2162	KEY, SOCKET HEAD SCREW: 7/64 IN W ACROSS FLATS, 2 1/8 IN ARM LG	EA	1
160	5120-00-240-5268	KEY, SOCKET HEAD SCREW: 9/16 IN W ACROSS FLATS 5 3/4 IN ARM LG	EA	1
161	5120-00-889-2163	KEY, SOCKET HEAD SCREW: 9/64 IN W ACROSS FLATS, 2 3/8 IN ARM LG (702760) 730	EA	1
162	4730-00-542-3359	KIT PIPE REPAIR EMERGENCY (81349) MILR1 7882B	EA	1
163	5180-00-391-1087	KIT TOOL ELECTRICIANS REPAIR (80244)	EA	1
164		RING BUOY, 30 IN O.D. ORANGE MILSPEC: M, L-41 6847E	EA	8
165	4010-00-285-9901	LIFELINE OBA TENDING (81349) MIL-W-2902	EA	4
166	1940-01-015-7346	LIFERAFT,INFLATABLE NAVY MK 6 25 MAN	EA	2
167	4220-00-200-0538	LIFE PRESERVER INHERENTLY BUOYANT VEST TYPE WITH COLLAR (76155) 160.053	EA	18
168	6230-00-146-8898	LIGHT, EXTENSION: 50 FT LG OA, AC, 115/250 V, MDM SCREW LAMP ACCOM CLOSED END GUARD W/HOOK (81348) W-L-661	EA	4
169	4020-00-530-0698	LINE RETRIEVING BUOY ORANGE POLYPROPY-LENE 1 INCH CIR 1700 LB B/S 200 YDS	RL	1
170	4930-00-253-2478	LUBRICATING GUN HAND: HAND 14 OZ CAP, 20 DEG RIGID BENT ANGLE TUBE EXTENSION, HYDR COUPLER, 6000 PSI DISCHARGE PRES-SURE, 61/2 IN EXTENSION LG, W/LOADER FIT-TING	EA	1
171	5120-00-255-1476	MAUL MSHIPS 5LB (81348) GGG-H-86	EA	1
172	6230-00-295-2696	MARKER LIGHT, FLOATING W/MOUNTING BRACK-ET, MIL SPEC MIL-L.-24532 (SH) (81349)	EA	10
173	6135-00-100-0413	MARKER LIGHT BATTERY, MIL SPEC: MIL-B-18/15C BA-23	EA	10
174	6625-00-999-6282	MULTIMETER: AN/URM-105C, PORT RANGES 0 TO 10.100 AND 1000 AT 1,000 OHMS PER V, AC VOLT-AGE: 0 TO 1.10, 100 AND 1000 AT 20000 OHMS PER V, DC VOLTAGE: RES RANGES 0 TO 2 KI-LOHMS, 20 KILOHMS, 200 KILOHMS, 2 MEGO AND 20 MEGO; INTL BTRY SOURCE: 6 112 IN LG X 3 9/32 IN W X 4 1/8 IN H; W/ACCESSORIES 2 TEST CLIPS LEAD (RED AND BLACK) AND TECHNICAL MANUAL (80058) AWURM 105C	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
175		METER, TENSION, DRIVE BELT (IN WORKSHIP (11243) 2414154-1	EA	1
176	5120-00-169-2986	MULTIPLIER, TORQUE WRENCH: POWER DYNE, 3/8 IN FIRST END, 3/4 IN SECOND END SQ INTL DR SIZE, DIAL INDICATOR, INCREMENTS 25 FT-LB, MAX CAP, 1200 FT-LB, W/CARRYING CASE, (U/W NSN 5120-01-008-3632 BAR, TORQUE WRENCH) (08194) DOPT-1200R W-T	EA	1
177		PLIERS TONGUE AND GROOVE JOINT, 9 1/2 IN LG 7663609	EA	1
178	5120-00-224-1532	PLIERS, DIAGONAL-CUTTING 7 IN NRF	EA	1
179	5120-00-278-0352	PLIERS, SLIP-JOINT 6 3/4 IN (71612) 420	EA	1
180	5120-00-595-9551	PLIERS, IGNITION SNAP-RING, 5 IN (80604) C484	EA	1
181	5120-00-248-9407	PLIERS, BATTERY TERMINAL, SELF-LOCKING, 7 IN LG (81348) 666-P-471	EA	1
182	5510-00-260-8953	PLUG, SOFT WOOD (80064) S8800-461043	EA	10
183	5510-00-260-8958	PLUG, SOFT WOOD (80064) S8800-461043	EA	10
184	5510-00-260-8962	PLUG, SOFT WOOD (800604) 803-461043	EA	10
185	5510-00-260-8966	PLUG, SOFT WOOD (80064) 803-461043	EA	10
186	5510-00-260-8969	PLUG, SOFT WOOD (80064) 803-461043	EA	10
187	5510-00-260-8973	PLUG, SOFT WOOD (80064) S8800-461043	EA	10
188	4320-01-186-3377	PUMP, PORTABLE FIREFIGHTING NAVY MOD-1 250 GPM16FT (81884) PE-250	EA	2
189		PROTECTOR, HEARING (52409) RBW-71	EA	15
190	5180-01-115-6873	SCREWDRIVER SET, CROSS TIP, POSIDRIVE: CONSISTS OF THE FOLLOWING:	SE	1
191	5120-01-113-1575	BIT, SCREWDRIVER: NO. 1 TIP, 3 IN. BLADE LG, 3/16 IN BLADE DIA	EA	1
192	5120-01-117-0467	BIT, SCREWDRIVER: NO. 2 TIP, 1 1/2 IN BLADE LG, 1/4 IN BLADE DIA	EA	1
193	5120-01-113-7149	BIT, SCREWDRIVER: NO. 2 TIP, 4 IN BLADE LG, 1/4 IN BLADE DIA	EA	1
194	5120-01-113-0116	BIT, SCREWDRIVER: NO. 3 TIP, 6 IN BLADE LG, 5/16 IN BLADE DIA	EA	1

