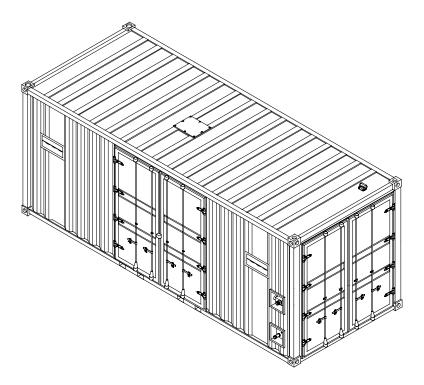
TECHNICAL MANUAL

OPERATOR'S, UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A (NSN 3510-01-474-9035)



<u>DISTRIBUTION STATEMENT A</u> – Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

01 JUNE 2001

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. Also included are explanations of safety and hazardous materials icons used within the technical manual.

EXPLANATION OF SAFETY WARNING ICONS



BIOLOGICAL - abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to life or health.



ELECTRICAL - electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.



SHARP OBJECT - pointed object in hand shows that a sharp object presents a danger to limb.



HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.



HEAVY OBJECT – human figure stooping over heavy object shows physical injury potential from improper lifting technique.

GENERAL SAFETY WARNINGS DESCRIPTION

WARNING



Some CSSL components are heavy. Applicable warnings and instructions are contained in the set-up, and maintenance procedures, calling for the required number of persons needed to lift these components. To prevent injuries ensure that the required number of people is on hand for the lift. Be sure to lift with legs, not back, to prevent injury.

WARNING



During some maintenance procedures electrical wires must be cut and some metal parts of the CSSL may have sharp edges. Be careful when handling and assembling the CSSL components to prevent injuries from cuts.

WARNING



The CSSL equipment operates at High Voltages. Use extreme caution. Touching a live wire can cause serious injury or death. Connecting the power supply to the CSSL can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G. Follow warnings contained in the operational and maintenance procedures to prevent serious injuries to personnel.

WARNING



The CSSL container weighs approximately 10,000 pounds when packed. Lift and move the container only with material handling equipment of at least 10,000 lbs capacity. Observe all safety precautions. Never stand under a CSSL container when it is being lifted. Unpacking components requires at least two persons.

WARNING



Ensure that wastewater is properly disposed of either through an approved municipal sewage system, or collected using a 3,000 Gallon tank, with subsequent evacuation by tanker. Keep wastewater hoses away from freshwater hoses and any freshwater supply in the vicinity. Serious health problems may result from water contamination.

CHANGE NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 31 AUGUST 2005

TECHNICAL MANUAL

OPERATOR'S, UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A (NSN 3510-01-474-9035)

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TM 10-3510-223-13&P, dated 01 June 2001, is changed as follows:

- 1. File this sheet in front of the manual for reference.
- 2. This change implements Army Maintenance Transformation and changes the Maintenance Allocation Chart (MAC) to support Field and Sustainment Maintenance.
- 3. New or updated text is indicated by a vertical bar in the outer margin of the page.
- 4. Added illustrations are indicated by a vertical bar adjacent to the figure number. Changed illustrations are indicated by a miniature pointing hand adjacent to the updated area and a vertical bar adjacent to the figure number.
- 5. Remove old pages and insert new pages as indicated below:

Remove Pages Insert Pages

| A/B blank | A/(B blank) |
|-------------------------------|-------------------------------|
| Electronic 2028 Instr/(blank) | Electronic 2028 Instr/(blank) |
| Sample 2028/envelope back | Sample Form 2028 front/back |
| DA Form 2028/envelope back | DA Form 2028 front/back |
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6. Replace the following work packages with their revised version:

Work Package Number

WP 0045 00

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER General, United States Army Chief of Staff

Official:

SANDRA R. RILEY

Administrative Assistant to the

Secretary of the Army

0521622

Distribution: To be distributed in accordance with initial distribution number (IDN) 990004 requirements for TM 10-3510-223-13&P

INSERT LATEST CHANGED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: The portion of text affected by the update is indicated by a vertical line in the outer margins of the page. Updates to illustrations are indicated by miniature pointing hands or vertical lines in the outer margins of the page in the area of the illustration changed. Zero in the "Change No." column indicates an original page or work package.

Dates of issue for original manual and changed pages / work packages are:

Original 01 June 2001 Change 1 31 August 2005

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 20 AND TOTAL NUMBER OF WORK PACKAGES IS 74, CONSISTING OF THE FOLLOWING:

| Page/WP No. | Change No. | Page/WP No. | Change No. | Page/WP no. | Change no. |
|---------------------|------------|--------------------|------------|---------------------|------------|
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| a-b | 0 | Chp 6 title page | 0 | WP 0062 00 (4 pgs) | 0 |
| i-v/(vi blank) | 0 | WP 0029 00 (4 pgs) | 0 | WP 0063 00 (4 pgs) | 0 |
| WP 0001 00 (4 pgs) | 0 | WP 0030 00 (2 pgs) | 0 | WP 0064 00 (4 pgs) | 0 |
| Chp 1 title page | 0 | WP 0031 00 (8 pgs) | 0 | WP 0065 00 (2pgs) | 0 |
| WP 0003 00 (8 pgs) | 0 | WP 0032 00 (6 pgs) | 0 | WP 0066 00 (2 pgs) | 0 |
| WP 0004 00 (6 pgs) | 0 | WP 0033 00 (4 pgs) | 0 | WP 0067 00 (2 pgs) | 0 |
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TECHNICAL MANUAL

OPERATOR'S, UNIT, AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A

(NSN 3510-01-474-9035)

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 together with DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual, directly to: Commander, U.S. Army Soldier and Biological Chemical Command, ATTN: AMSSB-RIM-E (N), Kansas Street, Natick, MA 01760-5052. You may also send in your recommended changes via electronic mail directly to amssb-rim-e@natick.army.mil. A reply will be furnished to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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HOW TO USE THIS MANUAL

This Manual contains General Information, Operating Instructions, Operator Preventive Maintenance Checks and Services (PMCS), Troubleshooting, and Maintenance/Repair instructions for the Containerized Self Service Laundry (CSSL) MODEL A.

Chapter 1 contains introductory information on the CSSL and its associated equipment as well as a Theory of Operation. Chapter 2 includes operating instructions under usual and unusual conditions. Chapter 3 contents include operator troubleshooting, PMCS, and service procedures. Chapter 4 contains Unit Maintenance instructions. Chapter 5 contains Direct Support Maintenance Instructions. Chapter 6 contains references and other supporting information. Chapter 6 also includes the Repair Parts and Special Tools List (RPSTL) that identifies those parts or tools, which are unique to the operation and maintenance of this equipment.

Manual Organization and Page Numbering System. The Manual is divided into six major chapters that detail the topics mentioned above. Within each chapter are work packages covering a wide range of topics. Each work package is numbered sequentially starting at page 1. The work package has its own page numbering scheme and is independent of the page numbering used by other work packages. Each page of a work package has a page number of the form XXXX YY-ZZ where XXXX is the work package number (e.g. 0010 is work package 10) and YY is the revision number for that work package and ZZ represents the number of the page within that work package. A page number such as 0010 00-1/2 blank means that page 1 contains information but page 2 of that work package has been intentionally left blank.

Finding Information. The Table of Contents permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The Table of Contents lists the topics contained within each chapter and the Work Package Sequence Number where it can be found.

Example: If the reader were looking for instructions on "Preventive Maintenance Checks and Services", which is an Operator Maintenance topic, the Table of Contents indicates that Operator Maintenance information can be found in Chapter 4. Scanning down the listings for Chapter 4, "Preventive Maintenance Checks and Services" information can be found in WP 0009 00 (i.e. Work Package 9).

An Alphabetical Index can be found at the back of the Manual. It lists specific topics with the corresponding work package.

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A GENERAL INFORMATION

SCOPE

This Technical Manual contains instructions for the operation, as well as preventive, and corrective maintenance of the Containerized Self Service Laundry (CSSL) (Refer to Figure 1.)

The CSSL is non-organizational equipment and must be requested through Army support channels.

Type of Manual: Operator's, Unit, and Direct Support Maintenance, including Repair Parts and Special Tools List.

Model Number and Equipment Name: Containerized Self Service Laundry (CSSL) MODEL A, P/N 5-13-6536, NSN 3510-01-474-9035

Purpose of Equipment: The CSSL provides cold-water washing and drying capacity of 10lbs per washer/dryer. It can support 120 personnel over a 20 Hour operating period. CSSL components can be operated by MOS non-specific personnel, however, initial power connections must be made by MOS 51R, 52C, 52D, or 52G qualified personnel.

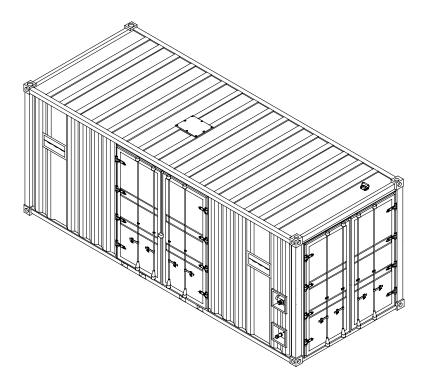


Figure 1. Containerized Self Service Laundry (Stored Configuration) 0001 00-1

MAINTENANCE FORMS RECORDS AND REPORTS.

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

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).

If your CSSL 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 SF368 Product Quality Deficiency Report. Mail it to: Commander U.S. Army Soldier and Biological Chemical Command; ATTN: AMSSC-I-LO, Kansas St. Natick MA 01760-5052. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC).

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber or plastic. Unusual cracking, softening, swelling or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using SF 368, Product Quality Deficiency Report. Use of key words such as (corrosion, rust, deterioration or cracking) will ensure that the information is identified as a CPC problem. This form should be submitted to the address specified in DA Pam 738-750.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

For procedures to destroy this equipment to prevent its use by the enemy refer to TM 750-244-3, Procedures for Destruction of Material to Prevent Enemy Use.

NOMENCLATURE CROSS-REFERENCE LIST.

| Common Name | Official Name |
|-----------------|---|
| Alarm | Wastewater pump control panel |
| Bootwall | TEMPER End Section ISO, Modified |
| Container | Shelter Modified, Welded Assembly, CSSL |
| CSSL | Containerized Self Service Laundry |
| Freshwater hose | Hose Assembly, Fresh Water, 2" |
| Pressure tank | Tank pre-pressurized, diaphragm type |
| Tent | TEMPER, Section Window |
| Wastewater hose | Hose Assembly, Discharge, Waste Water, 2" |
| Water Pump | Water Pump, Centrifugal (Freshwater) |
| Washer/Dryer | Maytag Stacked Washer/Dryer Units |
| Wastewater pump | Pump unit (Waste) |
| Endwall | TEMPER End Section |

| LISTO | F ABBREVIATIONS/ACRONYMS. | | |
|----------------|--|--------|--|
| AAL | Additional Authorization List | MTOE | Modified Table of Organization and Equipment |
| BII | Basic Issue Item | NBC | Nuclear, Biological, Chemical |
| COEI | Component of end item | NIIN | National Item Identification Number |
| CPC | Corrosion Prevention Control | NSN | National Stock Number |
| CSSL | Containerized Self Service Laundry | PMCS | Preventive Maintenance Checks and Services |
| cm | Centimeter | P/N | Part Number |
| °C | Degrees Celsius (Centigrade) | PSI | Pounds per square inch |
| ^⁰ F | Degrees Fahrenheit | POL | Petroleum, Oil and Lubricant |
| EIR | Equipment Improvement | QD | Quick Disconnect |
| | Recommendation | | |
| GFCI | Ground Fault Circuit Interrupt | RCPT | Receptacle |
| GPM | Gallons per Minute | RPSTL | Repair Parts and Special Tools List |
| hr | Hour | SMR | Source, Maintenance, and Recoverability |
| IAW | In Accordance With | TEMPER | Tent, Extendable, Modular, Personnel |
| ISO | International Organization For Standardization | TMDE | Test, Measurement and Diagnostic Equipment |
| in | Inches | TOE | Table of Organization and Equipment |
| Kg | Kilogram | U/M | Unit of Measure |
| kW | Kilowatt | UOC | Usable On Code |
| lbs | Pounds | VAC | Volt Alternating Current |
| lt | Liter | WP | Work Package |
| MOS | Military Occupational Specialty | | |
| MSDS | Material Safety Data Sheet | | |

SAFETY, CARE AND HANDLING, WARNINGS, CAUTIONS AND NOTES.

Always pay attention to Warnings, Cautions and Notes appearing throughout the manual. They will appear prior to applicable procedures. Ensure you read and understand their content to prevent serious injury to yourself and others, or damage to equipment.

CHAPTER 1
DESCRIPTON AND THEORY OF OPERATION
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

| CHARACTERISTICS | CAPABILITIES AND FEATURES |
|--|--|
| Requires personnel in MOS 51R, 52C, 52D, or 52G to connect and disconnect electrical power. | The CSSL can be operated by MOS non- specific personnel. |
| Modular system which, in stowed or deployed configuration, includes all necessary equipment to operate the facility except power generation. | Provides self-service laundry facilities using commercial washer/dryers. |
| Four-man assembly and disassembly, within two hours each. | Provides six individual washer/dryers for washing of personal clothing, each with a capacity of 10lbs per cycle. |
| Provides cold-water washing only. | Container uses utility panels for easy fresh water, wastewater, and electrical power connections. |
| Suitable for operation in temperatures above 32⁰ F. | The CSSL features an internal heater and roof-mounted exhaust fan for temperature control and ventilation. |
| Washers/dryers are installed into the container floor and wall for stable operation and ease of shipment. | Dryer exhaust hoses are ducted to the outside through two outlet panels in the CSSL wall. |
| Features an 8 ft TEMPER Section to provide an area for preparing/folding laundry. | |

CLOTHING WEIGHT

The CSSL washer/dryers are suitable for washing 10 lbs of personal clothing items and uniforms. An example of a 10 lbs load consists of one battlefield dress uniform, together with undergarments, socks, and a towel.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Internal)

Container. Modified type III general cargo container (1) with forklift pockets (2) and ISO fittings (3) for moving and lifting the container. Double doors are located at each end of the container. The personnel door (4) serves as main access door to the CSSL, and the rear door (5) provides access to the fresh water pump (6), wastewater tank (7), and pressure tank (8). An additional double service door (9) at the curbside allows access to the rear of the washer/dryers (10). Built-in, folding steps (11) and a grip atop the container (12) allow access to the top of the container.

Vent fan. Installed in the container roof, the fan (13) ventilates the interior of the CSSL container (1).

Space heater. Installed in the container curbside rear end, the heater **(14)** provides interior heating of the container when the CSSL is not in operation.

Power entrance box. The box **(15)** is located on the roadside and includes two 208VAC, 3 Phase input connectors **(16)** for power supply to both circuit breaker panels 1 **(17)** and 2 **(18)**, a 120VAC GFCI receptacle **(19)** used for TEMPER interior lights, and a 3 Phase, 208 VAC output receptacle **(20)** used for external components.

Power distribution panel #1 (17). Panel #1 contains a main breaker, and powers washers/dryers **(10)** #1 a ,3 C, and 5 C, and 5

Power distribution panel #2. (18) Panel #2 contains a main breaker, and powers washer/dryers (10) # 2 d , and 6 f , as well as the 60 AMP, 208VAC output circuit (20).

Freshwater and wastewater panels. Panels for water supply **(24)** and wastewater drain **(25)** hose connection between inside and outside CSSL are located in the curbside wall. Panels facilitate the following connections:

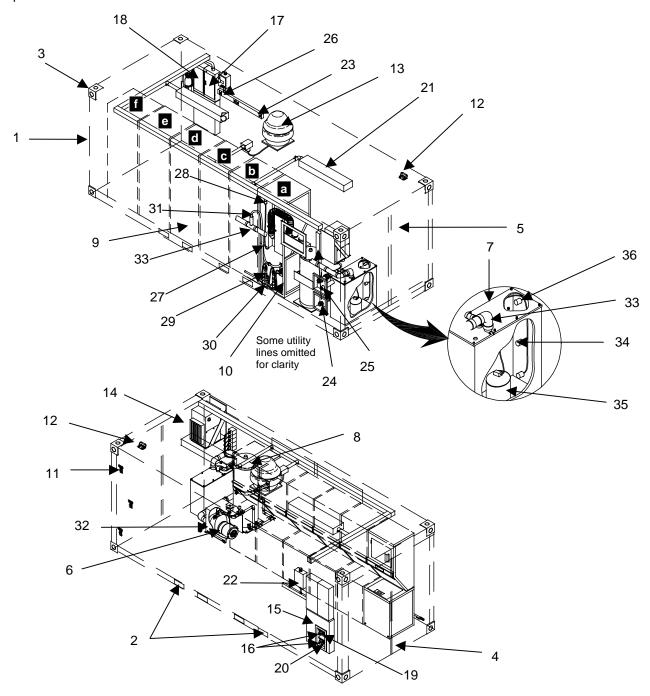
- Outside CSSL: Fresh water connection and wastewater connection to external source and disposal point, respectively.
- *Inside CSSL*: Fresh water connection to the fresh water pump, and wastewater connection from the wastewater holding tank. A small diameter drainpipe exits through the container floor.

Interior fluorescent lights and light switch. Two fluorescent light fixtures **(21)** are controlled from the light switch **(26)** located on the roadside wall.

Washers/Dryers (10). The washer/dryers are mounted to the container floor and wall. The power cord (27) of each washer/dryer unit is plugged into the twist-lock receptacles (28) located on the overhead raceway. Two fresh water hoses (29) connect each washer to the ³/₄" fresh water supply line (30). The washer drain hoses (31) are connected to the 3" PVC drainpipe (32).

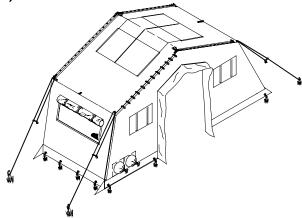
Freshwater pump. The freshwater pump **(6)** is mounted onto the container floor and is connected to the fresh water supply panel. It provides fresh water pressure to the main supply line when a 3,000 Gallon storage tank is used. A freshwater pump cover **(32)** is bolted to the floor and encloses the pump housing.

Waste water tank and pump. Located inside the CSSL, the wastewater tank (7) collects wastewater generated by the washers through the 3" PVC drainpipe (33). A float switch (34) in the tank activates the wastewater pump (35) that evacuates the wastewater from the tank to the designated external collection or disposal site. A second float switch (36) activates the overflow alarm (22) if the tank content reaches a pre-set level.

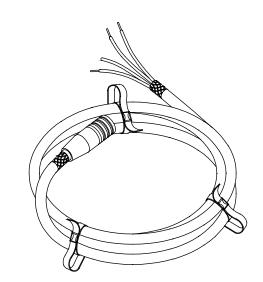


DESCRIPTION OF MAJOR COMPONENTS (external)

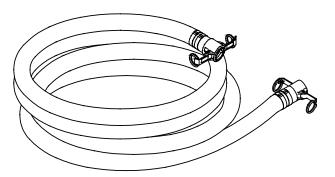
TEMPER. An 8 ft TEMPER Section is furnished with the CSSL. It attaches to the Container with a bootwall that is part of a modified TEMPER End Section, which is also furnished. The TEMPER section provides a workstation for folding laundry, etc. TM 10-8340-224-13 explains the operation of the TEMPER.



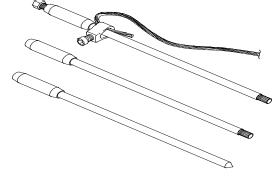
Power Cable, 100 AMP, 50 ft. The pigtail end of the power cable is connected to the power source and the receptacle to the J1 or J2 plug on the power entrance box of the CSSL. TM 9-6150-226-13 explains the use of the cable.



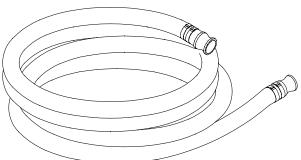
Hose Assembly, Fresh Water. The 2" diameter, 50' long freshwater hose supplies water from the source to the water entrance panel on the CSSL.



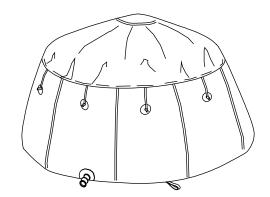
Ground Rod. The ground rod must be employed and connected to the container ground terminal when un-grounded power is connected to the CSSL.



Hose Assembly, Discharge, Wastewater. The 2" diameter, 50' long wastewater hose is connected to the wastewater panel on the CSSL and the wastewater disposal site as required.



Fabric Tanks, 3,000 Gallon. Two each of these tanks are furnished with each CSSL. One for use as freshwater storage marked FRESHWATER, the second as wastewater storage marked WASTEWATER. These tanks are used when no municipal freshwater supply or sewage disposal is available. TM 5-5430-227-12&P explains the operation of the 3,000 gallon fabric tank.



COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE), CTA 50-970, Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items, as applicable to your unit.

All Special Tools, TMDE, and Support Equipment for the CSSL are listed in WP 0068.

Repair parts are listed and illustrated in the repair parts and special tools list located in work packages 0047 through 0065.