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(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
195	5120-01-113-7150	BIT, SCREWDRIVER: NO. 4TIP, 8 IN BLADE LG, 3/8 IN BLADE DIA (LOCATED IN WORKSHOP) (55719) SSD250	EA	1
196	5120-00-580-0334	SCREWDRIVER SET, CROSS TIP, STRAIGHT AND OFFSET: CONSISTS OF THE FOLLOWING:	SE	1
197	5120-00-224-7375	SCREWDRIVER, CROSS TIP, STRAIGHT: NO. 4 TIP SIZE, 8 IN LG BL	EA	1
198	5120-00-234-8913	SCREWDRIVER, CROSS TIP: NO. 2 TIP, PLASTIC HDL, 4 IN BLADE LG	EA	1
199	5120-00-2348912	SCREWDRIVER, CROSS TIP: NO.3 TIP, PLASTIC HDL, 6 IN BLADE LG	EA	1
200	5120-00-242-3268	SCREWDRIVER, CROSS TIP: OFFSET, TIP NO. 3 AND 4,6 IN BLADE LG	EA	1
201	5120-00-256-9014	SCREWDRIVER, CROSS TIP: OFFSET, TIP NO. 1 AND 2,43/4 IN BLADE LG	EA	1
202	5120-00-240-8716	SCREWDRIVER, CROSS TIP: STRAIGHT, NO. 1 TIP SIZE, 3 IN BLADE LG (81348) 666S121	EA	1
203		TOOL, REMOVAL, REVERSE OSMOSIS MEM-BRANE ELEMENT (52484) 52100-1	EA	2
204	4140-01-039-9845	VENTILATING PORTABLE GE-V8 GAS POWERED (1 FP59) GEVB-3HP-1500CFM	EA	1
205	5120-01-070-0954	WRENCH KIT: 1 EA OPEN END WRENCH, U-SHAPE, DBL HD SIZE 6 MM X 5MM; 7 MM X 8 MM; 8MM X 7 MM; 10 MM X 9 MM; 9MM X 10MM; 11 MM X 12MM, AND 12 MM X 11 MM; FEELER GAGE, IGNITION PLIER, SPARK TESTING SCREWDRIV-ER, SCREW STARTER, W/BAG (72315) 22-WIM12S	KT	1
206	5120-01-112-9542	WRENCH SET, COMBINATION BOX AND OPEN END: 12 PT, W/BAG, CONSISTS OF THE FOLLOWING:	SE	1
207	5120-01-055-1307	WRENCH, BOX AND OPEN COMBINATION: 26.0 MM SIZE, 356.0 MM OA LG	EA	1
208	5120-00-077-2106	WRENCH, BOX AND OPEN COMBINATION: 17.0 MM SIZE, 238.6 MM OA LG	EA	1
209	5120-00-077-2219	WRENCHM BOX AND OPEN COMBINATION: 23.0 MM SIZE, 335.0 MM OA LG	EA	1
210	5120-01-101-4630	WRENCH, BOX AND OPEN COMBINATION: 20.0 MM SIZE, 283.5 MM OA LG	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
211	5120-01-1136284	WRENCH, BOX AND OPEN COMBINATION: 11.0 MM SIZE, 182.6 MM OA LG	EA	1
212	5120-01-113-6285	WRENCH, BOX AND OPEN COMBINATION: 12.0 MM SIZE, 187.1 MM OA LG	EA	1
213	5120-01-113-6286	WRENCH, BOX AND OPEN COMBINATION: 13.0 MM SIZE, 197.5 MM OA LG	EA	1
214	5120-01-113-6287	WRENCH, BOX AND OPEN COMBINATION: 14.0 MM SIZE, 210.8 MM OA LG	EA	1
215	5120-01-113-6288	WRENCH, BOX AND OPEN COMBINATION: 15.0 MM SIZE 215.1 MM OA LG	EA	1
216	5120-01-113-6289	WRENCH, BOX AND OPEN COMBINATION: 16.0 MM SIZE, 225.0 MM OA LG	EA	1
217	5120-01-113-6290	WRENCH, BOX AND OPEN COMBINATION: 18.0 MM SIZE, 242.5 MM OA LG	EA	1
218	5120-01-113-6291	WRENCH, BOX AND OPEN COMBINATION: 19.0 MM SIZE, 253.3 MM OA LG	EA	1
219	5120-01-113-6292	WRENCH, BOX AND OPEN COMBINATION: 21.0 MM SIZE, 283.5 MM OA LG	EA	1
220	5120-01-113-6293	WRENCH, BOX AND OPEN COMBINATION: 27.0 MM SIZE, 388.0 MM OA LG	EA	1
221	5120-01-113-6294	WRENCH, BOX AND OPEN COMBINATION: 30.0 MM SIZE, 422,9 MM OA LG	EA	1
222	5120-01-113-6295	WRENCH, BOX AND OPEN COMBINATION: 32.0 MM SIZE, 437.1 MM OA LG	EA	1
223	5120-01-113-7134	WRENCH, BOX AND OPEN COMBINATION: 10.0 MM SIZE, 168.3 MM OA LG (80204) ANSI-B107-9	EA	1
224		WRENCH, RATCHET, CROWFOOT, FINETOOTH, 3/8 IN OM DRIVE, STD, CONSISTING OF:	EA	1
225		WRENCH, CROWFOOT, 3/8 IN STD	EA	1
226		WRENCH, CROWFOOT, 7/16 IN STD	EA	1
227		WRENCH, CROWFOOT, 1/2 IN STD	EA	1
228		WRENCH, CROWFOOT, 5/8 IN STD	EA	1
229		WRENCH, CROWFOOT, 11/16 IN STD	EA	1
230		WRENCH, CROWFOOT, 3/4 IN STD	EA	1
231		W3RENCH, CROWFOOT, 13/16 IN STD	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
232		WRENCH, CROWFOOT, 7/8 IN STD	EA	1
233		WRENCH, CROWFOOT, 1 IN STD	EA	1
234		WRENCH, CROWFOOT, 1/2 IN DRIVE (11243) 2914441-1	EA	1
235		WRENCH, FLARE NUT, 12 PT DOUBLEHEAD SET:	SE	1
236	5120-00-935-7365	DOUBLEHEAD SIZE: 3/8 X 7/16 IN	EA	1
237	5120-00-935-7366	DOUBLEHEAD SIZE: 1/2 X 9/16 IN	EA	1
238	5120-00-935-7367	DOUBLEHEAD SIZE: 5/8 X 11/16 IN	EA	1
239	5120-00-935-7368	DOUBLEHEAD SIZE: 314 X 7/8 IN (IN WORKSHOP)	EA	1
240		WRENCH, FLARE NUT, METRIC	SE	1
241		DOUBLEHEAD SET, CONSISTING OF:		
242		DOUBLEHEAD SIXE: 9 X 11 MM	EA	1
243		DOUBLEHEAD SIZE: 10 X 12 MM	EA	1
244		DOUBLEHEAD SIZE: 13 X 14 MM	EA	1
245		DOOUBLEHEAD SIZE: 15 X 17 MM	EA	1
246		DOUBLEHEAD SIZE SIZE: 19 X 21 MM	EA	1
247		WRENCH, FLOWMETER (52484) 51884-1	EA	1
248		WRENCH, SPANNER, FIREHOSE FITTING (11243) 2914410-1	EA	2
249	5120-01-070-8954	WRENCH KIT: 1 EA OPEN END WRENCH U-SHAPE, DBL HD, SIZE 6 MM X 5 MM; 7 MM X 8 MM; 8MM X 7 MM; 10 MM X 9 MM; 9MM X 10 MM; 11 MM X 12 MM, AND 12 MM X 11 MM, FEELER GA, IGNITION PLIER, SPARK TESTING SCREWDRIV-ER, SCREW STARTER, W/BAG (72315) 22-WIMIS	SE	1
250	5120-01-139-0321	WRENCH: IGNITION, 10 AND 9 MM	EA	1
251	5120-01-139-0323	WRENCH: IGNITION, 11 AND 12 MM	EA	1
252	5120-01-138-7555	WRENCH: IGNITION, 12 AND 11 MM	EA	1
253	5120-01-138-7554	WRENCH: IGNITION, 6 AND 5 MM	EA	1
254	5120-01-139-0322	WRENCH: IGNITION, 7 AND 8 MM	EA	1
255	5120-01-142-9856	WRENCH: IGNITION 8 AND 7 MM	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
256	5120-01-139-0320	WRENCH: IGNITION, 9 AND 10 MM	EA	1
257		WRENCH STRAP, 4 IN (11243) 2914448-1	EA	1
258		WRENCH, TORQUE, 1/2 IN DRIVE, 10-15 LB-FT (11243) 2914447-1	EA	1
269		WRENCH, OPEN END, ENGINEER'S DOUBLE HEAD, 15 DEG OPENING, SET	SE	1
260	5120-00-277-2312	DOUBLE HEAD SIZE: 5/16 X 11132	EA	1
261	5120-00-277-2342	DOUBLE HEAD SIZE: 3/8 X 7/16 IN	EA	1
262	5120-00-187-7124	DOUBLE HEAD SIZE: 1/2 X 9/16 IN	EA	1
263	5120-00-187-7126	DOUBLE HEAD SIZE: 9/16 X 5/8 IN	EA	1
264	5120-00-224-3102	DOUBLE HEAD SIZE: 5/8 X 3/4 IN	EA	1