EQUIPMENT DATA

The following data pertains to the CSSL. Comparable data for the TEMPER, the water pump, wastewater ejector pump, and the commercial washer/dryers is contained in the appropriate equipment publications shown on page 0002 00-8.

| External dimensions: | | |
|---|--|---|
| | 19 feet, 10-1/2 inches | 6.06 meters |
| | 8 feet | |
| | 8 feet | |
| nternal dimensions: | | |
| Length | 19 feet, 4 inches | 5.80 meters |
| Width | 7 feet, 6 inches | 2.25 meters |
| | 7 feet, 3-3/8 inches | |
| Door dimensions: | , | |
| Personnel entrance door (front) | | |
| Height | 6 feet, 11-5/8inches | 2.09 meters |
| Width | 7 feet, 7 inches | |
| Double service door (curbside) | • | |
| | 6 feet, 11-5/8inches | 214 centimeters |
| | 7 feet, 7 inches 96.5 | |
| Double service door (rear) | | |
| Height | 6 feet, 11-5/8 inches | 2.09 meters |
| | 7 feet, 7 inches | |
| Required electrical input: | 100 An | nn 208 VAC 3 Phase |
| | | |
| | | 10 A |
| | | |
| Wastewater pump | 20 Amp, 20 | 08 VAC, Single Phase |
| Wastewater pump Heater, space | 20 Amp, 20 30 Amp, 1 | 08 VAC, Single Phase 20/208 VAC, 3 Phase |
| Wastewater pump Heater, space Fan, vent | 20 Amp, 20 30 Amp, 1 20 Ar | 08 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent | 20 Amp, 20 30 Amp, 1 20 Ar | 08 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase 20 Amp, 120 VAC |
| Wastewater pump | 20 Amp, 20 30 Amp, 1 20 Ar 20 Amp, 20 | 20/208 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase20 Amp, 120 VAC 28 VAC, Single Phase |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI | | 28 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase 20 Amp, 120 VAC 28 VAC, Single Phase 20 Amp, 120 VAC |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI | 20 Amp, 20 30 Amp, 1 20 Ar 20 Amp, 20 | 208 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase 20 Amp, 120 VAC 208 VAC, Single Phase 20 Amp, 120 VAC |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output | | 28 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase 20 Amp, 120 VAC 28 VAC, Single Phase 20 Amp, 120 VAC |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: | | 28 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase 20 Amp, 120 VAC 28 VAC, Single Phase 20 Amp, 120 VAC np, 208 VAC, 3 Phase |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: Low | | 28 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase mp, 20 Amp, 120 VAC 208 VAC, Single Phase 20 Amp, 120 VAC ap, 208 VAC, 3 Phase 208 VAC, 3 Phase 20 PSI |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: Low | | 28 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase mp, 20 Amp, 120 VAC 208 VAC, Single Phase 20 Amp, 120 VAC ap, 208 VAC, 3 Phase 208 VAC, 3 Phase 20 PSI |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: Low High | | 208 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase mp, 208VAC, 3 Phase20 Amp, 120 VAC 208 VAC, Single Phase20 Amp, 120 VAC ap, 208 VAC, 3 Phase20 PSI |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: Low High Required fresh water flow rate: | | 208 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208VAC, 3 Phase mp, 208VAC, 3 Phase20 Amp, 120 VAC 208 VAC, Single Phase20 Amp, 120 VAC ap, 208 VAC, 3 Phase20 PSI |
| Wastewater pump Heater, space Fan, vent Lights, fluorescent Pump, freshwater External GFCI Power output Pressure Tank Setting: Low High Required fresh water flow rate: | | 208 VAC, Single Phase 20/208 VAC, 3 Phase mp, 208 VAC, 3 Phase mp, 208 VAC, 3 Phase20 Amp, 120 VAC 208 VAC, Single Phase20 Amp, 120 VAC ap, 208 VAC, 3 Phase20 PSI |

REFERENCES. The following list contains publications necessary, or helpful, to support CSSL operation. These references are also listed in work package 0044 00.

| Item/Function | Technical Manual Title | TM Number |
|--|---|--|
| Washer-Dryer | MAYTAG Washer-Dryer Parts Catalog | Commercial Manual |
| Washer-Dryer Installation | MAYTAG Washer-Dryer Installation Instructions | Commercial Manual |
| Washer-Dryer Service | MAYTAG Stacked Laundry Service Manual 16002032 | Commercial Manual |
| Washer-Dryer Operation | MAYTAG Stacked Laundry Pair Model LS9904 Users Guide | Commercial Manual |
| Laundering | MAYTAG Laundering Guide | Commercial Manual |
| Wastewater Alarm | Installation Guide | Commercial Manual |
| Tank, 3000 gallon (water storage) | Operator's and Unit Maintenance Manual (Including RPSTL) Tank, Fabric, Self Supporting, 3000 Gallon Water | TM 5-5430-227-12 & P |
| Freshwater Pump | Installation Instructions | Commercial Manual |
| TEMPER | Operator, Unit and Direct Support Maintenance Manual for Tent, Extendable, Modular, Personnel (TEMPER) | TM 10-8340-224-13 |
| 100 AMP, 50ft Power Supply Cable | Operator's, Unit and Direct Support Maintenance Manual for Distribution Illumination Systems, Electrical (DISE), and Power Distribution Illumination Systems, Electrical (PDISE) consisting of Electrical Feeder System M200, M200 A/P, M100, M100 A/P, M40, M40 A/P, M60, M60 A/P and Electrical Utility Assembly M46. | TM 9-6150-226-13 |
| General Cargo Container Type III Modified | Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List), General Cargo Container | TM 55-8115-204-23 & P (Note! – included as reference for maintenance purposes only) |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A THEORY OF OPERATION

THEORY OF OPERATION

General. The CSSL is designed for operation in temperate zones above 32° F. It can be operated on a continuous basis in 20 Hour cycles, provided adequate freshwater supply and wastewater discharge can be sustained on this basis. Minimum employment requirements for the CSSL are summarized on page 0003 00-5.

CSSL AND TEMPER Section. The CSSL is housed in a general cargo container (1) modified to accommodate the electrically operated, cold- water service laundry facility. An 8-ft TEMPER Section (2), is attached to the container (1) using a modified end section (3). The boot on the end section connects to the CSSL with tie down cords and tent stakes at the end of the boot (4). User access to the CSSL is thru the personnel entrance door (5). The double curbside door (6) allows access to the rear of the washers and dryers (7). The rear door (8) provides access to the freshwater pump (9) and the wastewater tank and pump (10).

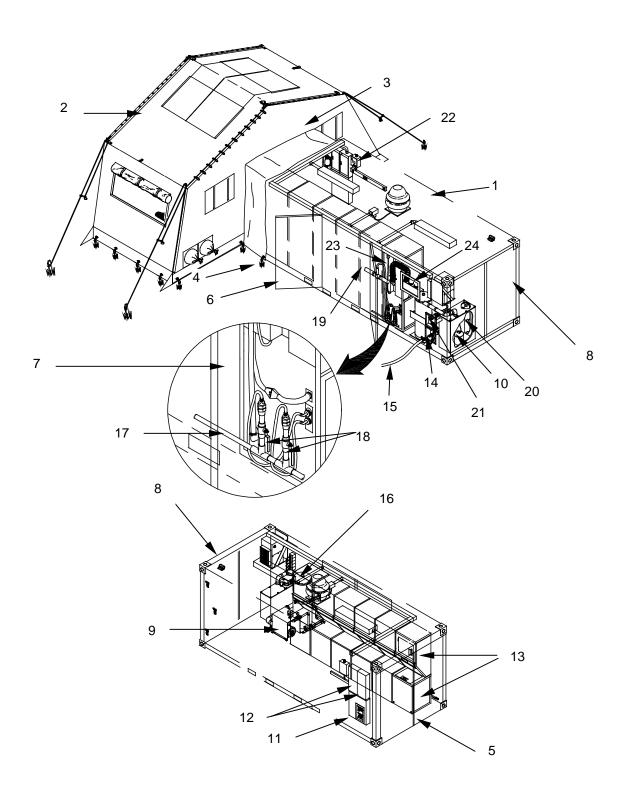
POWER DISTRIBUTION SYSTEM. The CSSL laundry operates on 100 Amp, 208 V, 3-Phase AC power. A power source, either commercial or appropriate generator (minimum 30kw), must be connected to external power entry box **(11)** connectors J1 and J2. Two power distribution panels **(12)** supply power through the internal GFCI circuit and to external components through the external GFCI (J3) and 60AMP (J4) connector on the power input box **(11)**.

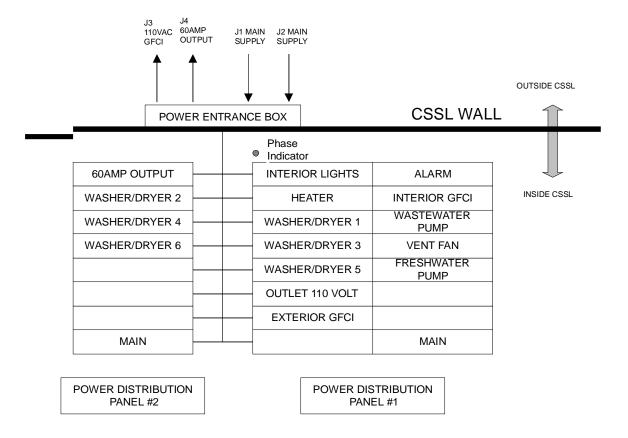
WASHING SYSTEM. The stacked commercial washer/dryer units, **(13)** are mounted to the CSSL floor for operation and stability during shipment. Washing is accomplished using cold water only.

Freshwater. A freshwater source (either municipal or a 3,000 gallon storage tank) is connected to the freshwater input panel (14) using a 2" diameter, 50 ft water hose (15). A minimum water pressure of 16 PSI is required to operate the washers. A pre-pressurized diaphragm-type tank (16) with a low-pressure cutoff switch regulates the freshwater system pressure, turning on the freshwater pump (9) when the pressure reaches 15 PSI, and off at 30 PSI. When municipal water of sufficient pressure is supplied to the CSSL, the freshwater pump is not used. Distribution of freshwater to the washers is through a ¾" diameter copper line (17). Freshwater may also be supplied to the CSSL using a standard garden hose connected directly to the freshwater input panel. Water supply can then be regulated using a gate valve located directly behind the panel. Each individual washer line is controlled with a ball valve (18).

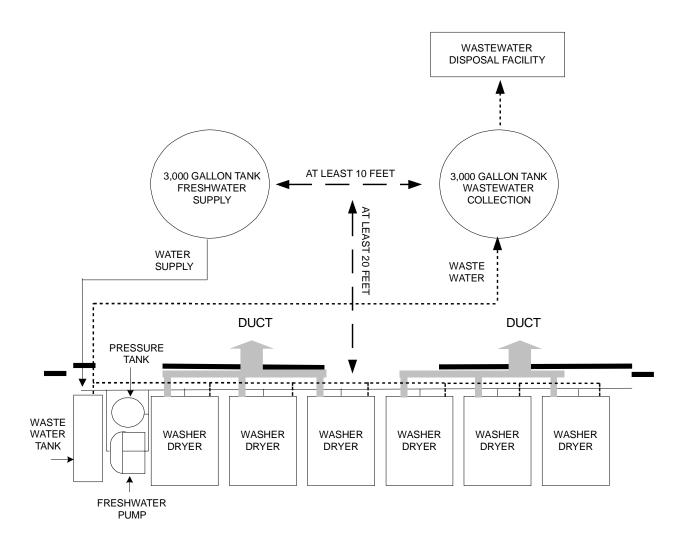
Wastewater. Wastewater generated by the washers (13) is drained through a 3" diameter PVC Pipe (19) into the wastewater tank (10) located in the rear of the container. When the tank contents reach a pre-set level, a float switch (20) activates a submersible pump (10), that evacuates the contents through the wastewater panel (21) and a 2" diameter hose into a 3,000 Gallon storage tank or directly into a wastewater disposal system. A wastewater tank overflow alarm (22), activated by a second float switch will alert the operator if the tank is not draining properly.

DRYING SYSTEM. Dryers (13) are stacked on top of the washers and fastened to the CSSL using an angle iron frame bolted to the sidewall of the container. The dryer exhausts (23) are passed thru flexible ducts that are connected to one of two exhaust openings (24) in the CSSL curbside wall.





Power Distribution System Schematic



Washing and Drying System Schematic

CSSL MINIMUM EMPLOYMENT CONDITIONS

Following is a summary of the conditions and parameters required to employ a CSSL.

Material Handling Equipment

A 10,000 lbs lifting and moving device (i.e., forklift, etc.) is required to unload and position the packed CSSL container.

Area Characteristics and Dimensions

A level area of approximately 2,000 square feet is required. The ground must be free of obstacles and vegetation (trees, brush, etc.) so that the container sits firmly on the ground. If the 3000 gallon freshwater or wastewater tanks are used, vehicular access is required. The employment area elevation should not exceed 7,000 ft (2114 Meters)

Power Requirements

The CSSL requires 100AMP, 208VAC, 3 Phase power. This can be provided through a commercial hookup, or through use of a generator (30 KW minimum). The power connection must be made by qualified civilian or military (MOS 51R, 52C, 52D, or 52G) personnel.

Utility Requirements

A freshwater source supplying a maximum 8,700 gallons per 20 hour period (Consumption at full use) is required. The source should be either a municipal water system or another approved freshwater water source.

Wastewater Disposal

A wastewater disposal site must be available in the form of a municipal sewage system, or other approved site where the wastewater collected in the 3,000 Gallon wastewater tank can be evacuated.

Water Service

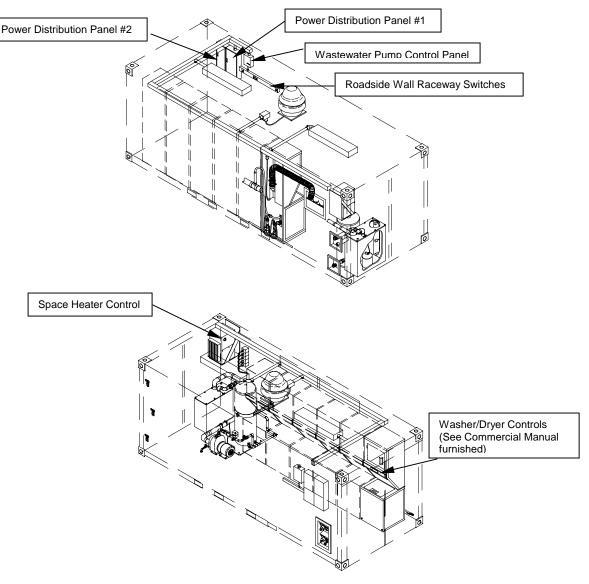
If 3,000 Gallon tanks are used for fresh and/or wastewater, water supply trucks (or service) and/or wastewater pumping tank trucks (or service) are required. Approximately three supply and collection round trips are required per day to keep the CSSL in full operation.

CHAPTER 2
OPERATOR INSTRUCTIONS
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A CONTROLS, INDICATORS, AND LABELS/INSTRUCTION PLATES

GENERAL

This work package contains information on the controls and indicators of the CSSL. For information concerning the controls and indicators of the stacked washer/dryers, consult the commercial literature furnished. For information on the controls and indicators of the 3,000 gallon fresh water tank, freshwater pump, TEMPER, 100AMP power supply pigtail and cable, or general cargo container, consult the appropriate publication (Refer to work package 0002 00 or 0044 00). The illustration below shows the location of the controls and indicators found on the CSSL. Subsequent illustrations and tables explain the specific function of each control and indicator.



LOCATION OF CSSL CONTROLS AND INDICATORS

POWER DISTRIBUTION PANEL #1

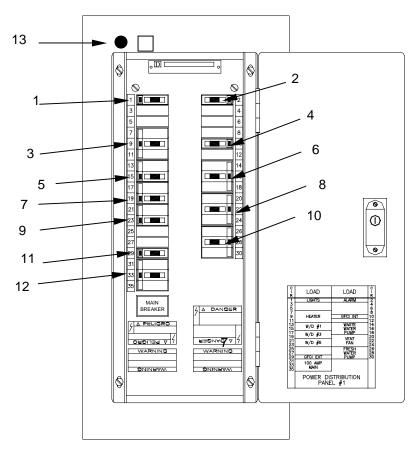


Table 1. Power Distribution Panel #1 Controls and Indicators

| L/EV/ | CONTROL AND INDICATOR | FUNCTION |
|-------|---|--|
| KEY | CONTROL AND INDICATOR | FUNCTION |
| 1 | Position 1 Circuit Breaker, 60AMP, 3 Pole | Controls operation of interior light circuit |
| 2 | Position 2 Circuit Breaker, 15AMP, 1 Pole | Controls operation of alarm circuit |
| 3 | Position 9 Circuit Breaker, 30AMP, 3 Pole | Controls operation of space heater circuit |
| 4 | Position 10 Circuit Breaker, 15AMP, 3 Pole | Interior GFCI circuit |
| 5 | Position 15 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #1 circuit |
| 6 | Position 16 Circuit Breaker, 15AMP, 3 Pole | Controls operation of waste water pump circuit |
| 7 | Position 19 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #3 circuit |
| 8 | Position 22 Circuit Breaker, 10AMP, 3 Pole | Controls operation of vent fan circuit |
| 9 | Position 23 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #5 circuit |
| 10 | Position 28 Circuit Breaker, 15AMP, 3 Pole | Controls operation of fresh water pump circuit |
| 11 | Position 29 Circuit Breaker, 20AMP, 1 Pole | Exterior GFCI circuit |
| 12 | Position 33 Panel Board 100AMP Main Breaker | Power Supply |
| 13 | Phase Indicator | Indicates Power Phase |

POWER DISTRIBUTION PANEL #2

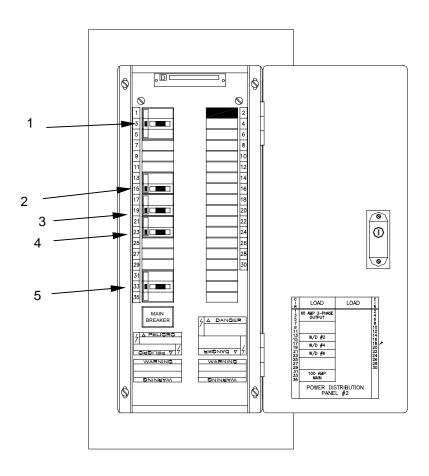


Table 2. Power Distribution Panel #2 Controls and Indicators

| KEY | CONTROL AND INDICATOR | FUNCTION |
|-----|---|---|
| 1 | Position 3 Circuit Breaker, 60AMP, 3 Pole | 60AMP, 3 Phase Output circuit |
| 2 | Position 15 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #2 circuit |
| 3 | Position 19 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #4 circuit |
| 4 | Position 23 Circuit Breaker, 30AMP, 2 Pole | Controls operation of washer/dryer #6 circuit |
| 5 | Position 33 Panel Board 100AMP Main Breaker | Power Supply |

WASTEWATER PUMP CONTROL PANEL

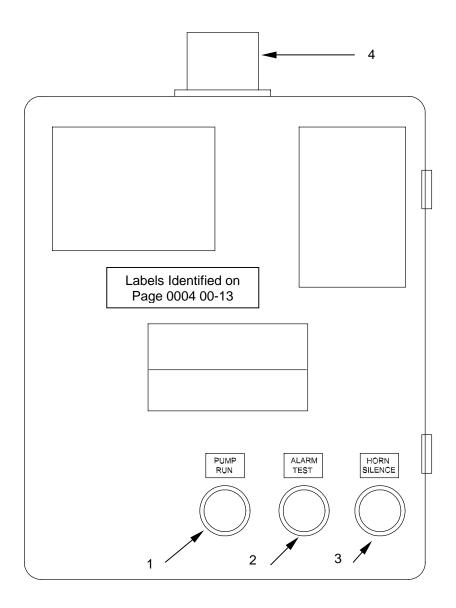


Table 3. Wastewater Pump Control Panel

| KEY | ITEM | FUNCTION |
|-----|---------------------|---|
| 1 | Pump Run Button | Activates Wastewater Pump |
| 2 | Alarm Test Button | Tests Alarm Circuit |
| 3 | Horn Silence Button | Deactivates the Audio Alarm |
| 4 | Alarm Light | Alerts Operator to Wastewater Tank Overflow |

ROADSIDE WALL RACEWAY SWITCHES

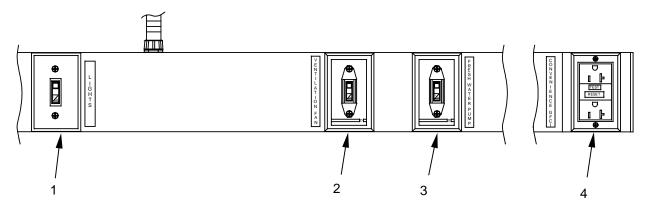


Table 4. Roadside Wall Raceway Switches

| KEY | ITEM | FUNCTION |
|-----|------------------------|---|
| 1 | Light Switch | Controls operation of the interior lights |
| 2 | Ventilation Fan | Controls operation of the ventilation fan |
| 3 | Freshwater Pump Switch | Controls operation of the freshwater pump |
| 4 | GFCI Receptacle | |

SPACE HEATER

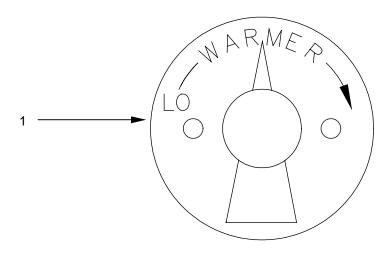


Table 5. Space Heater Controls and Indicators

| KEY | CONTROL AND INDICATOR | FUNCTION | |
|-----|-----------------------|--|--|
| 1 | Heater Control | Controls the operation of the space heater | |

LABELS AND INSTRUCTION PLATES

The following labels and instruction plates are found on the CSSL. For information concerning labels and instruction plates for component items such as the washer/dryers, 3,000 gallon wastewater collection tank, 3,000 gallon freshwater tank, freshwater pump, MGPTS Small, or the 100 AMP power supply pigtail and cable, consult the appropriate publication (Refer to work package 0002 or 0043 00).

Modified General Cargo Container Door

Labels. A data plate, located on the container, reflects the following information:

CONTAINER, CARGO CONTAINERIZED SELF-SERVICE LAUNDRY (CSSL)

MFD BY: TOBYHANNA ARMY DEPOT NSN: 3510-01-474-9035 SPECIFICATION: 5-13-6536 TARE WEIGHT: 5510 LBS

CONTROL NUMBER: DATE:

CONTRACT NUMBER

TECHNICAL MANUAL: TM 10-3510-223-13&P

CSC SAFETY APPROVAL

USA/AB/282/89 IDENTIFICATION NUMBER

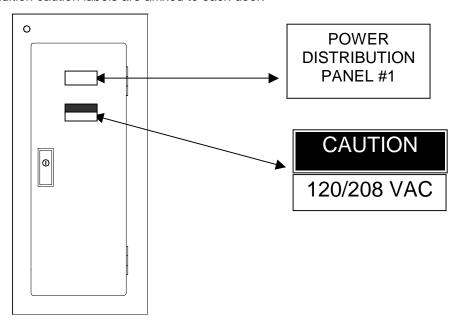
MAXIMUM GROSS WEIGHT: 24,000 KG 52,910 LBS

ALLOWABLE STACKING WEIGHT FOR 1.8G 192,000 KG 423,290 LBS

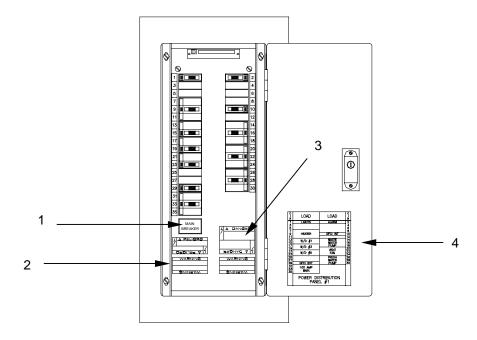
RACKING TEST LOAD VALUE 15,420 KG 33,600 LBS

Power Distribution Panels

Labels. Each panel door has an identification label designating the power distribution panels as #1 and #2. In addition caution labels are affixed to each door.

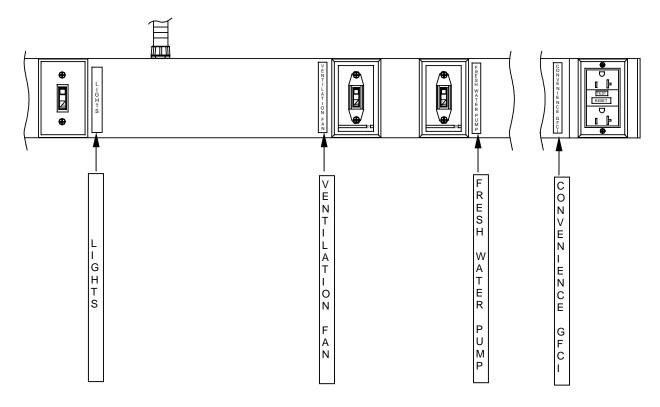


On the inside of each power distribution panel are main breaker identifying labels (1), warning (2) and danger labels (3), as well as a panel load identification list (4).