265	5120-00-240-5609	DOUBLE HEAD SIZE: 3/4 X 7/8 IN	EA	1
266	5120-00-270-7025	DOUBLE HEAD SIZE: 15/16 X 1 IN	EA	1
267	5120-00-293-0190	DOUBLE HEAD SIZE: 1 1/16 X 1 1/8 IN	EA	1
268		WRENCH, OPEN END, THIN, DOUBLE HEAD, 15 DEG OPENING, SET:	SE	1
269	5120-00-184-8552	DOUBLE HEAD SIZE: 11/32 X 3/8 IN	EA	1
270	5120-00-184-8553	DOUBLE HEAD SIZE: 7/16 X 1/2 IN	EA	1
271	5120-00-184-8557	DOUBLE HEAD SIXE: 11/16 X 3/4 IN	EA	1
272	5120-00-184-8559	DOUBLE HEAD SIZE: 13/16 X 7/8 IN	EA	1
273	5120-00-184-8560	DOUBLE HEAD SIZE: 15/16 X 1 IN	EA	1
274	5120-01-115-1148	WRENCH SET, OPEN END, FIXED: METRIC: DOUBLE HD TYPE: 15 DEG ANGLE: 11 PC SET: W/KIT BAG, CONSISTS OF ONE EACH OF THE FOLLOWING:	SE	1
275	5120-01-068-5646	WRENCH, OPEN END, FIXED: 6 AND 7 MM SIZE	EA	1
276	5120-01-737-7964	WRENCH, OPEN END, FIXED: 8 AND 10 MM SIZE	EA	1
277	5120-01-102-5973	WRENCH, OPEM END, FIXED: 11 AND 13 MM SIZE	EA	1
278	5120-01-102-4473	WRENCH, OPEN END, FIXED: 12 AND 14 MM SIZE	EA	1
279	5120-01-101-1193	WRENCH, OPEN END, FIXED: 14 AND 15 MM SIZE	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
280	5120-01-113-9562	WRENCH, OPEN END, FIXED: 16 AND 18 MM SIZE	EA	1
281	5120-01-111-5305	WRENCH, OPEN END, FIXED: 17 AND 19 MM SIZE	EA	1
282	5120-01-102-4472	WRENCH, OPEN END, FIXED: 19 AND 22 MM SIZE	EA	1
283	5120-01-113-9563	WRENCH, OPEN END, FIXED: 21 AND 24 MM SIZE	EA	1
284	5120-01-102-5974	WRENCH, OPEN END, FIXED: 27 AND 30 MM SIZE	EA	1
285	5120-01-038-0950	WRENCH, OPEN END, FIXED: 30 AND 32 MM SIZE (80204) ANSI-18107.9	EA	1
286	5120-01-079-8027	WRENCH, BOX AND OPEN COMBINATION: 22.0 MM SIZE, 307.1 MM OA LG	EA	1
287	5120-01-113-8068	WRENCH, BOX AND OPEN COMBINATION: 24.0 MM SIZE, 335.2 MM OA LG	EA	1
288	5120-00-895-9566	WRENCH SET, COMBINATION: BOX AND OPEN END, STR TYPE12 PT BOX END, 30 DEG ANGLE OF OPEN END, W/ROLL;, CONSISTING OF THE FOLLOWING:	SE	1
289	5140-00-322-6009	ROLL, TOOLS AND ACCESSORIES:		
290	5120-00-895-9576	WRENCH, BOX AND OPEN END: 1 IN OPNG, 11 5/8 IN LG	EA	1
291	5120-00-895-9577	WRENCH, BOX AND OPEN END: 1 1/8 IN OPNG, 12 3/4 IN LG	EA	1
292	5120-00-895-9569	WRENCH, BOX AND OPEN END: 1/2 IN OPNG, 5 7/8 IN LG	EA	1
293	5120-00-895-9572	WRENCH, BOX AND OPEN END: 11/16 IN OPNG, 7 5/8 IN LG	EA	1
294	5120-00-895-9575	WRENCH, BOX AND OPEN END: 15/16 IN OPNG, 11 1/4 IN LG	EA	1
295	5120-00-895-9573	WRENCH, BOX AND OPEN END: 3/4 IN OPNG, 8 1/2 IN LG	EA	1
296	5120-00-895-9567	WRENCH, BOX AND OPEN END: 3/8 IN OPMG, 5 1/4 IN LG	EA	1
297	5120-00-895-9571	WRENCH, BOX AND OPEN END: 5/8 IN OPNG, 7 IN LG	EA	1
298	5120-00-895-9568	WRENCH, BOX AND OPEN END: 7/16 IN OPNG, 5 1/2 IN LG	EA	1
299	5120-00-895-9574	WRENCH, BOX AND OPEN END: 7/8 IN OPNG, 10 3/8 IN LG	EA	1