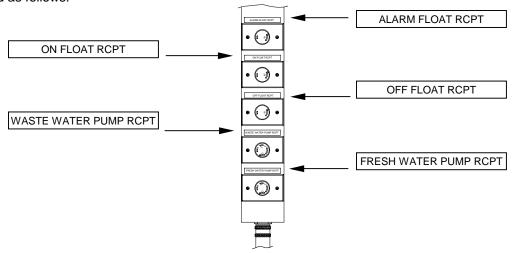
Roadside Wall Raceway Switches and GFCI Receptacle

Labels. Each switch and the GFCI receptacle on the roadside wall raceway are identified as follows:



Curbside Wall Raceway Receptacles

Labels. Receptacles on the curbside wall raceway and ventilation fan receptacle on the ceiling are identified as follows:



Label. Washer and Dryer operating instruction are posted on each dryer door.

WASHER OPERATING INSTRUCTIONS

NO TA-50 NO TENNIS SHOES

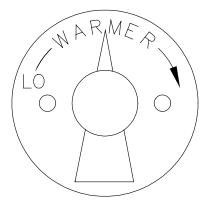
- 1.OPEN LID, ADD DETERGENT THEN CLOTHES, CLOSE LID.
 (USE RECOMMENDED AMOUNT OF DETERGENT FOR A SMALL TO MEDIUM LOAD. THESE MACHINES ARE SMALLER CAPACITY THAN MOST WASHERS AND REQUIRE LESS DETERGENT)
- 2. SELECT WASH CYCLE RECOMMENDED ON GARMENT. (REGULAR, PERMANENT PRESS OR KNITS / DELICATES)
- 3. SELECT LOAD SIZE. (SMALL, MEDIUM, LARGE)
- 4. SELECT WARM WATER TEMPERATURE. (THERE IS NO HOT WATER BUT A WARM FILL WILL FILL THE WASHER FASTER)
- 5. START WASHER. (PULL OUT CONTROL KNOB) THE WASHER WILL FILL AND RUN UNTIL THE LOAD IS COMPLETE.
- 6. DO NOT OPEN LID DURING THE WASH CYCLE. IF LID IS LIFTED THE WASHER WILL STOP. IF THIS OCCURS, CLOSE THE LID AND THE WASHER WILL START AGAIN.
- 7. IF A LOAD IMBALANCE OCCURS THE WASHER WILL STOP. PUSH IN THE CONTROL KNOB. OPEN THE WASHER AND REDISTRIBUTE THE CLOTHES, CLOSE THE LID AND PULL OUT THE CONTROL KNOB. THE WASH CYCLE WILL RESUME FROM WHERE IT STOPPED.

DRYER OPERATING INSTRUCTIONS

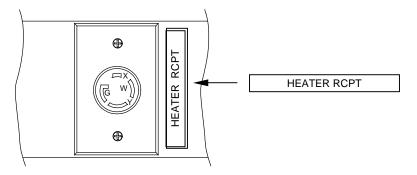
- 1. CLEAN LINT FILTER BEFORE EACH USE. (Dispose of lint in trashcan)
- 2. PLACE CLOTHES IN DRYER.
- 3. SELECT TYPE OF DRYING CYCLE PREFERRED.
- 4. SELECT TEMPERATURE (REGULAR, DELICATE) RECOMMENDED ON THE GARMENT LABEL.
- 5. PRESS START. (THE DRYER WILL AUTOMATICALLY STOP WHEN THE CYCLE SELECTED IS COMPLETE

Space Heater

Label. The space heater control located on the unit is labeled as shown below.

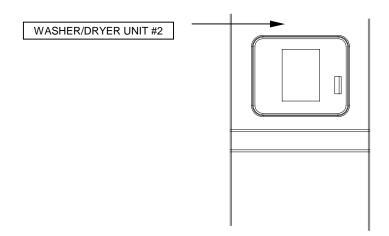


The space heater power receptacle located on the ceiling raceway is labeled as shown below.

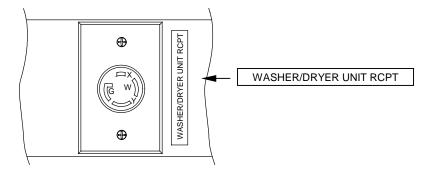


Washer/Dryer

Label The washer/dryer units are identified as follows:

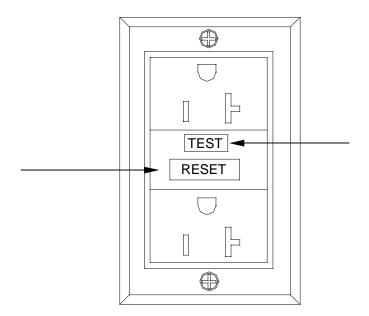


The washer/dryer power receptacles located on the ceiling raceway are labeled as shown below.



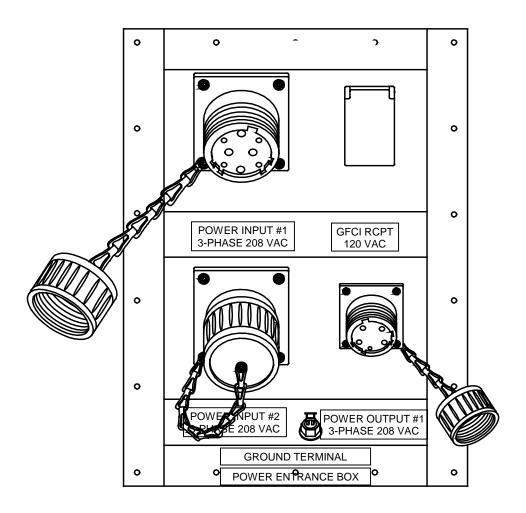
GFCI Receptacles

The GFCI Receptacles located on the roadside raceway and power entry box are labeled as shown below.



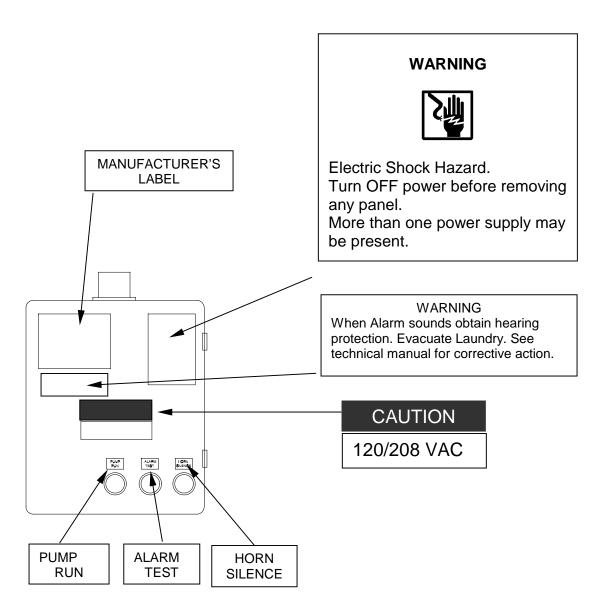
Power Entrance Box

Label The power entrance box connectors are labeled as follows:



Wastewater Pump Control Panel

Label The wastewater Pump Control Panel is labeled as follows:



END OF WORK PACKAGE

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A OPERATION UNDER USUAL CONDITIONS

SITING REQUIREMENTS



WARNING

The CSSL container weighs approximately 10,000 pounds when packed. Lift and move the container only with material handling equipment of at least 10,000 lbs capacity. Observe all safety precautions. Never stand under a CSSL container when it is being lifted. Unpacking components requires at least four persons.

This section outlines the siting requirements of the CSSL, and describes the assembly of its components. It also provides procedures for the preparation, and operation of the CSSL under usual conditions. Refer to work package 0006 00 for operation under unusual conditions. Refer to work package 0003 00 for a summary of minimum CSSL employment conditions. Procedures in this work package require the use of the general mechanics tool kit (Item #1, Table 2, Work Package 0045)

Unloading and moving the CSSL requires a forklift of at least 10,000 lbs capacity. Use the built-in forklift pockets on the container to move the CSSL.

For storage, CSSL containers may be stacked six-high, as long as the bottom unit is positioned on a firm, level surface. Hoisting requires 10,000 lbs minimum capacity hoists and slings connected to the corner ISO fittings.

Read all warnings and cautions within this section and follow procedures outlined herein to ensure safe operation of the CSSL and associated equipment.

SITE SELECTION

The selected site should be large enough to accommodate the CSSL container with attached 8-ft TEMPER Section. It should be within reasonable proximity to a freshwater source and wastewater disposal facility. If 3,000 Gallon fabric tanks furnished with each CSSL are to be used for freshwater storage and wastewater collection, sufficient space is needed to position the tanks as specified in work package 0003 00. The selected site should be level and free of large holes, trees, rocks, and debris. There should be sufficient drainage to prevent rainwater accumulation.

Proximity to a power source is also required. In addition, the power supply cables, the water supply, and wastewater drain hoses should not be subjected to vehicular traffic and out of the way of facility users. Vehicular access to the 3,000 Gallon tanks (if used) is required to frequently replenish freshwater and drain the wastewater. Additional space is required to position a 30 kW (minimum) generator (if used) to supply power to the CSSL and consideration for its refueling. Ideally, the container should be located within the distance of the furnished utility cables and hoses as follows:

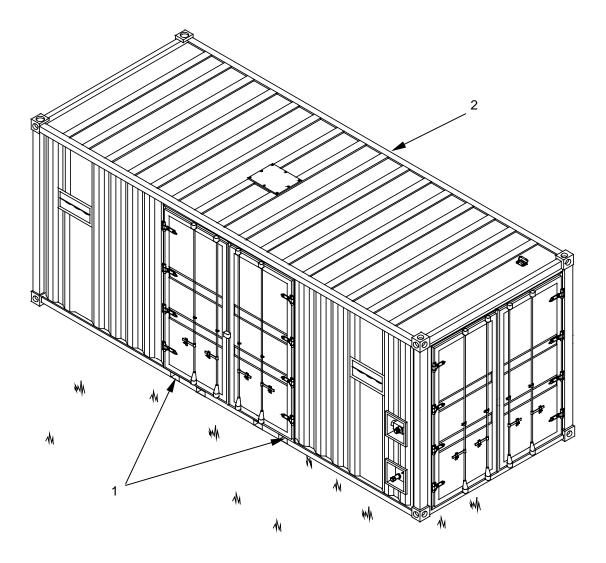
100AMP Cable50ftFreshwater Supply Hose50ftWastewater Drain Hose50ft

UNPACKING AND INVENTORY OF CSSL COMPONENTS

With 10,000 lbs capacity forklift, using the outside container forklift pockets (1), position the CSSL (2) in its designated area.

CAUTION!

The CSSL container must be level for proper operation and prevention of damage to the washer/dryers.



Open the personnel entry doors marked **OPEN FIRST**, then open the opposite doors marked **REAR DOOR**.

Loosen and remove tie-down straps secured to the provisions on the floor. Place straps into footlocker after setup is complete.



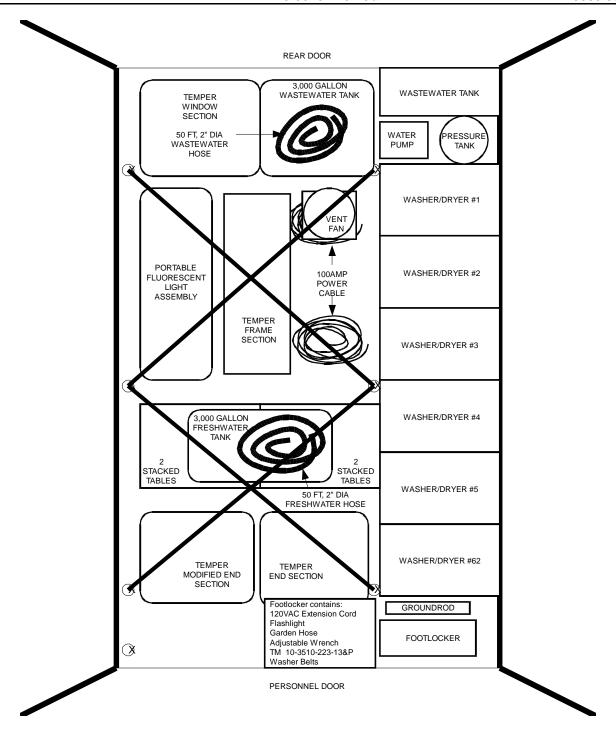
At least four persons are required to unpack the CSSL. To avoid injuries, observe the lift requirements shown in the table below.

Unpack the CSSL and identify and inventory items being removed using the table below and the packing plan on the following page. Position the unpacked items as shown in the illustration on page 0005 00-5.

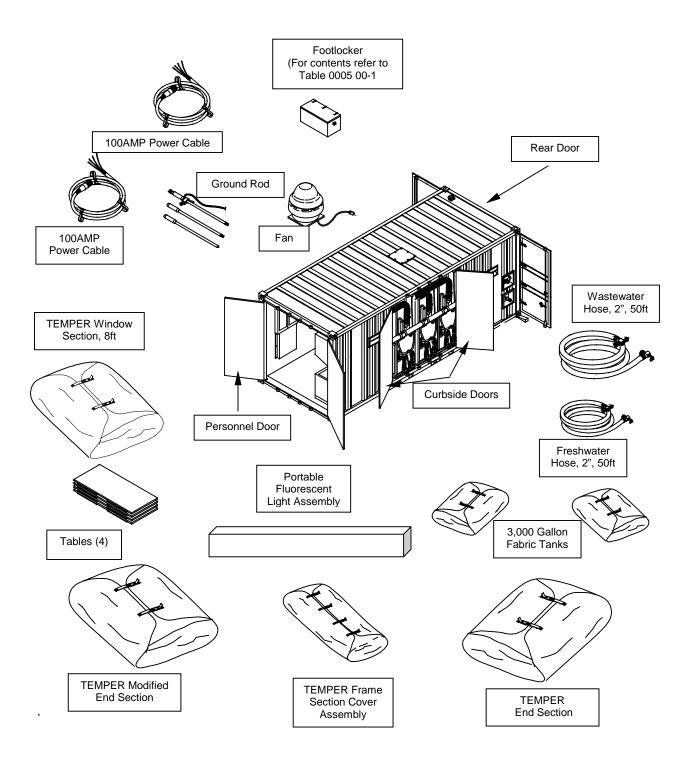
Check condition of components during unpacking and report any discrepancy to your supervisor.

Table 0005 00-1. CSSL Contents

| Nomenclature | Quantity | Condition | Lift Requirements |
|---------------------------------|----------|---------------------------------|----------------------|
| 100AMP Cable, 50ft | 2 | Clean, coiled, caps installed | 2 Persons each Cable |
| TEMPER Frame Section Cover | 1 | Clean and folded | 4 Persons |
| TEMPER, 8ft Window Section | 1 | Clean and folded | 4 Persons |
| TEMPER Modified End Section | 1 | Clean and folded | 4 Persons |
| TEMPER End Section | 1 | Clean and folded | 4 Persons |
| Fresh Water Supply Hose 1 ½" | 1 | Drained and coiled | 2 Persons |
| Wastewater Drain Hose 2" | 1 | Drained and coiled | 2 Persons |
| Ground Rod | 1 | Clean, with wire attached | 1 Person |
| Ventilation Fan | 1 | Cord Plug taped to body | 2 Persons |
| Wastewater Tank 3,000 Gallon | 1 | Drained clean and folded | 4 Persons |
| Freshwater Tank, 3,000 Gallon | 1 | Drained clean and folded | 4 Persons |
| Table, Folding | 4 | Folded and tied | 1 Person each table |
| Portable Fluorescent Light Assy | 1 | In Case | 1 Person |
| Tie Down Straps | 4 | Secured to floor provisions | 1 Person |
| Footlocker, containing: | 1 | | 1 Person |
| Garden Hose | 1 | Drained, coiled, ends connected | |
| Technical Manual | 1 | In plastic bag | |
| 120 VAC Power Cord | 1 | Clean and coiled | |
| Adjustable Wrench | 1 | Clean | |
| Flash Light | 1 | Clean | |
| Washer/Dryer Repair Parts | | Original Pack | |



CSSL Packing Diagram



PREPARE POWER DISTRIBUTION SYSTEM FOR USE

This procedure must be performed by civilian personnel (electrician), or qualified military personnel with MOS 51R, 52C, 52D, or 52G.



WARNING

The CSSL modified cargo container must be electrically grounded. Failure to ground the CSSL may result in serious injury or death from electrical shock.

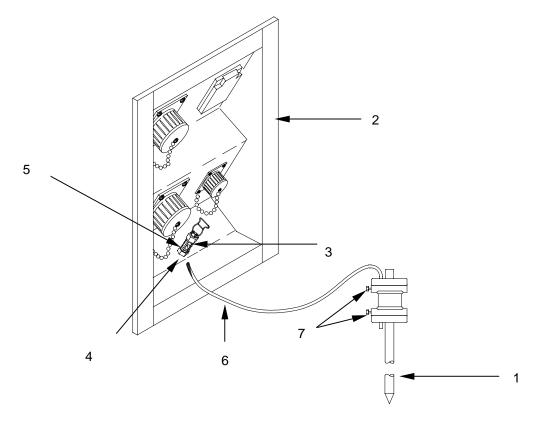
If ungrounded power will be used to operate the CSSL, the container must be grounded as follows:

Drive grounding rod (1) 8' into the ground near the power entry panel (2).

Back off hex nut (3) on grounding terminal (4) to expose the eye (5).

Insert ground cable (6) through eye (5) and tighten hex nut (3).

Ensure cable (6) is securely attached to grounding rod (1). Tighten setscrews (7) if necessary.



Qualified civilian personnel (electrician) or military personnel in MOS 51R, 52C, 52D, or 52G are required to connect the 100AMP power cables.

CAUTION

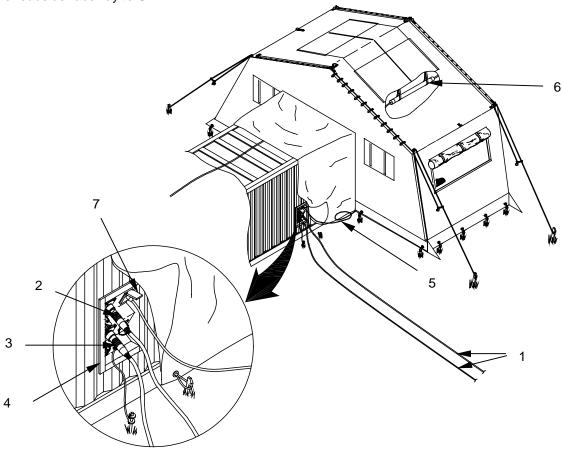
Ensure all circuit breakers on circuit breaker panels #1 and #2 are set to OFF to prevent shorting of equipment when power is initially connected.

Connect 100 AMP, 50 ft cables (1) to power input plug J1 (2) and J2 (3) on the power entrance box (4).

Have qualified personnel, as noted above, connect pigtail end of 100 AMP, 50 ft cables (1) to the power source (e.g., generator, municipal power supply, etc.).

If TEMPER interior lights (6) are used, lay out and connect 120VAC extension cord (5) (in footlocker) to GFCI receptacle J3 (7) on the power entrance box (4). Turn **ON** power at the source.

Switch main breakers in Power Distribution Panel #1 and #2 Circuit Breaker to **ON**. Observe phase indicator light on Panel #1. When indicator light is on, switch circuit breakers #1 and #29 on Panel #1, and circuit breaker #3 on Panel #2 (if needed) to **ON**. To operate the interior lights, turn the LIGHTS switch on the roadside raceway to **ON**.



INSTALL EXHAUST FAN



WARNING

This procedure requires four personnel to lift and move the fan into position atop the container. Personnel in the 5th percentile size group may require a step aide during this procedure.

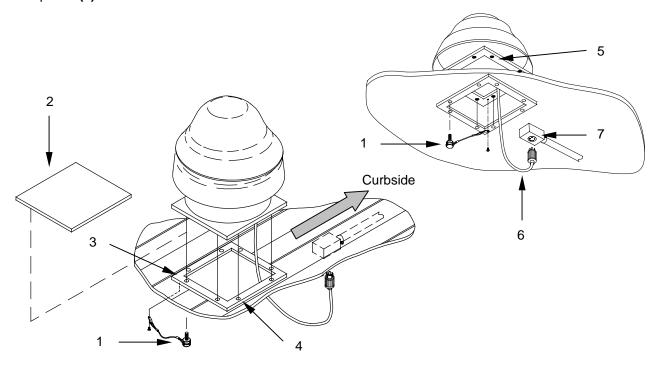
Inside the container, remove captive tiedown knobs (1) securing roof panel (2). (Switch interior lights **ON** with LIGHTS switch on the roadside raceway, if necessary).

Using the folding steps located on the outside of the rear end roadside wall of the container, have two personnel gain access to the top of the container.

From top of container, remove the panel (2). Pass panel to personnel on ground. Store panel inside container, behind washer/dryers.

Using two personnel on the ground, lift the fan to the two personnel on top of container. Remove the adhesive tape holding the power cord to the fan housing.

Install exhaust fan onto the mount (3), so that the power cord will be on the curbside of the mount, and align the holes (4). From inside the container, install captive tiedown knobs (1) onto exhaust fan frame (5). Tighten captive tiedown knobs (1) securely. Plug power cord (6) into designated 208VAC raceway receptacle (7).



SET UP WATER SYSTEM EXTERNAL COMPONENTS

Determine what external water systems components will be needed. This will depend on the availability of freshwater, and the method of wastewater disposal. If municipal facilities are available, the CSSL can be connected directly to a water supply source. Similarly the CSSL can be connected to a sewer system for wastewater disposal. Alternatively, the 3,000 Gallon collapsible fabric tanks furnished with the CSSL can be used for both freshwater supply and wastewater collection. However, this will require regular services using water tank trucks for resupply and wastewater collection trucks for disposal to keep the CSSL in operation. Place the water system components to be used in position as shown on the following illustration, observing the distances indicated.



WARNING

If municipal fresh water is not available, employ the 3,000 Gallon collapsible fabric tank labeled FRESHWATER TANK, with subsequent refilling by tanker. Keep the tank and freshwater hoses away from wastewater hoses and any wastewater storage in the vicinity. Serious health problems may result from water contamination. Refer to TM 5-5430-227-12&P for instructions to set up and prepare the tank for operation.

To connect the freshwater supply, lay out and connect the 2 inch freshwater hose (1) from the freshwater entry panel (2) on the container curbside wall, to the 3,000 Gallon collapsible fabric storage tank labeled FRESHWATER TANK (3).

Fill the 3,000 Gallon collapsible fabric storage tank labeled FRESHWATER TANK (3) with freshwater.

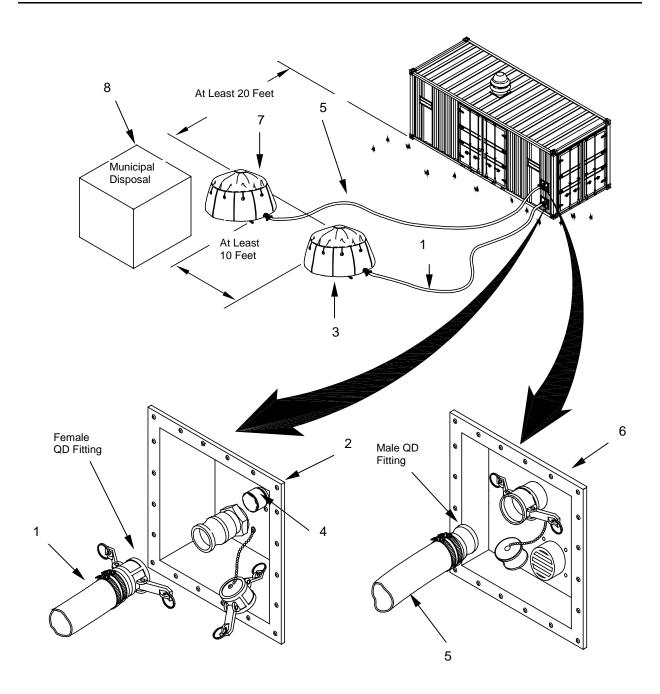
If municipal water is available a regular garden hose (obtain this hose from the footlocker) can be connected between the municipal supply and the ¾ inch hose fitting (4) on the freshwater entry panel.



WARNING

Ensure that wastewater is properly disposed of either through an approved municipal sewage system, or collected in the 3,000 Gallon collapsible fabric tank labeled WASTEWATER TANK, with subsequent evacuation by tanker. Keep wastewater hoses away from freshwater hoses and any freshwater supply in the vicinity. Serious health problems may result from water contamination. Refer to TM 5-5430-227-12&P for instructions to set up and prepare the tank for operation.

To connect the wastewater drain, lay out and connect the 2 inch wastewater hose **(5)** from the wastewater panel **(6)** on the container curbside wall) to the 3,000 Gallon collapsible fabric storage tank labeled WASTEWATER TANK **(7)**, or a designated municipal disposal point **(8)**.



PREPARE WASHERS AND WATER SYSTEM FOR USE

Open container curbside doors and check water hoses (1) for secure attachment to the washers (2) and the freshwater supply line (3). Hand tighten hoses if necessary. Leave curbside doors open.

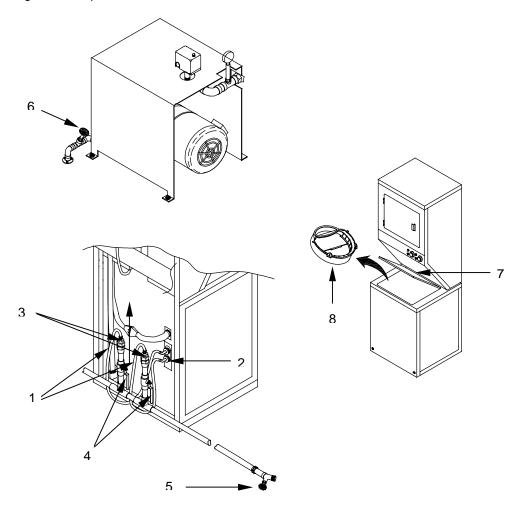
Ensure ball valves on washer water supply lines (4) are open (handle aligned with the water line)

Open supply line drain gate valve (5) and close water pump drain gate valve (6).

NOTE

If municipal water is supplied through a garden hose connection to the freshwater panel, the water supply is regulated with the gate valve located inside the freshwater panel. Otherwise, this valve should be closed.

Open washer lids (7) and remove plastic shipping brackets (8). Place brackets on top of dryer and retain for use during return shipment.



PREPARE DRYERS AND DRYING SYSTEM FOR USE

Remove tie-down strap from dryers (1) and place strap into footlocker after set up is complete.

Open doors on dryers and ensure lint traps (2) are clean and in place.

Through container curbside doors, gain access to area behind dryers and ensure exhaust hoses (3) are connected to dryer outlets (4) and exhaust vents (5) in the curbside wall.

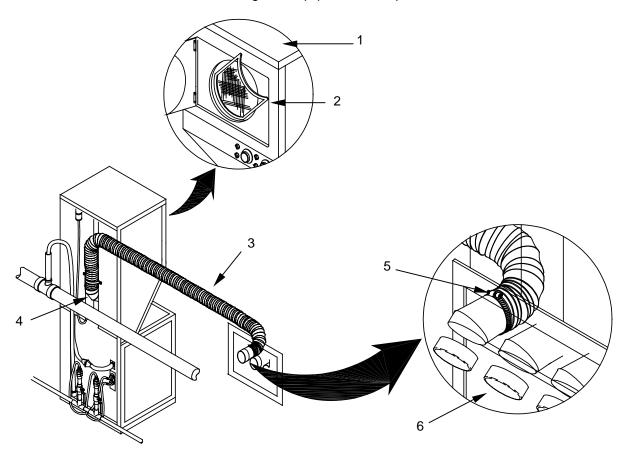
If necessary, install exhaust hoses (3) using hose clamps to secure them to dryer outlets (4) and exhaust vents (5) in the curbside wall.

Remove vent caps (6) from exhaust vents and store them in the footlocker.

If CSSL will be placed in operation immediately after set up, leave curbside doors open. Otherwise, close container curbside doors.

CAUTION

Do not operate dryers without exhaust hoses installed, or with ripped or torn hoses. This will damage the equipment and represent a fire hazard.



PREPARE TEMPER WITH MODIFIED END SECTION FOR USE



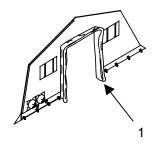
WARNING

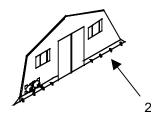
The assembled TEMPER section is heavy. At least four persons are required to move the TEMPER section into position. To avoid injuries, ensure personnel are available before attempting to lift the tent. Personnel in the 5th percentile size group may require a step aide during this procedure.

The following procedures provide detailed instructions for erecting a TEMPER window section, end section, and modified end section for use with the CSSL. For repair procedures or more detailed information on the TEMPER, refer to TM 10-8340-224-13.

Close the personnel double doors on the container.

Use WP 0062 to identify individual pieces of the TEMPER section. Pay particular attention to the difference between the modified TEMPER end section (1) and the regular TEMPER end section (2).





Assemble the TEMPER section with the modified end section (1) generally oriented towards the container personnel double doors.

NOTE

The frame assemblies are erected in three stages: kneeling, partially-erect, and erect. These stages permit the attachment of components without the aid of ladders. Both rigid and sectionalized arch assemblies are in use in the field. After initial assembly, the sectionalized arch assembly does not vary in function from the rigid arch assembly. Erect tent from top to bottom, end section towards opposite end section.

WARNING

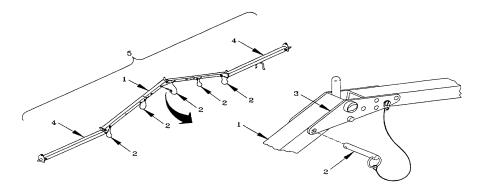
Frame assembly hinges can pinch or crush hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves.

CAUTION!

Do not twist or turn frame components when handling.

Damage to equipment may result.

Arch Assembly



Remove roof arch assembly (1) and side arch assemblies (4) from frame sections cover assembly bundle.

Ensure all quick release pins (2) are disengaged.

CAUTION!

Insert quick release pins towards inside of tent end assemblies.

Tent fabric may tear if inserted towards outside.

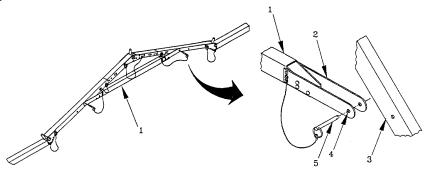
Align holes in roof arch assembly (1) with holes in ridge gusset plate (3). Insert quick release pin (2).

Move side arch assembly (4) away from roof arch assembly (1).

Connect roof arch assembly (1) and side arch assemblies (4) to form arch assembly (5).

Lay arch assembly (5) flat on the ground.

Header Assembly



NOTE

The header assembly will be pinned to the arch assembly between the ridge and eave.

Identify the header assembly (1).

Slide the header assembly end plates (2) over arch assembly (3).

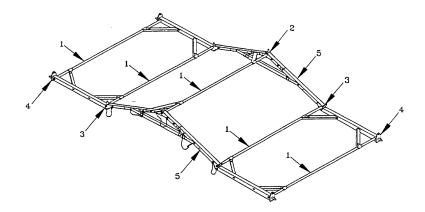
Align arch assembly (3) and header assembly end plate holes (4) and insert quick release pin (5).

Lay assembly on the ground. Repeat procedures for each arch assembly.

Purlin Assembly

NOTE

An 8-foot section of the frame will be completed with five purlins.



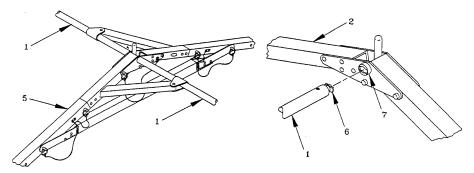
Identify five purlins (1) for installation at ridge (2), eaves (3), and bases (4).

Starting at the end arch, hold two arch assemblies (5) upright 8-feet apart, in kneeling position.

NOTE

Ensure arches are parallel.

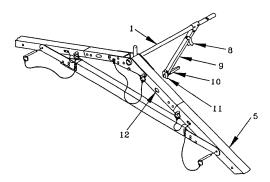
Install purlin (1) at ridge.



Identify end fitting (6) on each end of purlin (1).

Fit end fitting (6) in each arch assembly boss (7) simultaneously.

Rotate purlin (1) 90° so that end fittings (6) lock into boss (7) at each arch assembly (5).



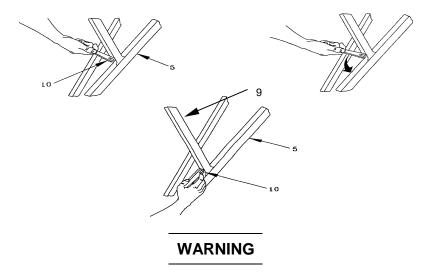
Unfasten retaining strap (8) and rotate a purlin diagonal brace (9) toward arch assembly (5).

NOTE

The brace stud and brace shackle are located at the end of the purlin diagonal brace. The slot on the arch assembly is approximately two feet away from the ridge.

Holding brace shackle (10), align and place brace stud (11) in arch assembly slot (12) located two feet from ridge.

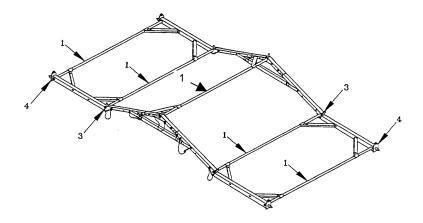
Rotate brace shackle (10) 90° to lock brace stud (11) in place.



Do not lock brace shackle toward purlin diagonal brace. Arch assembly may collapse causing injury to personnel or damage to equipment, if improperly locked.

Lock purlin diagonal brace (9) by pressing brace shackle (10) down towards arch assembly (5) until it is secure.

Install remaining purlin diagonal brace (9) repeating steps above.



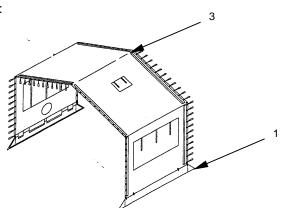
Install purlin (1) at each eave (3) repeating steps above. Begin at "Identify end fitting".

Install purlin (1) at each base (4) repeating steps above. Begin at "Identify end fitting".

The frame section is now in a kneeling position.

Placement of Window Section

Install window section as follows:

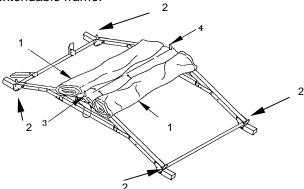


Identify the window section (1).

NOTE

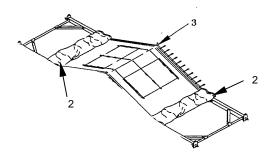
Four soldiers are required to carry the window section to the frame section ridge.

Place window section (1) next to extendable frame.



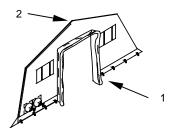
Identify large, spindle grommets (3) at the center of each side of the window section (1).

Place the large spindle grommets (3) over ridge spindles (4).



Unroll tent fabric until fabric reaches eave spindles (2). Place grommets over each of the four eave spindles (2).

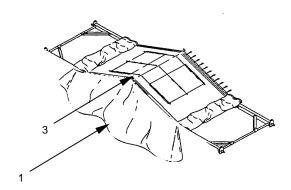
Placement of Modified End Section



Identify modified end section (1). Identify large spindle grommet (2) at peak of modified end section. Modified end section should be stenciled "ISO Bootwall".

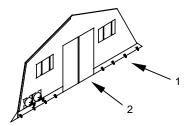
NOTE

It is important the modified end section be placed on the side of the frame assembly facing the CSSL. The modified end section connects to the CSSL at a later stage.

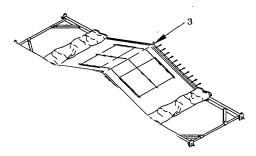


Place large, spindle grommet (2) {see illustration at top of page} located at peak of modified end section (1) over ridge spindle facing the CSSL (3)

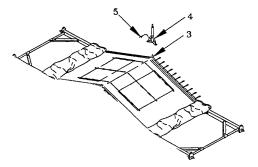
Placement of End Section



Identify end section (1). Regular end section has zip doors (2) versus the bootwall attachment on the modified end section.



Place large, spindle grommet (2) located at peak of end section (6) over ridge spindle opposite CSSL (3).



Identify the ridge extender (4)

Place the ridge extender (4) over the ridge spindle (3) opposite the CSSL. Align holes in ridge spindle (3) and ridge extender (4).

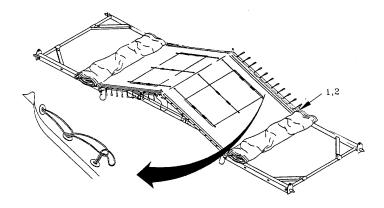
Install the attached hitch pin (5) through holes in ridge extender (4) and spindle (3), ensuring it secures the ridge extender (4) to spindle (3).

Becket Lacing Window and End Sections

At this point, lacing together of window and end sections may be accomplished simultaneously. Begin all lacing from the ridge line and work towards the eave. Becket lacing procedure is the same throughout the erection process and is accomplished as follows:

CAUTION!

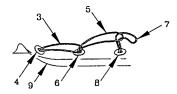
Do not step on tent components. Material may be torn and dirt ground into material.



NOTE

For easier lacing, place eave grommets with becket laces over eave spindles first, to provide fabric tension, then overlap adjoining window section and end section eave grommet without laces.

Place becket side eave grommet (1) over eave spindles (2).



Identify first becket lace (3) and becket grommet (4) near the ridge.

Insert the first becket lace (3) through first becket grommet (4) and second becket lace (5) through second becket grommet (6).

Insert second becket lace (5) through the loop of first becket lace (3).

Pull second becket lace (5) tight away from ridge.

Insert third becket lace (7) through grommet (8) and through loop of second becket lace (5).

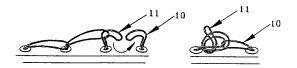
Pull third becket lace (7) tight away from the ridge.

Continue lacing and close hook and pile weather flap (9) until reaching the last becket lace (10).

NOTE

Ensure weather flap fabric is slid under the ridge extender brace.

Place remaining window and end section grommets over eave spindles.

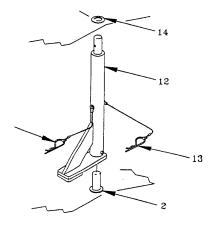


Upon reaching last becket lace (10) at eave, insert next-to-last becket lace (11) through loop of last becket lace (10).

Pull the next-to-last becket lace (11) back towards the ridge and tie off with half-hitch knot.

Complete lacing all window and end sections up to eave.

Identify the eave extenders (12).



Place eave extenders (12) on eave spindle (2) with brace towards ridge.

Align spindle (2) and eave extender (12) holes and insert the hitch clip pin (13) ensuring it secures eave extender (12) to eave spindle (2).

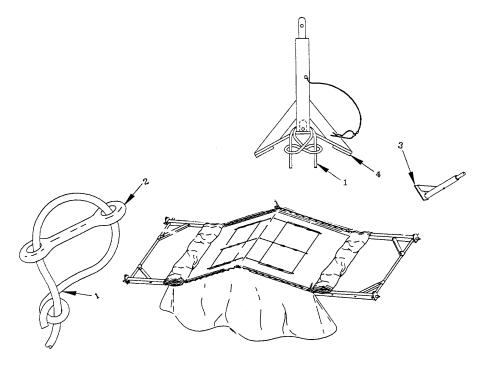
NOTE

Do not leave any beckets below the eave at this time.

Install Guy Line

Identify one 19-foot guy line (1) and one tent slip (2) for placement at each of the four eave extender (3) bases.

Identify two 19-foot guy line (1) and tent slips (2) for placement at the end ridge extender (4) base.



Thread the guy line (1) through one side of the tent slip (2) and then through the brace and around the pole of the eave (3) extender. Thread two guy lines through the ridge extender (4).

Bring guy line (1) through other side of tent slip (2) and tie an overhand knot at end of guy line (1). Repeat steps above for all extenders.

WARNING

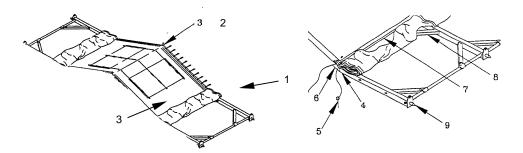
Eliminate the possibility of tripping. Clear fabric and guy lines. Injury to personnel may result from falls.

Raising the Frame to Partially-Erect Position.

CAUTION!

Avoid folding wall fabric into joints. Material may rip or tear if caught in joint.

Raise one side of the frames as follows:



Fold wall fabric (1) towards ridge (2) to expose eave gussets (4). Place folded fabric on ridge fabric (3).

Identify quick release pin (5) and ensure it is hanging free.

Identify the locking hole in the side arch assembly (6) and ensure it is free of debris.



WARNING

Two soldiers should be placed at each arch leg to raise frame. Lift tent from correct squatting position, using your legs to avoid back injury.

CAUTION!

Tent frame must be raised uniformly to avoid twisting or turning.

Damage to frame can result.

Step in next to the eave gusset (4).

WARNING

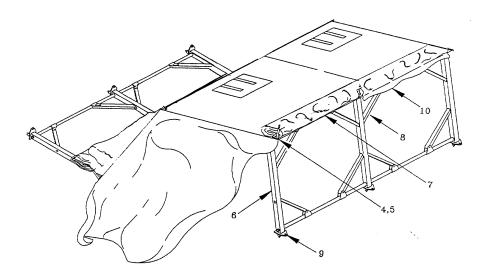
Frame assembly hinges can pinch or crush hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves. Failure to do so may result in injury to personnel.

Place one hand on the side arch assembly (6) and one hand on the eave purlin (7) outside the diagonal brace (8).

Get in a stable squatting position.

NOTE

This illustration shows two window sections for clarity. Only one window section is used in the CSSL.



Lift frame straight up to shoulder height; drag side arch assembly (6) inward.

Place weight of the frame on side arch assembly foot (9).

CAUTION!

Insert quick release pins towards inside of tent on end assemblies. Tent fabric may tear if inserted towards outside.

Align holes of eave gusset (4) and side arch assembly (6) and install quick release pin (5).

Identify purlin flap (10) on interior of window/roof section.

Secure purlin flap (10) to frame at eave purlin (7) using hook and pile fasteners.

Tent is now in a partially-erect stage.

NOTE

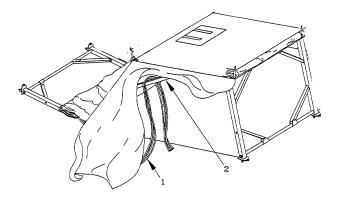
The other side of the tent will be raised after installation of interior components.

Component Installation

While the frame is partially-erect install light supports and luminaries as follows:

WARNING

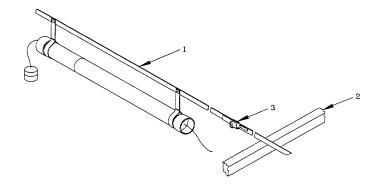
Lethal voltage is present when cables are connected to power control system. Ensure cables are disconnected from power source when working with cables or fixtures. Electrical shock or death may result from failure to heed this warning.



CAUTION!

Allow slack in electrical cables. Strain on cable can damage equipment.

Wrap extension cable (1) once around the header (2) to relieve strain.



Identify light support strap assembly (1) in light set case.

Wrap each running end of light support strap assembly (1) once around header (2) at header/arch joint so the double D-ring (3) faces the tent roof.

Secure end of light support strap assembly (1) through double D-ring (3) assembly on standing end of strap. Tighten webbing until taut.



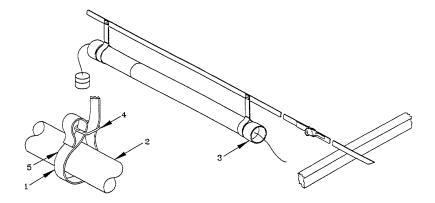
WARNING

Two personnel are required to lift light set case to avoid injury.

NOTE

To prevent damage leave luminaires in case until ready to install.

Be sure male plug end is toward the CSSL.



Wrap light hanger strap (1) around each end of luminaire (2) on inside of rubber end caps (3).

Pull strap (1) up through the "D" ring (4) and press down to engage hook and pile fastener (5).

Mate plug properly to next luminaire (2), ensuring reflecting surface faces up and lamp faces down.

Repeat steps above for additional luminaires.

Repeat for second luminaire on other side of TEMPER section. Plug the luminaries (2) together on the end opposite the CSSL.

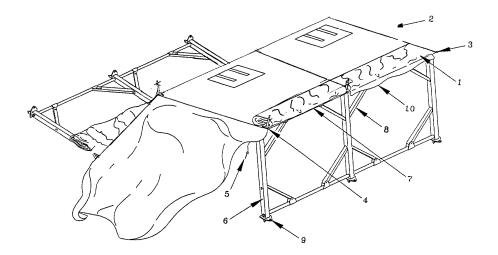
Fully Erecting the Frame

CAUTION!

Avoid folding wall fabric into joints. Material may rip or tear.

NOTE

This illustration shows two window sections for clarity. Only one window section is used in the CSSL.



Fold wall fabric (1) towards ridge fabric (2) and lay on roof (3) to expose eave gussets (4).

Identify quick release pin (5) and ensure it is hanging free.

Identify the locking hole in the side arch assembly (6) and ensure it is free of debris.



WARNING

Two soldiers should be placed at each arch leg to raise frame. Lift tent from correct squatting position, using your legs to avoid back injury.

CAUTION!

Tent frame must be raised uniformly to avoid twisting or turning.