Section III. BASIC ISSUE ITEMS

(1) Item NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM and Part Number	(4) U/M	(5) QTY RQD
300	5120-00-895-9570	WRENCH, BOX AND OPEN END: 9116 IN OPNG, 6 1/2 IN LG (81348) 666-W-00645	EA	1

APPENDIX C

ADDITIONAL AUTHORIZATION LIST

Section I. Introduction

C-1. Scope

This appendix lists additional items authorized to support the ROWPU barge.

C-2. General

This list identifies items not required to accompany the ROWPU barge and that do not have to be turned in with it. These items are all authorized by CTA, MTOE, TDA, or JTA.

C-3. Explanation of Listing

National stock numbers, descriptions, and quantities are provided to help identify and request the additional items required to support this equipment. The items are listed in alphabetical sequence by item name under the type document (i.e., CTA, MTOE, TDA, or JTA) which authorizes the item(s). The items listed are used with ROWPU barges 1,2, and 3.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION FSCM and Part Number		(3) U/M	(4) QTY RQD
5180-00-592-7141	(80091) STKCAT	AUTOMOTIVETOOLKIT BILGE HOSE FOOT VALVE	KT EA	1 1
7210-00-205-2804	(81348) DDD B421 84 X 66	BLANKETS, 80% WOOL, 20% COTTON,	EA	18
7330-00-205-3337	(58536) A-A 1079	BOWL, MIXING 3 QT	EA	1
7350-01-036-5426	(81348)L-T-48	BOWL, PLASTIC, 4 1/2 OZ	DZ	1
7350-01-036-5427	(81348)L-T-48	BOWL, PLASTIC, 16 OZ	DZ	1
7920-00-292-2369	(81348) HB56	BROOM, CORN	EA	6
7920-00-061-0037	(81348) 1490 6 P1	BRUSH, COUNTER	EA	4
8020-00-685-5393	(81348) H-B-420	BRUSH, PAINT, INTERIOR/EXTER WALL NYLON BRISTLE, WATER-THINNED AND OIL-BASED PAINTS 4 X 4 5/16 IN		
8020-00-559-0389	(81348) H-B-491	BRUSH, PAINT, SASH FLAT, SOFT HOG BRISTLE ANGULAR CUT, BEVELED, 2X21/81N	EA	12

Section II. ADDITIONAL AUTHORIZATION LIST (cont)