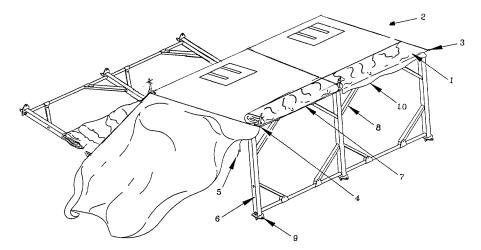
Damage to frame can result

Step in next to the eave gusset (4).

WARNING

Frame assembly hinges can pinch or crush hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves.

Place one hand on the side arch assembly (6) and one hand on the eave purlin (7) outside the diagonal brace (8).



Get in a stable squatting position.

Lift frame straight up to shoulder height, dragging side arch assembly (6) inward.

Place weight of the frame on side arch assembly foot (9).

CAUTION!

Insert quick release pins towards inside of tent on end assemblies. Tent fabric may tear if inserted towards outside.

Align holes of eave gusset (4) and side arch assembly (6) and install quick release pin (5).

Identify purlin flap (10) on interior of window/roof section.

Secure purlin flap (10) to frame at eave purlin (7) using hook and pile fasteners.

CAUTION!

Frame bases set more than 20 feet 4 inches apart may cause end section fasteners to tear apart.

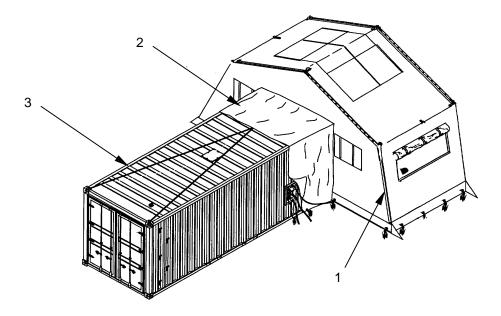
Set frame bases 20 feet 4 inches apart.

Moving the TEMPER Section into Position



WARNING

The assembled TEMPER is heavy. At least four persons are required to move the TEMPER into position. To avoid injuries, ensure personnel are available before attempting to lift the tent. Personnel in the 5th percentile size group may require a step aide during this procedure.

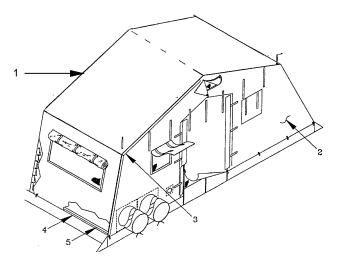


Using four soldiers, one at each side arch assembly (1), pick up and move the TEMPER section against the CSSL, centering the ridge on the TEMPER section with the center of the closed personnel doors.

Have two soldiers gain access to top of CSSL using the hinged steps. Pull the boot (2) over the container end and lay loosely on the container roof.

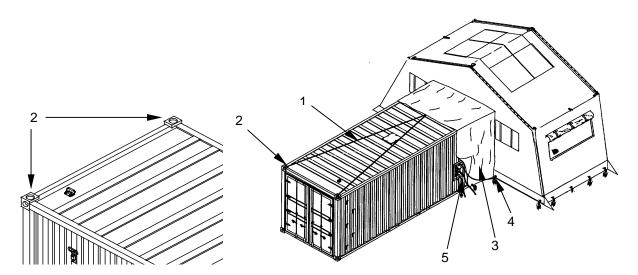
Locate two bootwall lines (3) attached to the bootwall fabric and pull them towards the opposite corners of the CSSL as shown. DONOT FASTEN THESE LINES AT THIS TIME.

Complete Becket Lacing and Bootwall Attachment



Roll up window flaps and secure. Have two soldiers on the ground complete lacing the window section (1) and the end sections (2) together. Secure weather seal flap (3).

Pull sod cloth (4) under base purlins (5) and end wall section (2).



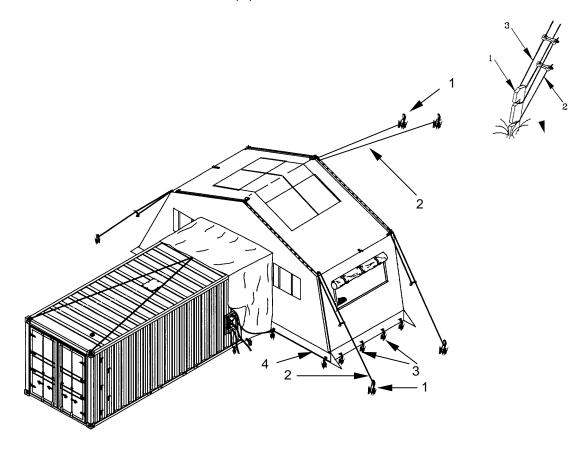
Have two soldiers on top of container secure the bootwall lines (1) to the upper ISO fittings (2) at the opposite end of the container. Secure the lower end (3) of the bootwall with to the ground with 12-inch steel pins (4).

Plug power cord (5) for TEMPER interior lights into container power panel.

Stakes and Guy Lines

WARNING

Stakes and guy lines must be used to prevent excessive movement of the tent section in high winds. Failure to stake and tie down tent section may result in personal injury or damage to equipment.



Place a 24-inch wooden stake (1) approximately 10 feet from the sides at the corners of the tent section at each eave extender and slant stake(s) towards tent. Place two stakes (1) approximately 10-feet from the rear of the tent section at the ridge extender with stakes slanted towards tent.

Connect loop of eave extender guy line (2) and ridge extender guy lines (2) to bottom notch of wooden stake (1).

Stake tent frame foot to ground using 12-inch steel pins (3).

Stake foot loops (4) to ground and tighten guy lines (2).

Open the container door, being careful not to hit lights. Store light kit container under one of the tables.

After the TEMPER section is set up, unfold the four folding tables and place them inside the tent section.

OPERATE CSSL

After the power and freshwater supply connections are complete, and a wastewater collection/disposal site is connected, the CSSL can be operated. To use the interior lights, turn the LIGHTS switch on the roadside raceway to **ON**.

In Power Distribution Panel No.1, set circuit breakers # 2, 9, 10, 15, 16, 19, 22, and 23 to ON

In Power Distribution Panel No.2, set circuit breakers #15, 19, and 23 to **ON**.

NOTE

The freshwater pump is not used when the CSSL is connected to a municipal water system that supplies sufficient water pressure. Water supply is then regulated with the gate valve located behind the freshwater panel. However, when a static supply, such as a 3,000 Gallon fabric tank is connected, the freshwater pump must be used to provide water pressure.

To operate the CSSL with a static water supply using the water pump (1), the Set circuit breaker #28 on Power Distribution Panel #1 to **ON**.

Ensure that pump drain valve (2) is closed.

Attach garden hose to the hose fitting at the end of the freshwater line (3), located behind washer/dryer #6 and open the gate valve (4).

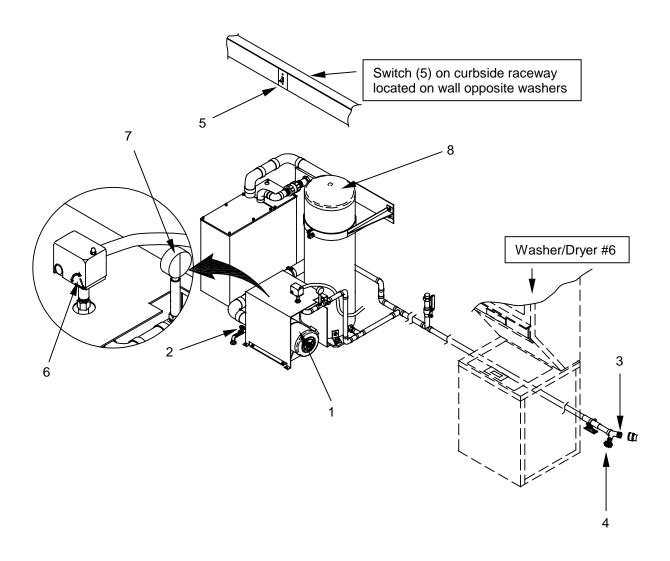
Turn the switch marked 'FRESH WATER PUMP' on the roadside raceway (5) to ON.

Start the pump by lifting the lever **(6)** on the side of pressure switch to override the shutoff. Hold lever until the pressure gage **(7)** indicates 20 lbs of pressure, then release lever.

When water flows from the garden hose attached to the end of the freshwater line, close the gate valve (4).

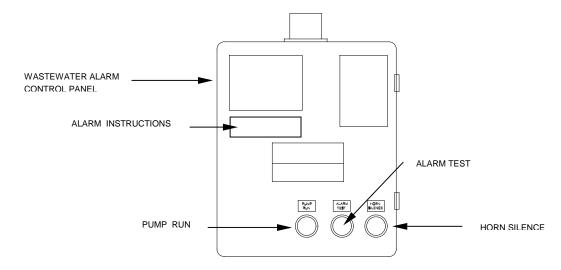
After the pressure switch lever **(6)** is released, the pressure tank **(8)** regulates the operation of the pump in accordance with the needs of the wash system.

If pressure gage shows no pressure after pump has run for several minutes, refer to Unit Maintenance.



After the freshwater system has been activated, check the water hose connections behind washers for leaks. Hand-tighten any hose that leaks. If leak persists, notify unit maintenance. Close curbside doors.

The submersible wastewater pump empties wastewater from the internal wastewater tank. A float-on switch turns on the pump when the water in the tank reaches a pre-set level. Similarly, another, float-off switch shuts off the pump when the tank is empty. If the float-on level is exceeded, an alarm float switch will set off the wastewater alarm. To operate the wastewater pump, push the PUMP RUN button.



Before placing the CSSL in operation, test the operation of each washer/dryer by briefly activating the controls, and if the machine starts, resetting the controls.

After testing, operate washer/dryers as described in commercial manual and posted instructions.

To operate the space heater, adjust the heater control knob until the heater comes on. The heater should not be operated while the washers and dryers are in operation.

To operate the exhaust fan, turn the VENTILATION FAN switch on the roadside raceway to ON.

To operate the 3,000 Gallon collapsible fabric tank(s) refer to TM 5-5430-227-12&P

Operate the TEMPER Section as described in TM 10-8340-224-13.

During operation of the CSSL, check exterior dryer exhaust vents daily for free air flow.

Refer to work package 0006 00 for precautions during operation under unusual conditions.

CAUTION

If the **WASTEWATER ALARM** goes off, push **HORN SILENCE** button on the alarm box. Switch circuit breakers 10, 15, 16, 19, 23, and 28 of circuit breaker panel #1 to **OFF**. Switch circuit breakers 15, 19, and 23 of circuit breaker panel #2 to **OFF**. Discontinue use of CSSL and notify unit maintenance.

CSSL TEMPORARY SHUTDOWN

If the CSSL will not be needed for an extended period, it should be shut down temporarily.

NOTE

If the CSSL needs to be shut down because of unusual weather conditions, refer to work package 0006 00.



WARNING

The CSSL components are heavy. To avoid injuries, four persons are required to perform this procedure.

To shut down the facility while it remains in place proceed as follows:

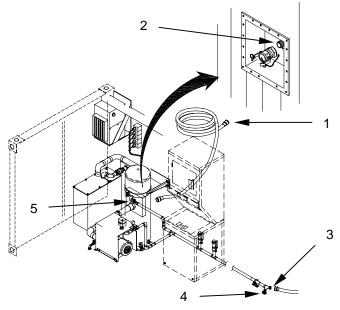
Ensure washer/dryers have completed their cycle.

When municipal water is used:

Shut off the fresh water supply at the source. Disconnect garden hose (1) from the source and the fitting on the freshwater panel (2) on the curbside of the container.

Connect the garden hose (1) to the threaded fitting (3) at the end of the supply line and open the gate valve (4) to let the system drain.

After supply line has drained, disconnect hose (1). Drain the hose, coil it, and set aside. Close gate valve (4) after system has drained. Close gate valve (5) inside the freshwater inlet panel.



When a 3,000 Gallon freshwater tank is used:

Shut **OFF** the freshwater pump **(1)** at the roadside raceway **(2)** switch (located on roadside raceway beside power panels **(19)**. Disconnect the 2" freshwater hose **(3)** from the freshwater inlet panel **(4)** on the curbside of the container. While holding the end of the hose above the water level in the freshwater tank **(5)**, place the end of the hose **(3)** into the freshwater tank as shown. Install dust cap **(6)** on panel **(4)**.

Open the gate valve (7) behind the freshwater inlet panel (4). Connect a garden hose to the threaded fitting (8) at the end of the supply line and open the gate valve (9) to let the system drain. Open the freshwater pump drain valve (10) to let the pump drain. Close valves after system has drained.

Drain the 3,000 Gallon freshwater tank (5) in accordance with TM 5-5430-227-12&P. Remove the 2" freshwater hose (3) from the freshwater tank. Drain the hose, coil, and set aside.



WARNING

Avoid spillage of wastewater. Drain wastewater hoses into an approved disposal facility. Keep wastewater hoses away from freshwater hoses and any freshwater supply in the vicinity. Serious health problems may result from freshwater contamination.

After the wastewater pump (11) has stopped running, shut off the pump (Circuit Breaker #16, Panel #1). Drain the remaining water from the interior wastewater tank (12) by removing the drain plug (13) with an adjustable wrench. Reinstall the plug after tank has drained.

When a municipal disposal system is connected:

Disconnect the 2" wastewater hose (14) from the wastewater panel (15) on the curbside of the container, and drain it into the disposal connection. Disconnect 2" wastewater hose (14) from wastewater disposal point. Coil the hose and set it aside. Install dust cap (16) on panel (15).

When a 3,000 Gallon wastewater collection tank was connected:

Disconnect the 2" wastewater hose (14) from the wastewater panel (15) on the curbside of the container. While holding the end of the hose above the water level in the 3,000 Gallon wastewater tank (17), place the end of the hose into the wastewater tank as shown. Install dust cap (16) on panel (15).

Empty the 3,000 Gallon wastewater tank (17) in accordance with TM 5-5430-227-12&P. Remove the 2" wastewater hose (14) from the wastewater tank. Drain the hose, coil, and set aside.

Clean out dryer lint traps (18) and dispose of lint. Clean CSSL and TEMPER Section as described in work package 0010 00.

Place 2" wastewater hose (14) and 3,000 Gallon wastewater tank (17) inside the TEMPER Section.

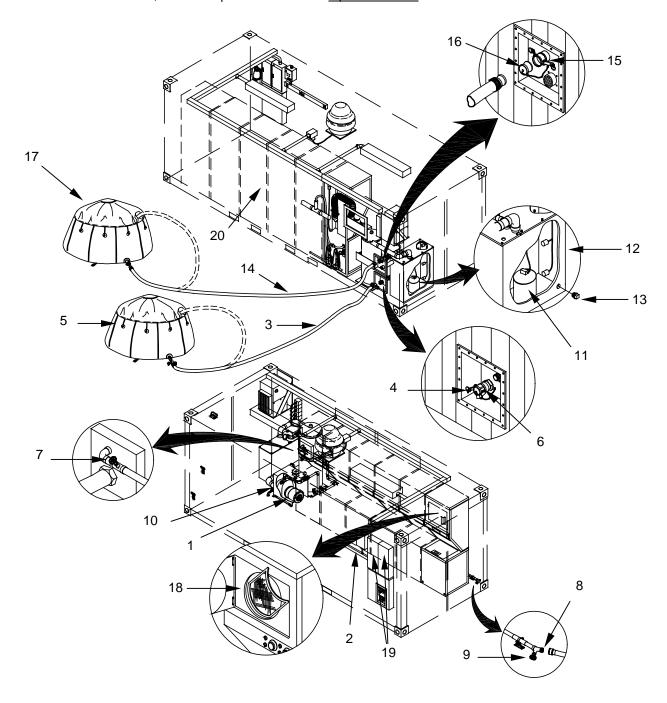
Remove garden hose from threaded fitting (8) on supply line. Drain the hose, coil, and place inside CSSL.

Coil and place 2" freshwater hose (3) together with 3,000 Gallon freshwater tank (5) inside CSSL.

Switch all individual and then the main circuit breakers in both power distribution panels (19) to OFF.

Close all window flaps on the TEMPER and slide fasteners around the entry. Close container curbside doors **(20)**. Retrieve dryer vent caps from footlocker and place over exhaust exits in curbside wall.

To re-activate the CSSL, follow the procedures under **Operate CSSL**.



PREPARE CSSL FOR RETURN SHIPMENT

When the CSSL is no longer required to support the mission, arrange for its return shipment to depot through command / support channels. Prior to shipment, close the facility and prepare it for shipment as described herein. Ensure all washer/dryer units have completed their cycle and the off float switch has turned off the wastewater pump, before proceeding.



WARNING

The CSSL components are heavy. To avoid injuries, four persons are required to prepare the CSSL for shipment.

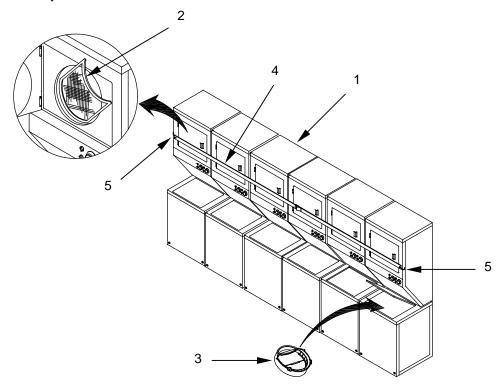
PREPARE WASHER AND DRYERS FOR SHIPMENT

Open washer/dryers (1) and remove any items that may have been left.

Clean out dryer lint screens (2) as shown in commercial washer/dryer manual.

Retrieve washer shipping brackets (3) from top of dryers and install into washers.

Retrieve tie-down straps (4) from footlocker and install on dryers #1 and #6 as shown (5). Connect straps and tighten to secure dryer doors.



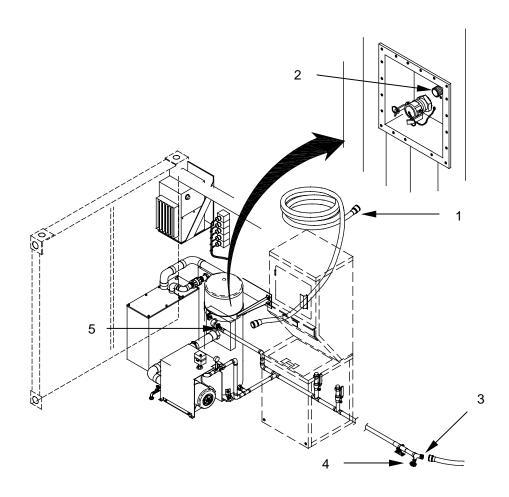
PREPARE FRESHWATER COMPONENTS FOR SHIPMENT

When municipal water was used:

Shut off the fresh water supply at the source. Disconnect garden hose (1) from the source and the fitting on the freshwater panel (2) on the curbside of the container.

Connect the garden hose (1) to the threaded fitting (3) at the end of the supply line and open the gate valve (4) to let the system drain.

After supply line has drained, disconnect hose (1). Drain the hose, coil it, and set aside. Close gate valve (4) after system has drained. Close gate valve (5) inside the freshwater inlet panel.



When a 3,000 Gallon freshwater tank was used:

Shut **OFF** the freshwater pump (1) at the roadside raceway (2) switch. Disconnect the 2" freshwater hose (3) from the freshwater inlet panel (4) on the curbside of the container. While holding the end of the hose above the water level in the freshwater tank (5), place the end of the hose (3) into the freshwater tank as shown. Install dust cap (6) on panel (4).

Open the gate valve (7) inside the freshwater inlet panel (4). Connect a garden hose to the hose fitting (8) at the end of the supply line and open the gate valve (9) to let the system drain. Open the freshwater pump drain valve (10) to let the pump drain. Close valves after system has drained.

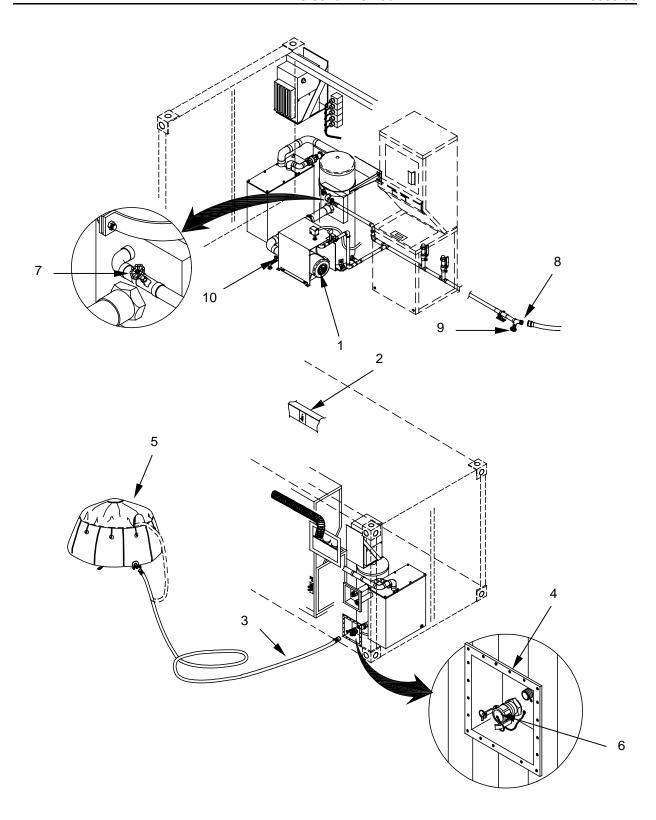


WARNING

The 3,000 Gallon water tank is heavy. To avoid injuries, four persons are required to prepare the CSSL for shipment.

Drain the 3,000 Gallon freshwater tank **(5)** in accordance with TM 5-5430-227-12&P. Remove the 2" freshwater hose **(3)** from the freshwater tank **(5)**. Drain the hose, coil, and set aside. Disassemble and place 3,000 Gallon freshwater tank **(5)** into bag in accordance with TM 5-5430-227-12&P.

After supply line has drained, disconnect garden hose from the hose fitting (8). Drain the hose, coil it, and set aside.



PREPARE WASTEWATER COMPONENTS FOR SHIPMENT $0005\ 00-42$



WARNING

Avoid spillage of wastewater during preparation for movement. Drain wastewater hoses into an approved disposal facility. Keep wastewater hoses separate from freshwater hoses.

After the wastewater pump (1) has stopped running, shut off the pump (Circuit Breaker #16, Panel #1). Drain the remaining water from the interior wastewater tank (2) by removing the drain plug (3) with an adjustable wrench. Reinstall the plug after tank has drained.

When a municipal disposal system was connected:

Disconnect the 2" wastewater hose (4) from the wastewater panel (5) on the curbside of the container, and drain it into the disposal connection. Disconnect 2" wastewater hose (4) from wastewater disposal point. Coil the hose and set it aside. Install dust cap (6) on panel (5).

When a 3,000 Gallon wastewater collection tank was connected:

Disconnect the 2" wastewater hose (4) from the wastewater panel (5) on the curbside of the container. While holding the end of the hose (4) above the water level in the 3,000 Gallon wastewater tank (7), place the end of the hose into the wastewater tank (7). Install dust cap (6) on panel (5).