(1) National Stock Number	(2) Description FSCM and Part Number		(3) Qty U/M	(4) Reqd
7920-00-282-2470	(81348) HB1490/3TI	BRUSH, SCRUB	EA	4
7920-00-291-5815	HB178	BRUSH, WIRE	EA	8
5130-00-278-6633	(58536) AA 2512 1/2 IN DIA	BRUSH, WIRE CUP UNTHREADED,	EA	4
	16 QT	BUCKET, MOP, W/WRINGER (COMBO)	EA	4
		CABLE, WELDING	EA	2
7210-00-259-8897	(81348) DDD P351	CASE, PILLOW	DZ	2
		CLEANER,VACUUM	EA	1
7520-00-254-4610	(72094) HB4	CLIPBOARD 9 X 15 1/2 IN	EA	12
7330-00-264-4139		COFFEE FILTERS	BX	1
7330-00-272-2481	(58536) AA 1078	COFFEE POT (VACUUM)	EA	1
5110-00-221-1044	(50893) 4S	CUTTER, PIPE, 2-4 IN	EA	1
		DISC, SANDING	EA	4
7290-00-616-0109		DISPENSER, PAPER TOWEL	EA	1
7350-00-687-4409	(81348) DD-S-50	DISPENSER, SUGAR, MOISTURE PROOF, 9 OZ	EA	1
		DRAIN CLEARER, NOSE CONE	EA	1
7290-00-224-8308	(58536) AA300 T1/2	DUST PAN	EA	1
5110-00-203-4552	(56536) A-A-2314	FILE, HAND: AMERICAN PATT, KNIFE TYPE DBL-SM FACES, SGLE-CUT SM EDGES, 6 IN HEEL TO PT	EA	2
5110-00-239-8889	(56536) A-A-2317	FILE, HAND: AMERICAN PATT, PILLAR TYPE, DBL-CUT SEC-CUT FACES, SGL-CUT SEC-CUT EDGE, SAFE EDGE, 10 IN HEEL TO PT	EA	2
5110-00-234-6557	(96508) 12134	FILE, HAND: AMERICAN PATT, RND TYPE, 1/2 IN DIA OF LARGEST SECT, DBL-CUT BASTARD FACE, 12 IN HEEL TO PT	EA	2

Section II. ADDITIONAL AUTHORIZATION LIST (cont)

(1) National Stock Number	(2) Description FSCM and Part Number		(3) U/M	(4) Qty Reqd
5110-00-241-9160	(19204) 41F572	FILE, HAND: AMERICAN PATT, THREE-SQ TYPE, SM CUT, 6 IN LG	EA	2
5110-00-373-1691	(77547) NUTRIX1	FILE, THREAD RESTORER, DESIGNED FOR 11, 12,13,14,16,18,20, AND 24 TPI, 8 1/21 N OA LG	EA	2
5110-01-045-3511	(77547) 9	FILE, THREAD RESTORER, PITCHES 0.75, 1.00,1.25,1.50,1.75,2.00, AND 3.00 MM	EA	2
5110-00-249-2848	(10001) 41F860	FILE, HAND: AMERICAN PATT, FL TYPE DBL CUT, BASTARD FACE, 8 IN LG HEEL TO PT	EA	2
5110-00-234-6531	(56536) A-A-2311	FILE, HAND: AMERICAN PATT, FL TYPE, SEC-CUT, 6 IN LG	EA	2
5110-00-234-6537	(95683) 41F674	FILE, HAND: AMERICAN PATT, FL TYPE, DBL-CUT SEC-CUT FACES, SGL-CUT SEC-CUT EDGES, 10 IN HEEL TO PT	EA	2
5110-00-249-2858	(19204) TEAX2EB	FILE, HAND: AMERICAN PATT, HALF-RND TYPE, DBL-CUT SEC-CUT FACES, 10 IN HEEL TO PT	EA	2
8345-00-753-3230	(81346) DDD-F-416	FLAG, NATIONAL US NYLON 2 1/2 X 4 1/2 (ON MAST OR IN DAYROOM)	EA	1
		FLOODLIGHT, 300 PAR 56/WELl20	EA	6
7330-00-205-0617	(58536) A-A-1640	FOOD TURNER, HAMBURGER	EA	1
7340-00-292-9487	(95683) PD7340-101	FORK, COOKS, 14 IN	EA	1
7340-00-241-8169	(81348) RR-F-450	FORK, TABLE, 24/BX	BX	1
7240-00-404-9795	(58536) A-A-1663	FUNNEL: PLASTIC, 2 OT CAP W/O STRAINER, RIGID SPOUT	EA	2
7240-00-244-1206	(58536) A-A-1065	FUNNEL: S. GALV. 2 GAL CAP W/ REMOVABLE STRAINER, RIGID SPOUT	EA	2
7240-00-559-7364	(F5315) 19818	FUNNEL: S, ZINC COATED, 1 QT CAP, 8 IN LG FLEX TUBE SPOUT W/ REMOVABLE STRAINER	EA	