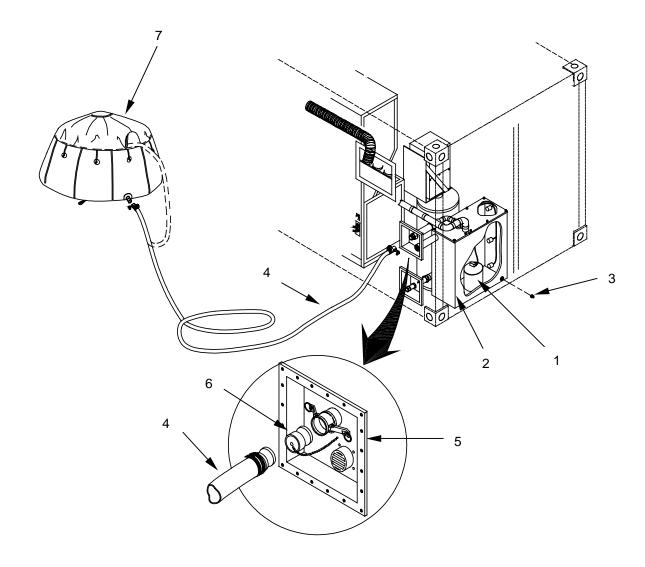


WARNING

The 3,000 Gallon water tank is heavy. To avoid injuries, four persons are required to prepare the CSSL for shipment.

Empty the 3,000 Gallon wastewater tank (7) in accordance with TM 5-5430-227-12&P. Remove the 2" wastewater hose (4) from the wastewater tank. Drain the hose, coil, and set aside.

Disassemble and place 3,000 Gallon wastewater tank (7) into its bag in accordance with TM 5-5430-227-12&P.



PREPARE EXHAUST FAN FOR SHIPMENT



WARNING

This procedure requires four personnel to lower the fan from atop the container. Personnel in the 5th percentile size group may require a step aide during this procedure.

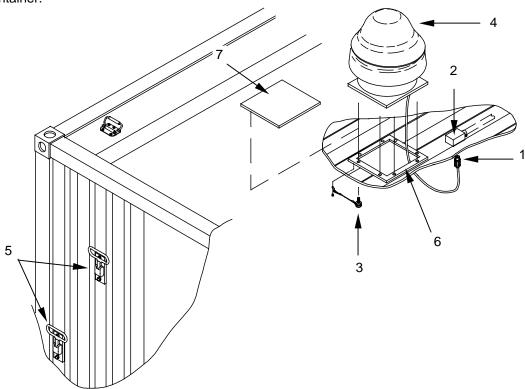
Unplug exhaust fan power cord (1) from ceiling raceway outlet (2).

Inside the container, remove captive tiedown knobs (3) securing the ventilation fan (4). (Switch interior lights **ON** with LIGHTS switch on the roadside raceway, if necessary).

Using the folding steps (5) located on the outside of the rear end roadside wall of the container, have two personnel gain access to the top of the container.

From top of container, remove the ventilation fan (4) from its mount (6) and lower it over the roadside of the container to two persons on the ground.

Retrieve exhaust fan panel (7) from behind washer/dryer #1 and hand it to personnel atop container. Place panel over ventilation fan mount (6) and secure panel with captive tiedown knobs (3) from inside the container.



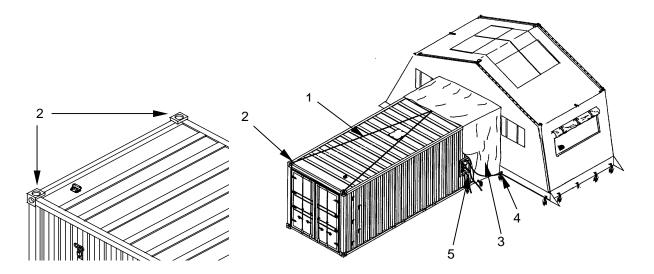
PREPARE TEMPER WITH MODIFIED END SECTION FOR SHIPMENT

To prepare the TEMPER section for movement, follow the procedures outlined. Clean and dry tent fabric sections and equipment as described in below. Package the tent frame pieces into the TEMPER frame section cover assembly.

CAUTION!

Use caution when closing CSSL doors to avoid damage to lights. CSSL doors are heavy and can break lights .

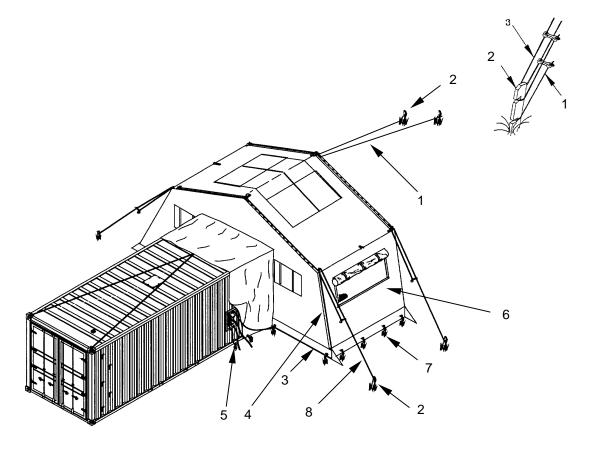
Striking procedures. First, locate the frame section cover and the light set storage container, close the personnel double doors, then proceed as follows:



Have two soldiers on top of container loosen the bootwall lines (1) to the upper ISO fittings (2) at the opposite end of the container. Have two soldiers on ground remove tent stakes (4) from the lower end (3) of the bootwall.

Fold bootwall back towards TEMPER section and coil bootwall lines (1).

Have a soldier on the ground unplug power cord **(5)** used for TEMPER interior lights from the container power panel. Disconnect from lights, coil cable, and place in CSSL footlocker.



Release tension from both guy lines at ridge (1) and disconnect from wooden stakes (2).

Remove the stakes (2) from rear of TEMPER section and remove footstop tent pins (3).

Disconnect all becket laces (4) up to eave.

Close all windows and doors on all fabric sections.

Remove frame foot tent pins (7).

Lift fabric (6) from side of tent and roll up onto roof section.

Release tension from guy lines (8) at eaves and disconnect from wooden stakes (2).



WARNING

The assembled TEMPER section is heavy. At least four persons are required to move the TEMPER away from CSSL. To avoid injuries, ensure personnel are available before attempting to lift the TEMPER Section.

Using one soldier at each of the four corners, move the TEMPER section away from the CSSL approximately four to six feet.

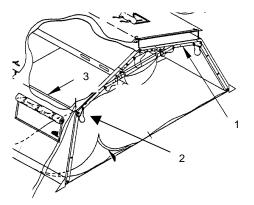
Lowering the Frame

WARNING

Frame assembly hinges can pinch or crush hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves.

CAUTION!

Avoid folding wall fabric into joints. Material may rip or tear if caught in joint.



Place two soldiers at each arch (1) on side of tent being lowered.

On command, remove quick release pins (2) holding arches erect.

CAUTION!

Do not twist or turn frame components when handling. Damage to equipment may occur.

Standing clear of tent section, place one hand below eave joint of arch (1) and one on the eave purlin (3).

Swing out side frame and lower side. Extra soldiers may assist in lowering frame.

Remove luminaries from inside tent section.

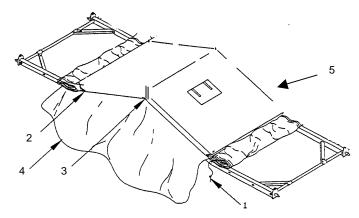
Remove light strap assemblies.

Store light components in retrieved light case.

Disconnect eave purlin flaps.

Repeat these steps to lower other side of tent section.

Removing the Fabric



Disconnect hitch clip pins (1), from eave extenders (2) and remove eave extenders (2).

Untie tie off point and disconnect becket lacing of roof section.

Remove hitch clip pin from ridge extender (3) and remove ridge extender (3).

Remove modified end section (4) and regular end section on opposite side of frame.

NOTE

Fold fabric, label side out.

Remove window section (5) from frame.

Frame Disassembly

NOTE

Disassembly sequence is from base to ridge.

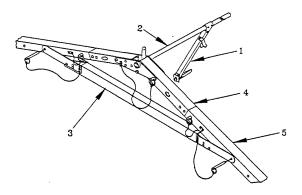
Disconnect each purlin diagonal brace (1), fold and secure.

WARNING

Position one soldier at each ridge arch to hold arch upright during frame disassembly. Failure to hold frame upright may allow frame to fall and cause injury to personnel.

Rotate purlins (2) and remove.

Remove headers (3).



Disassemble roof arch (4) and side arch assembly (5) and fold.

Pack frame components in TEMPER frame section cover assembly

PREPARE POWER DISTRIBUTION SYSTEM FOR SHIPMENT



WARNING

Power source must be shut down/secured before disassembling any cables to prevent electrical shock.

NOTE

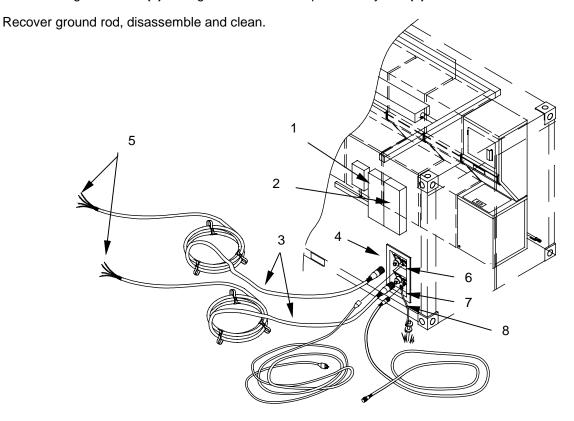
This procedure can only be performed by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

Set all individual and then the main circuit breakers on power distribution panels #1 (1) and #2 (2) to OFF. Turn power source OFF.

Disconnect 100 AMP Supply Cables (3) from J1 and J2 Connectors on the power entry box (4) and from power source (5).

Disconnect power cables from J3 (6) and J4 (7) Connectors on the power entry box (4).

Install dust covers on all power input box connectors and 100 AMP Supply Cables (3). Coil the Cables. Disconnect ground wire (8) from ground terminal on power entry box (4).



PACKING CSSL FOR RETURN SHIPMENT

Before packing the CSSL container for return shipment, ensure that the inside has been swept clean and excess water has been mopped off. Retrieve dryer exhaust caps from the footlocker and install onto external dryer exhausts.



WARNING

The CSSL components are heavy. To avoid injuries, observe the lift requirements shown in the table below.

Pack the CSSL components into the container in the condition indicated in the packing list below and position as shown in the following illustration. Retrieve tie-down straps from footlocker and secure items as shown. Place the technical manual into footlocker. Close and secure all doors.

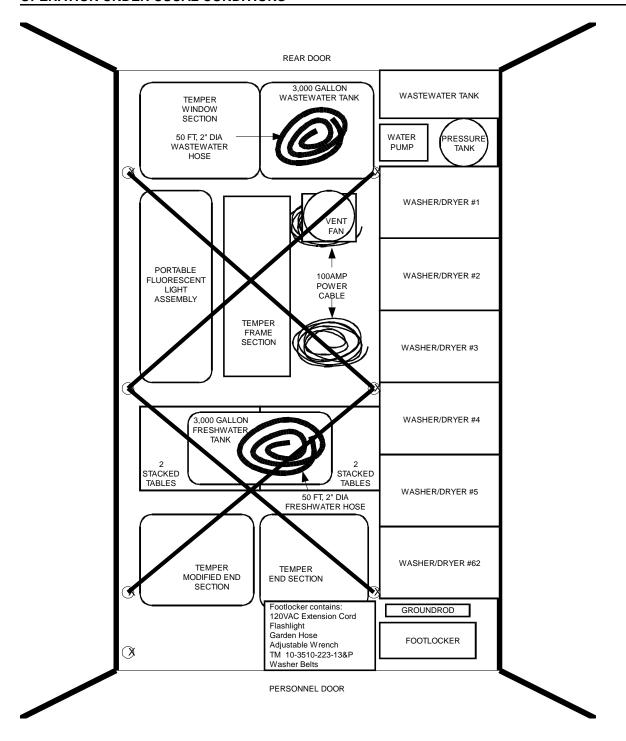
| Nomenclature | Quantity | Condition | Lift Requirements |
|---------------------------------|----------|---------------------------------|----------------------|
| 100AMP Cable, 50ft | 2 | Clean, coiled, caps installed | 2 Persons each Cable |
| TEMPER Frame Section Cover | 1 | Clean and folded | 4 Persons |
| TEMPER, 8-ft Window Section | 1 | Clean and folded | 4 Persons |
| TEMPER End Section | 1 | Clean and folded | 4 Persons |
| TEMPER Modified End Section | 1 | Clean and folded | 4 Persons |
| Fresh Water Supply Hose 1 ½" | 1 | Drained and coiled | 2 Persons |
| Wastewater Drain Hose 2" | 1 | Drained and coiled | 2 Persons |
| Ground Rod | 1 | Clean, with wire attached | 1 Person |
| Ventilation Fan | 1 | Cord Plug taped to body | 2 Persons |
| Wastewater Tank 3,000 Gallon | 1 | Drained clean and folded | 4 Persons |
| Freshwater Tank, 3,000 Gallon | 1 | Drained clean and folded | 4 Persons |
| Table, Folding | 4 | Folded and tied | 1 Person each table |
| Portable Fluorescent Light Assy | 1 | In Case | 1 Person |
| Tie Down Straps | 4 | Secured to floor provisions | 1 Person |
| Footlocker, containing: | 1 | | 1 Person |
| Garden Hose | 1 | Drained, coiled, ends connected | |
| Technical Manual | 1 | In plastic bag | |
| 120 VAC Power Cord | 1 | Clean and coiled | |
| Adjustable Wrench | 1 | Clean | |
| Flash Light | 1 | Clean | |
| Washer/Dryer Repair Parts | | Original Pack | |



WARNING

The CSSL container weighs approximately 10,000 pounds when packed. Lift and move the container only with material handling equipment of at least 10,000 lbs capacity. If forklift is used, lift at outside pockets. Never stand under a CSSL container when it is being lifted.

Using a 10,000 lbs forklift or other lifting device, move and lift CSSL onto conveyance for shipment.



END OF WORK PACKAGE

CSSL Packing Plan 0005 00-53/(54 Blank)

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A OPERATION UNDER UNUSUAL CONDITIONS

OPERATION IN UNUSUAL ENVIRONMENT/WEATHER CONDITIONS

General. Refer to Operation Under Usual Conditions (WP 0005), for specific operating instructions, and use this work package for further instruction if operating the CSSL in unusual conditions. Read all sections that apply to the conditions to which the CSSL will be exposed.

Unusual conditions include severe weather, such as 90 to 100 percent humidity for a week or more; 32° F (zero degree centigrade) or below temperatures for a week or more; 100° F (38 degree centigrade) or above temperatures for a week or more; blowing sand or dust; heavy rain or snow.

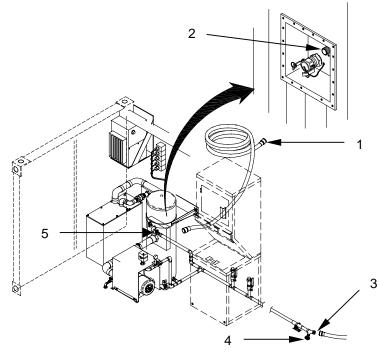
Operation in extreme heat (moist and dry) conditions. Keep the rear and curbside double service doors open and operate the fan to ventilate the container.

Operation in extreme cold conditions. The CSSL is not designed for use in sustained temperatures below 32⁰ F. If temperatures below 32⁰ F are expected intermittently for short periods of time, shut the facility down as described below:

When municipal water is used:

Shut off the fresh water supply at the source. Disconnect garden hose (1) from the source and the freshwater panel (2) on the curbside of the container.

Connect the garden hose (1) to the threaded fitting (3) at the end of the supply line and open the gate valve (4) to let the system drain. After supply line has drained, disconnect hose (1). Drain the hose, coil it, and place inside CSSL. Leave gate valves at the end of the freshwater line (4) and behing the freshwater inlet panel (5) open.



When a 3,000 Gallon freshwater tank was used:

Shut **OFF** the freshwater pump (1) at the roadside raceway (2) switch. Disconnect the 2" freshwater hose (3) from the freshwater inlet panel (4) on the curbside of the container. While holding the end of the hose above the water level in the freshwater tank (5), place the end of the hose (3) into the freshwater tank. Install dust cap (6) on panel (4).

Open the gate valve (7) inside the freshwater inlet panel (4). Connect a garden hose to the threaded fitting (8) at the end of the supply line and open the gate valve (9) to let the system drain. Open the freshwater pump drain valve (10) to let the pump drain. Leave valves open after system has drained. Disconnect garden hose from the threaded fitting (8). Drain the hose, coil it, and place inside CSSL.



WARNING

The 3,000 Gallon water tank is heavy. To avoid injuries, four persons are required to prepare the CSSL for shipment.

Drain the 3,000 Gallon freshwater tank **(5)** in accordance with TM 5-5430-227-12&P. Remove the 2" freshwater hose **(3)** from the freshwater tank **(5)**. Drain the hose, coil, and place inside CSSL. Place the 3,000 Gallon freshwater tank inside the CSSL.



WARNING

Avoid spillage of wastewater during shut down. Drain wastewater hoses into an approved disposal facility. Keep wastewater hoses and 3,000 Gallon wastewater tank separate from freshwater equipment.

After the wastewater pump (11) has stopped running, shut off the pump (Circuit Breaker #16, Panel #1). Drain the remaining water from the interior wastewater tank (12) by removing the drain plug (13) with an adjustable wrench. Reinstall the plug after tank has drained.

When a municipal disposal system was connected:

Disconnect the 2" wastewater hose (14) from the wastewater panel (15) on the curbside of the container, and drain it into the disposal connection. Disconnect 2" wastewater hose (14) from wastewater disposal point. Coil the hose and place it inside the CSSL. Install dust cap (16) on panel (15).

When a 3,000 Gallon wastewater collection tank was connected:

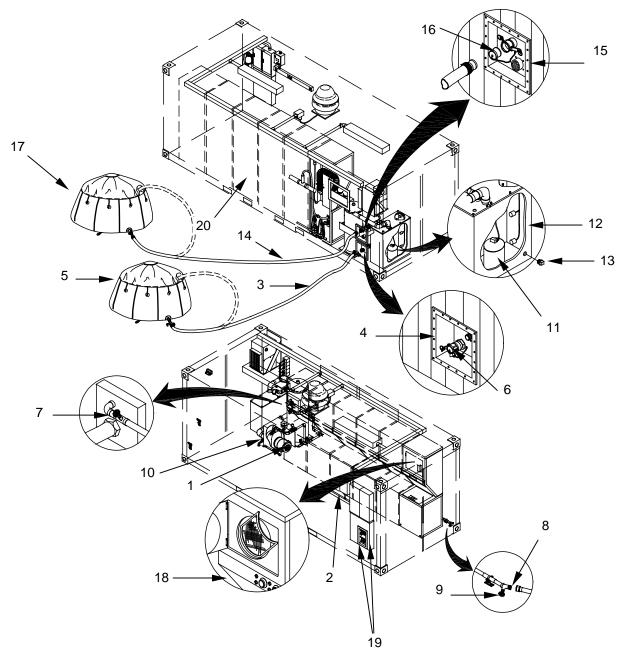
Disconnect the 2" wastewater hose (14) from the wastewater panel (15) on the curbside of the container. While holding the end of the hose above the water level in the 3,000 Gallon wastewater tank (17), place the end of the hose into the wastewater tank. Install dust cap (16) on panel (15).



WARNING

The 3,000 Gallon water tank is heavy. To avoid injuries, four persons are required to prepare the CSSL for shipment.

Empty the 3,000 Gallon wastewater tank (17) in accordance with TM 5-5430-227-12&P. Remove the 2" wastewater hose (14) from the wastewater tank. Drain the hose, coil, and place it inside the CSSL.



0006 00-3

Leave external power cables connected to CSSL. Turn **OFF** all circuit breakers in power distribution panel #2. Leave circuit breakers 1, 9, 10, 29, and 33, in power distribution panel #1 **ON**. Turn circuit breakers 2, 15, 16, 19, 22, 23, and 28 in power distribution panel #1 **OFF**. Turn space heater control knob until heater comes on. Close rear, personnel, and curbside doors.

Operation in snowy or muddy conditions. Ensure TEMPER Section and CSSL are placed on firm foundations. Keep the front and curbside double service doors closed to protect the equipment. Also see operation in extreme cold conditions, above.

Operation in dusty or sandy conditions. Clean dryer lint filters more frequently. Keep the rear and curbside double service doors closed to protect the equipment.

Operation in rainy and/or humid conditions. Keep the rear and curbside double service doors closed to protect the equipment.

Operation in high altitude conditions. CSSL should not be operated above 7000 feet (2114 meters)

Nuclear, Biological, and Chemical (NBC) Decontamination. Perform interim decontamination procedures in accordance with FM 3-5.

CHAPTER 3
TROUBLESHOOTING PROCEDURES
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A OPERATOR LUBRICATION AND SERVICE PARTS INFORMATION

LUBRICATION REQUIREMENTS

NOTE

Lubrication requirements for CSSL Components must be followed in the specified technical manuals. To prolong the serviceable life of these items, it is very important to follow lubrication instructions.

CSSL-unique lubrication requirements are limited to the modified type III general cargo container and the TEMPER. Refer to TM 55-8115-204-23&P and TM 10-8340-224-13, respectively.

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A OPERATOR TROUBLESHOOTING PROCEDURES

TROUBLESHOOTING PROCEDURES

The Malfunction Index lists common malfunctions that may occur during CSSL inspection and operation.

Find the malfunction the CSSL is having in the index and go to the troubleshooting procedure provided in the following pages.

These charts cannot list all malfunctions that may occur, all tests or all inspections needed to find the fault, nor all actions required to correct the fault. If your malfunction is not listed in, or is not correctable through, this troubleshooting index, notify your supervisor or unit maintenance.

DO NOT START THE TASK UNTIL:

- You understand the task
- You understand what you are to do
- You understand what is needed to do the work
- You have the things you need

MALFUNCTION SYMPTOM INDEX

| Malfunction or Symptom | Refer to Troubleshooting Procedure |
|-----------------------------------|------------------------------------|
| Electrical Appliances Inoperative | 1 |
| Water Leak | 2 |



WARNING

Do not attempt to connect the power source to the CSSL Power Entrance Box. This procedure must be performed by MOS 51R, 52C, 52D, or 52G qualified personnel. Serious injury and death can result from electrical shock.