Section II. ADDITIONAL AUTHORIZATION LIST (cont)

(1) National Stock Number	(2) Description FSCM and Part Number		(3) U/M	(4) Qty Reqd
4840-00-540-2381	(20266) 315F-N	FOOT VALVE AND STRAINER 3 IN, ID CONNECTION	EA	2
8145-00-268-7859		GLOVES, WELDERS:LTHR, 52.19 KNITTED COTTON AND WOOL LINING, CREAM OR LT GRAY COLOR, GAUNT CUTT	EA	4
4220-00-269-7912	(30760) 5023A	GOGGLES, INDUS: VENTED EYE CUP-ADJ NOSE BRIDGE, LENS-CLEAR HARDENED GLASS, HEADBAND SUPPT., USAGE OVER SPECS	PR	4
		GRINDER/SANDER-R ANGLE, 4 1/2 IN	EA	2
4940-00-333-5541	(17431) DGA250	GUN, AIRBLOW, STR DESIGN BUTTON OPERATED, W/HANG-UP HOOK 9.5 CFM AT 100 PSI AIR FLOW CAP, RATING, REM TIP	EA	3
5120-00-900-6097	(58536) A-A-1293	HAMMER, HAND: SLEDGE BLKSMITH'S DBL-FACE, 20 # HD WT	EA	1
7330-00-782-0005	(81348) WH636	HOT PLATE	EA	1
		KEVLAR ROPE, 2500 FT	EA	1
		KEYSTOCK 1/8., 3/16,1/4, 5/16, 3/8 (1 FT LENGTH)	EA	1
7340-00-579-3303	(81348) GGG-C-746	KNIFE, BUTCHER 10 INSS	EA	1
7340-00-488-7939	(81348) GGG-C-746	KNIFE, PARING 7 IN SS	EA	2
7340-01-056-1095	(78013) 114 W/BAIL	KNIFE, STEAK 8 IN (6/BX)	BX	2
7340-00-060-6057	(81348) RR-F-450	KNIFE, TABLE (24/BX)	BX	1
5440-00-223-6025	(85836) AA 1997	LADDER, EXTENSION, 20 FT	EA	1
5440-00-227-1595	(81348) LLLS 710	LADDER, STEP 10 FT	EA	1
7330-03-685-5330	(58536) A-A-1956	LADLE, KITCHEN 12 OZ	EA	1
		MATTRESS	EA	9
7240-00-233-6013	(56232) 281639 DISSP.	MEASURE, LIQUID: S, 1 QT CAP W/FLEX SPOUT OPNG	EA	2
7240-00-233-6015	(58536) A-A-1067	MEASURE, LIQUID: 4 QT CAP, W/FLEX SPOUT OPNG, COP PLD	EA	1
		MEGAPHONE, HAND	EA	2

Section II. ADDITIONAL AUTHORIZATION LIST (cont)

(1) National Stock Number	(2) Description FSCM and Part Number		(3) U/M	(4) Qty Reqd
		NAV LAMPS #2450C, 24V-40W	EA	2
4930-00-274-5713	(96906) MS15762-1	OILER, HAND: S, REMOVABLE SPOUT TIP, 6 OZ CAP	EA	2
4930-00-275-7900	(95879) 6121	OILER, HAND: 28 TO 36 OZ CAP FORCE FED BY PRESSURE, MALE THD	EA	2
7330-00-205-3151	(83190) ESLUND2	OPENER, CAN, MECH, MTD	EA	1
7330-00-238-3805	(58536) A-A-423	PAN, FRYING, 12 IN, 2 1/4 IN DEEP 12 IN	EA	1
4940-00-795-3595		PAN, WASH: S, 19 GA, ZN-CTD LKPROOF, 181/211 X1/2	EA	2
4510-00-983-6906	(33591)	PAPER TOWEL DISPENSER	EA	1
7210-00-205-3205	(81348) VP356	PILLOW	EA	9
7350-00-249-5165	(58536) A-A-424	PITCHER, WATER 2 QT SS	EA	1
7350-00-205-3213	(81348) L-T-48	PLASTIC MATCHING CUP/SAUCER	DZ	1
7350-01-036-5430	(81348) L-T-48	PLATE, PLASTIC, BREAD/BUTTER 7 IN	EA	1
7350-01-036-5429	(81348) L-T-48	PLATE, PLASTIC, DINNER 9 IN	DZ	1
7350-00-205-3211	(81348) L-T-48	PLATTER, PLASTIC, SERVING 10 1/2 X 15	EA	1
7330-00-205-4146	(58536) A-A-555	POT, COOKING, 14 QT	EA	1
7330-00-680-0857	(01653) 4341-1/2W4341 C	SAUCEPAN, SS 1 1/2 QT	EA	1
7330-00-205-1880		SAUCEPAN, SS 2 1/2 QT	EA	1
5120-00-222-8852	(80063) SCC5345022	SCREWDRIVER, FLAT TIP: 1/1 IN WLG, BLADE: FLARED: SIDE PLASTIC (80063)	EA	1
5120-00-222-6985		SCREWDRIVER, FLAT TIP: 318 IN WLG BLADE: PLASTIC HANDLE	EA	1
7350-00-655-5255	(81348) DD-S-50	SHAKER, SALT AND PEPPER, MOISTURE PROOF	EA	2
7520-00-162-6148	(08287) M3KS	SHARPENER, PENCIL	EA	1
5110-00-293-0089	(79000) 270	SHEARS, LIGHT METAL 12 1/2 IN	EA	1
7210-01-168-4473	(58536) AA 1433	SHEET, THIN, FLAT	DZ	3
7230-00-849-9838	(83421) 7230 00849 9838	SHOWER CURTAIN	EA	1