PROCEDURE 1 COVERS:

Loss of Power

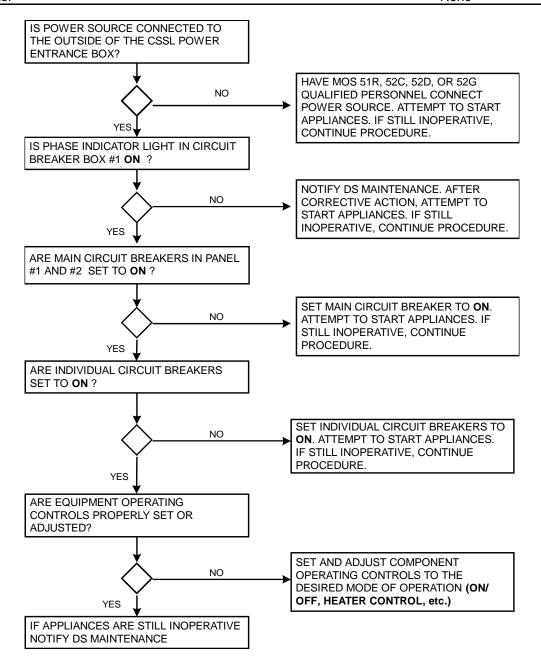
INITIAL SETUP:

CSSL set up but not in operation

Maintenance Level

Operator

Materials/Parts None



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) OPERATOR TROUBLESHOOTING PROCEDURES

PROCEDURE 2 COVERS

Water Leak

INITIAL SETUP:

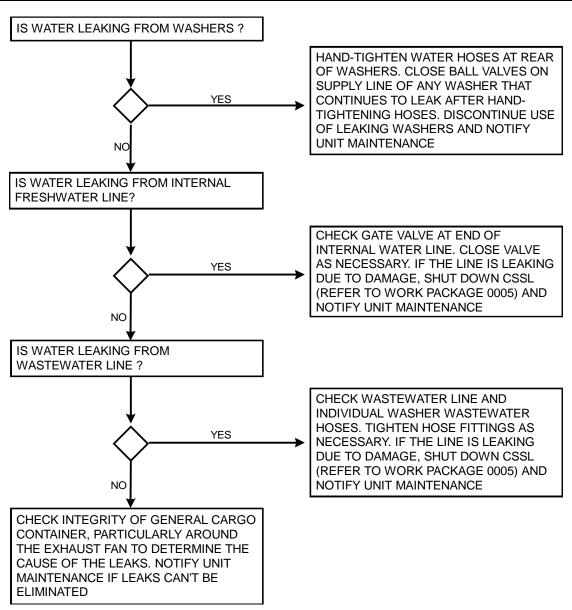
CSSL set up but not in operation

Maintenance Level

Operator

Materials/Parts

None



CHAPTER 4
OPERATOR MAINTENANCE INFORMATION
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A PREVENTIVE MAINTENANCE CHECK AND SERVICES (PMCS)

THIS SECTION COVERS:

Introduction, PMCS Procedures

INITIAL SETUP:

CSSL set up but not in operation

Maintenance Level

Operator/Unit

Tools and Special Tools

None

Materials/Parts

Rags (WP 0072, Table 1, Item 1)

Light Fluorescent Gen Purp. (WP 0072, Table 1, Item 2)

INTRODUCTION

Preventive Maintenance Checks and Services (PMCS) are performed to keep the CSSL and its associated equipment in good operating condition. The checks are used to find, correct, or report problems. Operator personnel are to do the PMCS jobs as shown in the PMCS table. PMCS are done every day the CSSL is operated, using the PMCS table. Pay attention to WARNING and CAUTION statements. A WARNING means someone could be hurt. A CAUTION means equipment could be damaged.

Before you begin using the CSSL, do Before PMCS

During use of the CSSL, do During PMCS

After using the CSSL, do After PMCS

Once a week, do Weekly PMCS if the CSSL has been in use

Do Monthly PMCS once a month if the CSSL has been in use

If you find something wrong when performing PMCS, fix it using troubleshooting and/or maintenance procedures.

The right-hand column of the PMCS table lists conditions that make the CSSL not fully mission capable. Write up the faults that cannot be repaired on DA Form 2404 for unit maintenance. For further information on how to use this form, see DA PAM 738-750.

If tools that are required to perform PMCS are not listed in procedures, notify your supervisor.

INSPECTION

Look for signs of trouble. Senses help here. You can feel, smell, hear, or see many problems that can be eliminated before they get worse. Inspect to see if items are in good condition. Are components correctly installed and secured? Is any damage to the frame or components visible? Correct any faults or notify unit maintenance.

ASSOCIATED COMPONENTS

Perform PMCS on the TEMPER Section, freshwater pump, 3,000 Gallon fabric tanks, general cargo container, 100 AMP power supply cable and pigtail in accordance with the publications specified in work package 0044.

There are some common items to check on the CSSL and associated equipment. These include the following:

- Proper operation and condition of the washer/dryers
- Condition of the water supply and wastewater drain hoses
- Proper operation of interior lights, space heater, and vent fan
- Condition of 3,000 gallon capacity fresh water and wastewater fabric tanks (if used)



WARNING

CSSL electrical connections can be made only by MOS 51R, 52C, 52D, or 52G qualified personnel. If ungrounded power is used, the CSSL modified cargo container must be electrically grounded. Failure to ground the CSSL may result in serious injury or death to personnel from electrical shock.

- Condition of the power supply cable
- Condition and proper connection of ground rod (if used)

LUBRICATION SERVICE INTERVALS

The door hinge and latch assembly of the general cargo container should be lubricated in accordance with TM 55-8115-204-23&P. The TEMPER Section should be lubricated in accordance with TM 10-8340-224-13.

CLEANING

Proper cleaning of the CSSL and components is an integral part of maintenance. It will help prevent possible problems in the future, so make it a habit to clean the CSSL and its components whenever necessary.

The washer/dryers should be frequently wiped down with a rag and the lint traps checked on a daily basis. The interior of the cargo container should be swept out on a daily basis and keep clean of trash on a regular schedule.

THIS SECTION COVERS:

Before Operation PMCS Checks and Services

INITIAL SETUP:

CSSL set up. Water and power connected

Maintenance Level Operator/Unit

Tools and Special Tools

None

Materials/Parts

Rags (WP 0071, Table 1, Item 1) Fluorescent Light bulbs

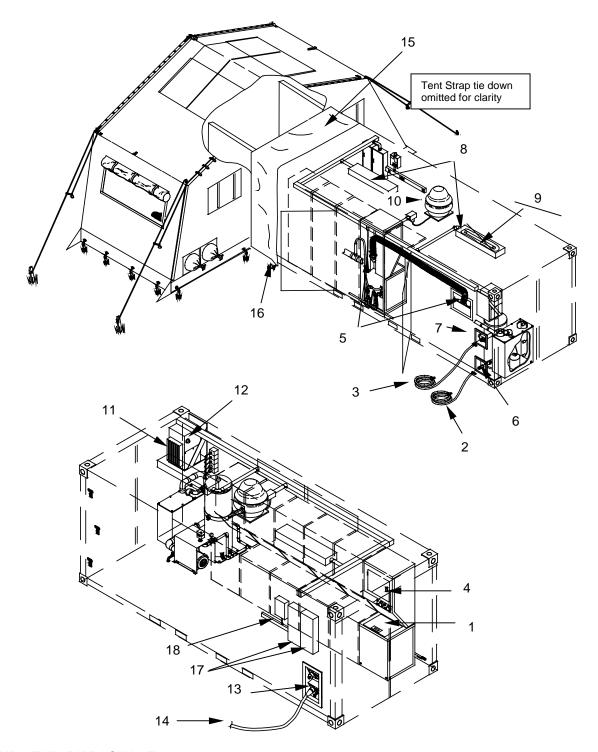
(WP 0071, Table 1, Item 2)

Table 0009 00-1. Preventive Maintenance Checks and Services for CSSL

| | | 10 0000 00 111 | reventive maintenance onecks and c | 1 |
|-------------|----------|--------------------------------------|---|---|
| ITEM NO. | INTERVAL | ITEM TO BE CHECKED OR SERVICED | PROCEDURE | EQUIPMENT NOT READY/ AVAILABLE IF: |
| 1 | Before | Washer/Dryers | Open washers (1) to determine if they contain any water that has not drained properly, clothes, or other items. Drain water by activating washer. (If problem persists unclog drain line as described in work package 0012 00) Check the condition and proper attachment of the freshwater supply (2) and wastewater drain (3) hoses. Check for leaks. Check and, if needed, clean out dryer lint traps (4). Check secure attachment and general condition of dryer exhaust ducts (5) | Washers contain water of previous wash cycle, clothes or other items. Dryers that contain clothes or other items. Dryer lint traps are clogged. Dryer exhaust hoses loose, clogged or damaged. Water supply or drain hoses loose, damaged or missing. Washers leak. |
| 2 | Before | Water Service Panels | Check the freshwater (6) and wastewater (7) panels for physical damage, leaks and corrosion. | Panels or QD fittings are damaged. Hoses are improperly connected and leaking. Excessive corrosion. |
| 3 | Before | Interior Lights | Activate interior lights (8) and check their operation. Replace any burned out light bulbs (9) as required. Refer inoperative light switch to unit maintenance and inoperative light fixtures to direct support maintenance. | Inoperative light fixtures, light switch, and excessive number of light bulbs burned out. |
| 4 | Before | Vent Fan | Activate exhaust fan (10) and determine its proper operation. Refer an inoperative ventilation fan to direct support maintenance. | Inoperative vent fan. Noisy operation. Power cord damaged. |
| 5 | Before | Space Heater | Activate space heater (11). Determine its operation. Check for functioning of the heater control (12). Check for any physical damage to the unit. | |
| 6 | Before | Power Entry Box | Check for physical damage to panel (13) connectors, and cables (14). Ensure cables are properly connected. (Refer to work package 0005 00) | Damaged panel or connectors. Improper or loose electrical connections |

Table 0009 00-1. Preventive Maintenance Checks and Services for CSSL - Continued

| ITEM | INTERVAL | ITEM TO BE | PROCEDURE | EQUIPMENT NOT READY/ |
|------|----------|-----------------------------------|--|--|
| NO. | | CHECKED OR SERVICED | | AVAILABLE IF: |
| 7 | Before | TEMPER Modified End Section | Check bootwall (15) for rips and tears, missing hardware, or improper installation. Check cinch-strap (16) around boot for tightness. | Ripped and torn fabric. End wall not properly installed. |
| 8 | Before | Circuit Breakers | | Damaged or non-functioning circuit breakers. |
| | | | WARNING ELECTROCUTION Do not touch damaged circuit breakers. Notify direct support maintenance. | |
| | | | Open circuit breaker boxes (17) and examine circuit breakers. Note any damage to breakers and the box. If no damage is noted, activate the breakers to determine their proper functioning. | |
| 9 | Before | Interior GFCI Receptacle | With the main circuit breaker (#33) of power distribution panel #1 set to ON , set circuit breaker #10 to ON and test the GFCI receptacle in the roadside raceway (18) by pushing the TEST button. Observe light indicator. If light indicator does not activate, push the RESET button. Repeat test. If receptacle does not work, replace it as described in work package 0016. | |



END OF WORK PACKAGE

0009 00-5/6 Blank

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A OPERATOR MAINTENANCE

THIS SECTION COVERS:

Operator Maintenance

INITIAL SETUP

CSSL set up but not in operation

Maintenance Level

Operator

INTRODUCTION

This section contains Operator Maintenance applicable to the CSSL as authorized by the Maintenance Allocation Chart (MAC) in WP 0045 of this manual.

Maintenance procedures in this section can be performed by one person, unless otherwise indicated.

Read all **WARNINGs**, **CAUTIONs**, **and NOTEs** carefully before attempting these procedures, including the warnings at the front of this manual.

NOTE

CSSL component maintenance programs must be followed using the applicable technical manuals. To prolong the serviceable life of this equipment it is essential that maintenance procedures be adhered to.

Refer to the appropriate component technical manuals identified in work package 0001 00 and 0044 00 for specific maintenance instructions pertaining to the freshwater pump, modified type III general cargo container, 3,000 gallon tanks (if used), space heater, and washer/ dryers. Maintenance instructions covered in this section are CSSL-unique.

INSPECT

Refer to Table 1 of work package 0009 00, Preventive Maintenance Checks and Services for CSSL.

SERVICE

CAUTION

Do not use any tools to tighten the washer water hoses. Hand-tighten these hoses if necessary. Over tightening the hoses will cause water leaks.

Use common tools (pliers, open-end wrenches, etc.) to tighten fresh and wastewater lines as necessary to eliminate minor leaks.

Check dryer exhaust hoses frequently (at least weekly when the laundry is in operation) for proper attachment to dryers and exhaust vents. While dryers are on, check exhaust vent exit for free air flow.

CLEAN

Wipe external surfaces of washer/dryers with a rag as necessary to keep the equipment clean. Sweep interior of CSSL frequently and mop up any standing water. Remove debris and trash from the CSSL and TEMPER Section interior on a regular basis.

CHAPTER 5
UNIT MAINTENANCE INFORMATION
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A SERVICE UPON RECEIPT

SERVICE UPON RECEIPT

No specific de-processing is required for any of the CSSL components before they are used. However, the tasks prescribed in this work package must be performed to ensure proper functioning of this equipment.

GENERAL

The CSSL is shipped via truck and will arrive with the following components packed inside:

One TEMPER Window Fabric Section
One TEMPER Modified End Section
One TEMPER End Section
Two TEMPER Frame Sections

Five TEMPER Purlins

Four TEMPER Eave Extenders One TEMPER Ridge Extender Six Wood Tent Stakes, 24" Twenty-four Metal Tent Stakes, 12" One Portable Fluorescent Light

Assembly

Six 19-ft Tent Line Six Slip(s), Tent Line Two Header Assemblies One Freshwater Hose One Grounding Rod One Wastewater Hose

One 3,000 Gallon Freshwater Tank One 3,000 Gallon Wastewater Tank Two 100AMP, 50ft Power Cables

One Garden Hose One Footlocker One Ventilation Fan

The following tasks must be performed upon receipt of the CSSL:



WARNING

The laundry components are heavy. To avoid injuries, four persons are required to unload components.

Unpacking. Open the general cargo container and remove the components stored inside.

Packing list verification. Check the components removed against the packing list to see if the shipment is complete. Report all discrepancies in accordance with DA Pam 738-750.

Inspection. Inspect the components removed as well as the equipment installed in the general cargo container (washers/dryers, plumbing, freshwater water pump, pressure tank, wastewater tank, pump, and alarm, space heater, interior lights, power distribution boxes, switches and receptacles, etc.) for damage incurred during shipment. If the equipment has been damaged in shipment, report the damage on SF 364, Report of Discrepancy. In addition, a unit maintenance technician should inspect the equipment, using the PMCS inspection procedures in work package 0009 00.

Verification of equipment modifications. Check to see if any of the equipment has been modified in any way. Notify your supervisor or unit maintenance personnel if modifications are noted.

Pre-operation services. Service any damaged equipment, as necessary, using unit maintenance procedures in Chapter 4 to restore equipment to operable condition. Before operation, check that

washer/dryers as well as the cargo container are free of packing materials and dunnage. The CSSL should be serviced prior to operation in accordance with PMCS Table 1, WP 0009.

CSSL Components. Prepare separate CSSL components for operation as described in the applicable technical manuals. (Refer to work package 0002 00 and 0044 00 for a listing of pertinent publications). Prepare washer/dryers as described in the commercial literature provided.

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT TROUBLESHOOTING PROCEDURES

TROUBLESHOOTING PROCEDURES

The Malfunction Index lists common malfunctions that may occur during laundry inspection and operation. Find the malfunction the CSSL is having in the index and go to the indicated troubleshooting paragraph in the following pages.

These charts cannot list all malfunctions that may occur, or all tests and inspections needed to find the fault. If your malfunction is not listed in, or is not correctable through this troubleshooting index, notify your supervisor or unit maintenance.

DO NOT START THE TASK UNTIL:

- You understand the task
- You understand what you are to do
- You understand what is needed to do the work
- You have the things you need

MALFUNCTION SYMPTOM INDEX

| Malfunction or Symptom | Refer to Troubleshooting Procedure |
|----------------------------|------------------------------------|
| Loss of power | 1 |
| Water Leak(s) | 2 |
| No water pressure | 3 |
| Wastewater Alarm Activated | 4 |



WARNING

Do not attempt to connect the power source to the CSSL Power Entrance Box. This procedure must be performed by MOS 51R, 52C, 52D, or 52G qualified personnel. Serious injury and death can result from electrical shock.

PROCEDURE 1 COVERS:

Loss of power

INITIAL SETUP:

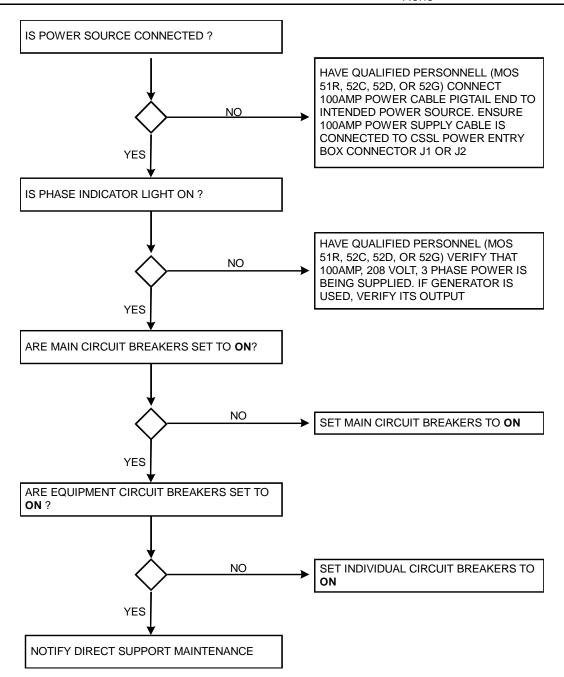
CSSL set up but not in operation

Maintenance Level

Unit

Materials/Parts

None



PROCEDURE 2 COVERS:

Water leaks

INITIAL SETUP:

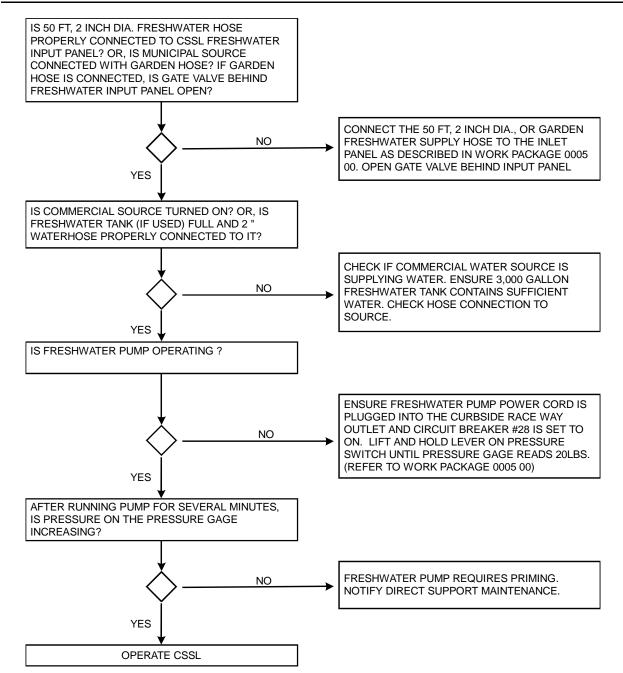
CSSL set up but not in operation

Maintenance Level

Unit

Materials/Parts

None



PROCEDURE 3 COVERS:

No water pressure

INITIAL SETUP:

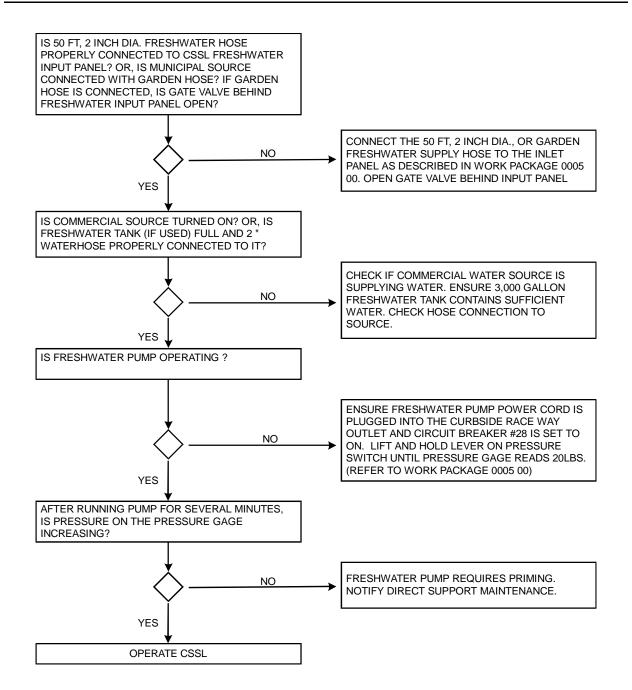
CSSL set up but not in operation

Maintenance Level

Unit

Materials/Parts

None



PROCEDURE 4 COVERS:

Wastewater Alarm Activated

INITIAL SETUP:

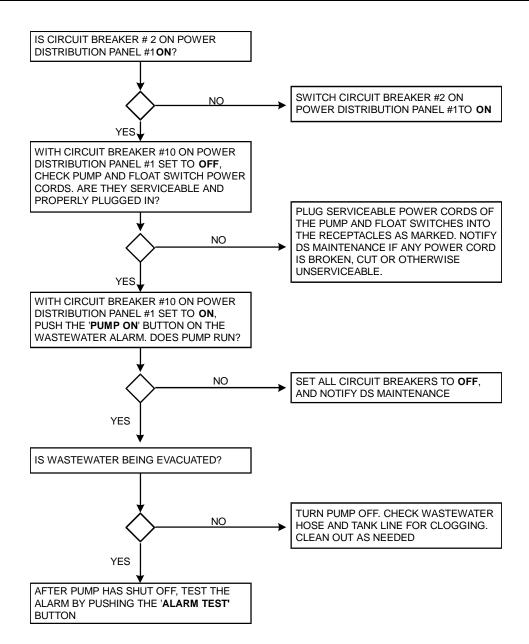
CSSL set up but not in operation

Maintenance Level

Unit

Materials/Parts

None



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT MAINTENANCE

POWER ENTRY CONNECTORS

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL shut down. All power cables disconnected

Maintenance Level

Unit

Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)



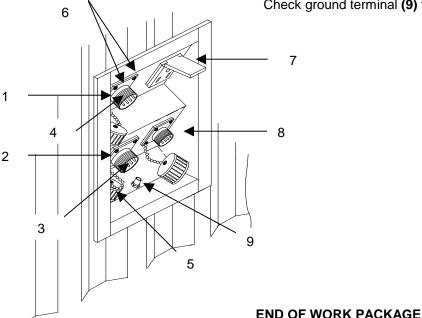
WARNING

This equipment operates at High Voltages. Use extreme caution. Turn OFF power supply and disconnect all power cables from the power entry box. Touching a live wire can cause serious injury or death.

INSPECT

Inspect the power input plugs J1 (1) and J2 (2) for damage. Check for bent connector pins (3), corrosion, and stripped or otherwise damaged threads (4). Check for presence and serviceability of protective cover (5). Check pan head screws (6) securing the plugs to the panel and tighten if necessary. Check GFCI Receptacle J3 (7) and external receptacle J4 (8) for corrosion, clogged pinholes, missing covers and loose or missing hardware. Have any unserviceable plug or receptacle replaced through direct support maintenance.

Check ground terminal (9) for serviceability.