Section II. ADDITIONAL AUTHORIZATION LIST (cont)

(1) National Stock Number	(2) Description FSCM and Part Number		(3) U/M	(4) Qty Reqd
7230-00-252-3394	(26821) L946	SHOWER CURTAIN, HOOKS	EA	1
7230-00-202-1762	(81349) MILC18366 TYPE 1	SHOWER CURTAIN, LINER	EA	1
8345-01-101-1101	(813490) MIL-S-29134	SIGNAL, DAY, BLACK-DIAMOND	EA	1
1370-01-030-8330	(100001) DL313934	SIGNAL, SMOKE & ILLUMINATION, MARINE, MK124, MOD O	EA	12
7920-00-141-5452	(82733) 0896	SQUEEGEE HANDLE	EA	4
7920-00-530-5740	(81348) ZZS666	SQUEEGEE 24 IN REG DUTY	EA	4
5120-00-224-9328	(81348)	GGGS326 SPADE	EA	1
7340-00-240-7079	(58536) A-A-1082	SPOON, COOK'S, 13 IN SS	EA	1
7340-00-634-2862	(81348) RR-F-450	SPOON, TABLE (7 IN)	DZ	1
7340-00-205-3340	(81348) RR-F-450	SPOON, TEASPOON 6 IN (24/BX)	BX	1
7350-00-680-0645	(58536) A-A-457	TRANSPARENT PLASTIC TUMBLER, DRINKING 8 OZ TBS	DZ	1
5110-00-596-9703	(81348) GGG-S-00278	TRIMMER, BENT 9 IN	EA	1
		TRIMMER, HVY, DUTY	EA	1
		VOM W/CASE	EA	1
7240-00-819-7735	(13147) 2281	WASTE CAN, OILY, 32 GAL	EA	8
		WELDING AND CUTTING OUTFIT	EA	1
		WELDING HELMET	EA	1
		WORKBOAT ANCHOR	EA	1

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GLOSSARY

Section I. ABBREVIATIONS

The following abbreviations are used in this manual.

BII -	BASIC ISSUE ITEMS (LIST)
CO_2 -	CARBON DIOXIDE
COEI -	COMPONENTS OF END ITEMS (LIST)
CTA -	COMMON TABLE OF ALLOWANCES
EIR -	EQUIPMENT IMPROVEMENT RECOMMENDATIONS
FSCM -	FEDERAL SUPPLY CODE FOR MANUFACTURER
GPD -	GALLONS PER DAY
JTA -	JOINT TABLE OF ALLOWANCES
KW -	KILOWATT
MTOE -	MODIFICATION TABLE OF ORGANIZATION AND EQUIPMENT
NSN -	NATIONAL STOCK NUMBER
PL -	PLACES
RO -	REVERSE OSMOSIS
ROWPU -	REVERSE OSMOSIS WATER PURIFICATION UNIT
STBD -	STARBOARD
TAMMS -	THE ARMY MAINTENANCE MANAGEMENT SYSTEM
TDA -	TABLE OF DISTRIBUTIONS AND ALLOWANCES
TM -	TECHNICAL MANUAL
TOE -	TABLE OF ORGANIZATION AND EQUIPMENT
U/M -	UNIT OF MEASURE

Section II. DEFINITION OF UNUSUAL TERMS

Osmosis - the dispersement of fluids through a membrane.

Reverse osmosis - forcing water under pressure through a membrane to pass pure water by filtering out salts and other dissolved impurities.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
06961

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DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

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