0013 00-1/(2 Blank)

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT MAINTENANCE

POWER DISTRIBUTION PANEL

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL shut down. All power cables disconnected

Maintenance Level

Unit

Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

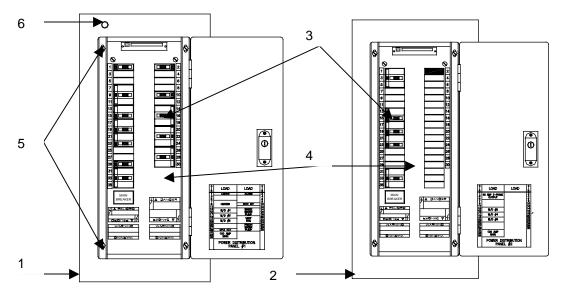


WARNING

This equipment operates at High Voltages. Use extreme caution. Turn OFF power supply and disconnect all power cables from the power entry box. Touching a live wire can cause serious injury or death.

INSPECT

Inspect the power distribution box #1 (1) and #2 (2) for external damage to the housing. Open both boxes and check for damage to the circuit breakers (3) and panels (4). Switch each breaker to check its functioning. Check for corrosion and missing or loose mounting hardware (5). Tighten loose hardware as necessary. Check for visible damage to the phase indicator (6). Check for legibility of warning and identification labels (7). Refer a damaged power distribution box to direct support maintenance.



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT MAINTENANCE

FLUORESCENT LIGHTS

THIS SECTION COVERS:

Inspect and Repair

INITIAL SETUP

Circuit Breaker #1 in circuit breaker box #1 set to OFF

Maintenance Level

Unit

Tools and Special Tools

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

Materials/Parts

Light Fluorescent, General Purpose (WP 0072 00, Table 1, Item 2)



WARNING

This equipment operates at High Voltages. Use extreme caution. Turn Circuit Breaker #1 in Circuit Breaker Box #1 **OFF** before proceeding with this procedure. Touching a live wire can cause serious injury or death.

INSPECT

Using a flashlight (in footlocker), inspect the fluorescent light fixtures for damage and security of mounting. Check for presence and security of cover (1).

REPAIR

To replace a burned out light bulb (2) un-clasp and remove the cover (1). Remove the retainer clips (3) holding the light bulb in the sockets (4) and retain. Turn the burned out light bulb slightly and remove it from its sockets.

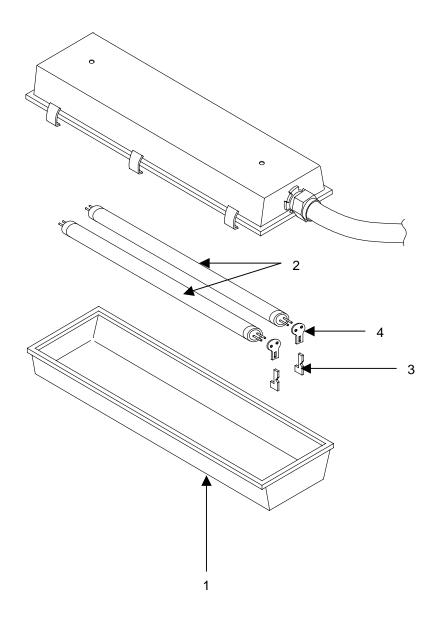
Remove the insulators (4) from both ends of the light bulb and retain.

While the light bulb is removed, check the security of fixture mounting hardware. Tighten if necessary.

Place the insulators (4) removed from the old lightbulb onto the new bulb to be installed so that the slotted end faces down and outward from the bulb.

Install the new lighbulb (2) into the fixture and secure with retainer clips (3).

Replace cover (1).



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT MAINTENANCE

INTERIOR SWITCHES AND RECEPTACLES

THIS SECTION COVERS:

Inspect and Replace

INITIAL SETUP

Main Breakers in circuit breaker box #1 and #2 OFF

Maintenance Level

Unit

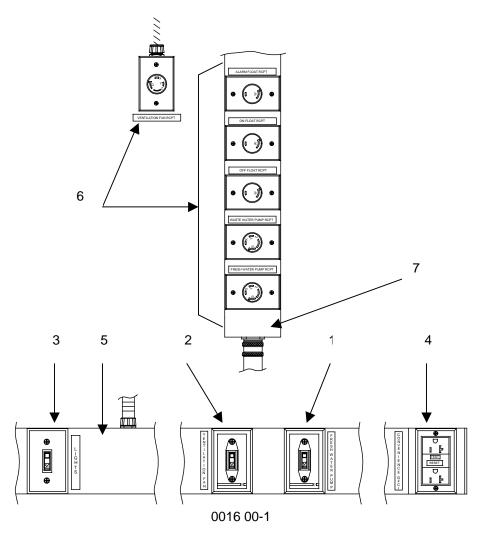
Tools and Special Tools

Materials/Parts

General Mechanic Tool Kit (WP 0045, Table 2, Item 1)

INSPECT

Using a flashlight (in footlocker), inspect the freshwater pump (1) and the ventilation fan 3 pole switches (2) the light switch (3) and the GFCI receptacle (4) located in the roadside raceway (5). Also inspect the twist-lock receptacles (6) located in the overhead and curbside raceway (7) for damage. Test operation of GFCI receptacle (4) as described in Work package 0009, page 0009-00-4.





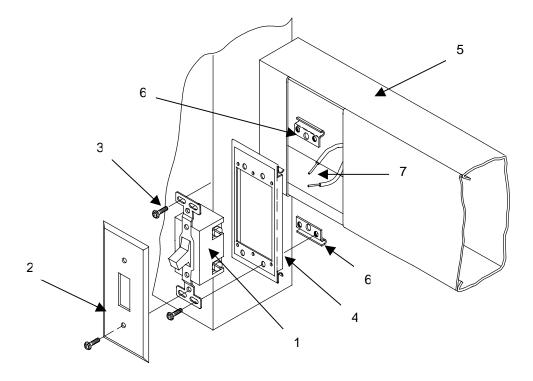
WARNING

This equipment operates at High Voltages. Use extreme caution. Turn Main Breakers in Circuit Breaker Box #1 and #2 OFF, before proceeding with this procedure. Touching a live wire can cause serious injury or death.

REPLACE

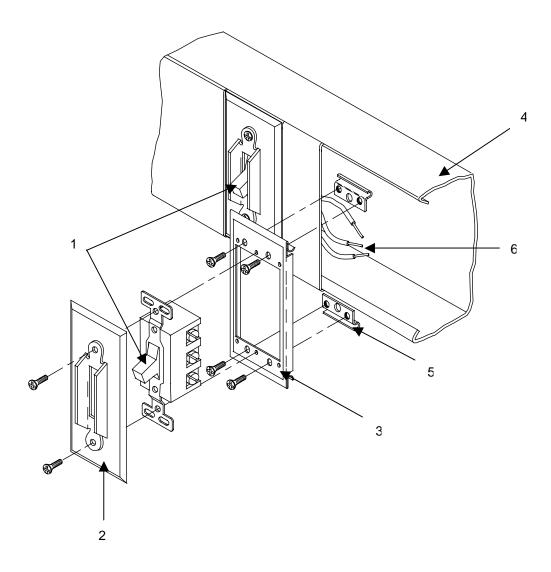
Replace damaged or otherwise unserviceable switches and receptacles by removing the applicable section of the raceway using a flathead screwdriver. Then proceed as follows:

To remove the light switch (1) located in the roadside raceway, remove the cover (2) and switch installation screws (3). Remove mounting frame (4) from raceway (5). Retain the installation clips (6). Loosen and remove the wires from switch (7), noting the method of attachment.



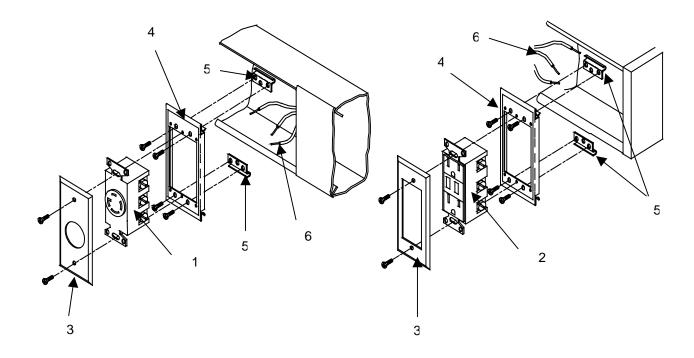
To install a new switch (1), place the installation clips (6) onto the frame (4) and secure the switch onto the frame and clips with the installation screws (3). Attach the wires (7) onto the new switch (1) in the same manner as removed. Clip frame with switch installed onto the raceway. Replace cover (2).

To replace the 3-pole ventilation fan and freshwater pump (1) switches located in the roadside raceway, remove the cover and guard (2). Remove the mounting frame (3) from raceway (4). Retain the installation clips (5). Loosen and remove the wires (6) from switch, noting the method of attachment. Discard switch.



To install a new 3-pole freshwater pump or ventilation fan switch, place the new switch (1) into the frame (3). Attach the wires (6) onto the new switch in the same manner as removed. Place the installation clips (5) onto the raceway (4) and secure the frame and clips onto the raceway (4). Place cover (2) over switch and secure both onto the frame with screws as shown.

To replace a twist-lock receptacle (1) located in the ceiling or curbside raceway, or a GFCI receptacle (2) located in the ceiling or roadside raceway, remove the cover (3). Remove mounting frame (4) from raceway and retain installation clips (5). Loosen and remove the wires (6) from switch, noting the method of attachment. Discard switch.



To install a new twist-lock receptacle (1), or a GFCI receptacle (2), place the new switch into the frame (4). Attach the wires (6) onto the new switch in the same manner as removed. Place the installation clips (5) onto the raceway and secure frame and clips onto the raceway. Place cover (3) over switch and secure both onto the frame with screws as shown.

FRESHWATER PUMP COVER AND POWER CORD

THIS SECTION COVERS:

Inspect

INITIAL SETUP

Materials/Parts

CSSL set up. Freshwater pump turned **OFF**

Maintenance Level

Unit

Tools and Special Tools

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)



WARNING

This freshwater pump operates at high voltages. Use extreme caution. Make sure freshwater pump is turned off before proceeding with the following procedures. Touching a live wire can cause serious injury or death.

INSPECT

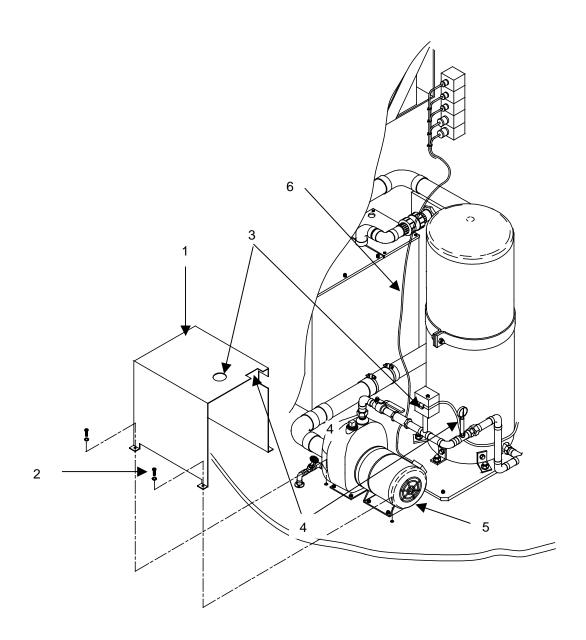
Turn the freshwater pump switch on the roadside raceway to **OFF**.

Inspect the freshwater pump cover (1) for damage. Check condition of mounting screws (2) holding cover to floor. Tighten if loose.

Check for bents and deformations of the cover particularly around the pressure switch (3) and gage (4) that may interfere with proper operation of the pump (5).

Inspect the power cord **(6)**. If power cord is frayed, broken, loose, or connector is unserviceable, refer to direct support maintenance.

If cover and power cord are in satisfactory condition, turn the freshwater pump switch on the roadside raceway to **ON** as needed.



PRESSURE TANK

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL shut down

Maintenance Level

Unit

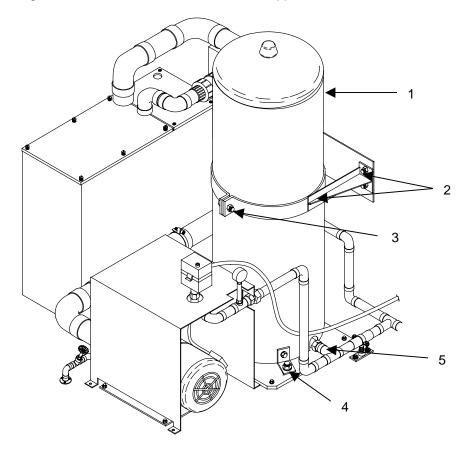
Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

INSPECT

Inspect the Pressure Tank (1) for damage and corrosion. Check the wall support bracket (2) for corrosion, missing or loose hardware and security of the strap (3). Inspect the tank floor mounts (4) for rust, missing or loose hardware. Check connection of water pipe for leaks and fitting adapter (5) for tightness. Using common tools, tighten hardware as necessary. Refer a damaged pressure tank that leaks, or shows excessive rust, missing wall or floor mount hardware to direct support maintenance.



PRESSURE SWITCH/GAUGE

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

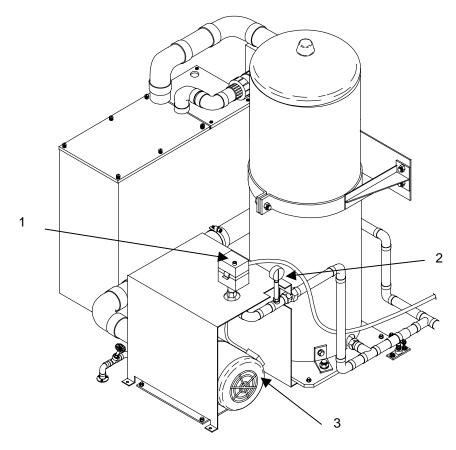
Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

INSPECT

Inspect the pressure switch **(1)** and gage **(2)** for damage. Check for legibility of scale, internal corrosion, and leaks. Observe proper functioning of pressure switch and gage during normal operation of facility. The pressure gage should move between 15 and 30 PSI during normal operation. The water pump **(3)** should start when the pressure reaches 15 PSI and turn off at 30 PSI. Refer an inoperable pressure switch or gage to direct support maintenance.



END OF WORK PACKAGE

0019 00-1/(2 Blank)

INTERNAL FRESHWATER LINE

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

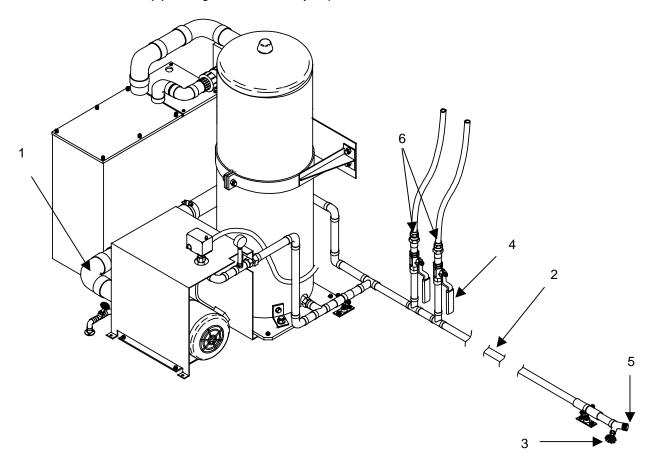
Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

INSPECT

Inspect the internal freshwater distribution lines including the 1 ½" PVC inlet line (1), the ¾" copper tubing (2) including gate valves (3), ball valves (4), and fittings (5), for damage. Check proper attachment of washer water hoses (6) and tighten if necessary to prevent leaks.



WASTEWATER PUMP

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL not in operation

Maintenance Level

Unit

Tools and Special Tools

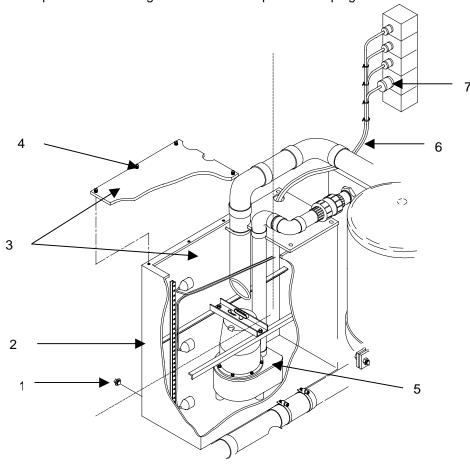
Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

Wiping Rags, (WP 0072, Table 1, Item 1)

INSPECT

Remove the drain plug (1) on the wastewater tank (2) and allow the tank to completely drain. Open the wastewater tank cover (3) by loosening 6 captive fasteners (4). Visually inspect the wastewater pump (5) for damage. Check the power cord (6) and twist-lock plug (7) for serviceability. Refer a wastewater pump that is not functioning properly, or has a frayed or otherwise damaged power cord or plug to direct support maintenance. Replace cover and tighten fasteners. Replace drain plug.



FLOAT SWITCHES

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

Tools and Special Tools

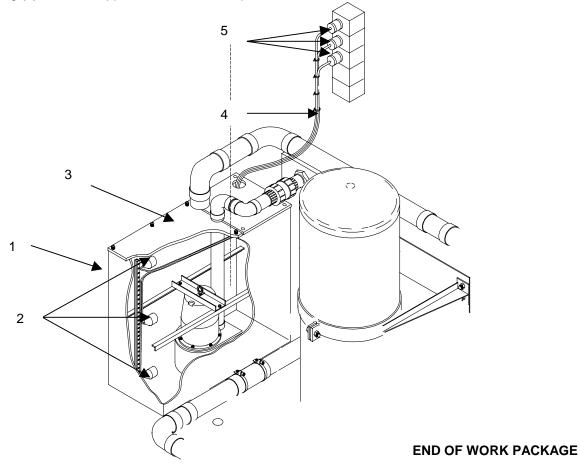
Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

Wiping Rags (WP 0072, Table 1, Item 1)

INSPECT

Inspect the wastewater tank (1) float switches (2) by observing them in operation. Open the wastewater tank cover (3) and visually inspect the float switches operate as the tank contents rise, and in turn are evacuated. Check the power cord (4) and twist-lock plug (5) of each switch for serviceability. Refer a float switch that is not functioning properly, is damaged, or has a frayed or otherwise damaged power cord (4) or plug (5) to direct support maintenance. Replace tank cover.



WASTEWATER ALARM

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

Tools and Special Tools

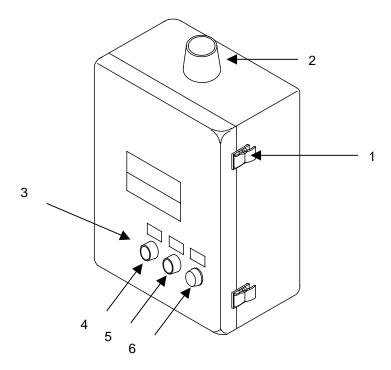
Materials/Parts

INSPECT

Inspect the exterior of the wastewater alarm panel and latches (1) (**Do not open the panel**) for damage. Check condition of light (2) and push buttons (3). Check the functioning of the Pump On switch (4) by pushing the button while the pump is running (It should turn the pump off) and then turning it back on.

Check the alarm panel operation by pressing the ALARM TEST button (5) (alarm should sound). The HORN SILENCE button (6) should turn the alarm off.

Refer an inoperative or damaged wastewater alarm panel to direct support maintenance.



END OF WORK PACKAGE

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WASTEWATER PVC PIPES

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

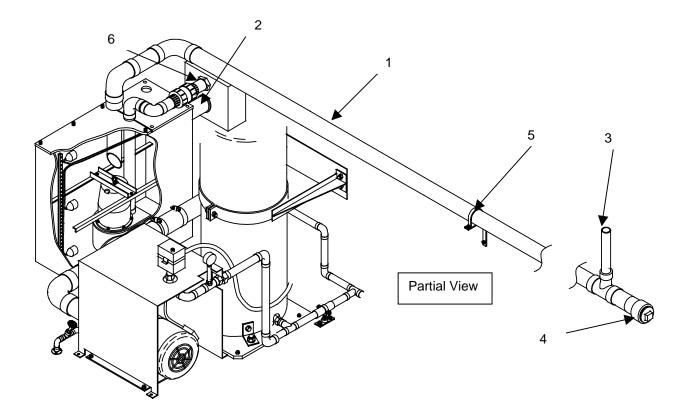
Tools and Special Tools

Materials/Parts

Wiping Rags (WP 0072, Table 1, Items1)

INSPECT

Inspect the internal PVC Wastewater collection lines including the 3" collection (1) and overflow line (2), the 1 ½" vent line (3) cleanout fitting (4), wastewater pipe holders (5), and wastewater panel adapter fitting (6) for leaks due to damage or improper connections. Open curbside doors and inspect the collection line (1). Refer any repairs required on the wastewater piping to direct support maintenance.



WASHERS/DRYERS

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

Tools and Special Tools

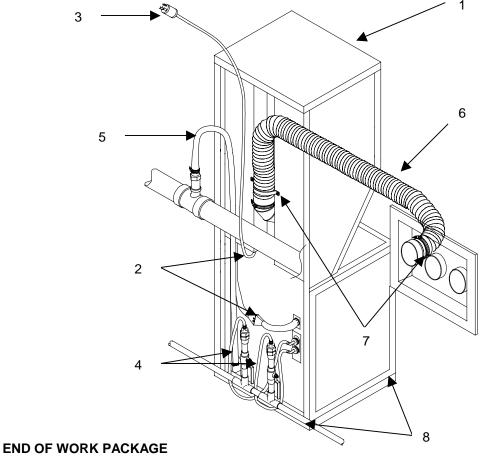
Materials/Parts

General Mechanic Tool Kit (WP 0045, Table 2, Item 1)

Wiping Rags (WP 0072, Table 1, Item 1)

INSPECT

Inspect each of the six washer/dryers (1) for damage. Check power cords (2) for cuts or fraying, and broken twist-lock connectors (3). Check condition of freshwater (4) and drain hoses (5). Tighten hoses if necessary. Check conditions of dryer exhaust hoses (6). Tighten hose clamps (7) if necessary. Refer replacement of a crushed, torn, or ripped hose to direct support maintenance. Check stability of washer/dryer mounting (8) and tighten if necessary. Refer an inoperative washer/dryer to direct support maintenance.



0025 00-1/2 Blank

VENTILATION FAN

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

Tools and Special Tools

Materials/Parts

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

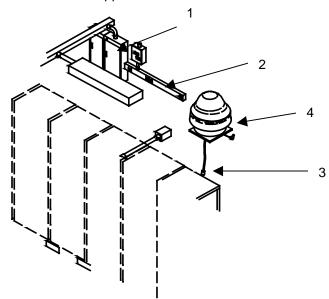


WARNING

This equipment operates at High Voltages. Use extreme caution. Turn OFF power supply and disconnect ventilation fan power cable. Touching a live wire can cause serious injury or death.

INSPECT

With the circuit breaker #22 on breaker panel #1 set to OFF, the ventilation fan switch (1) on the roadside raceway (2) set to OFF, and the power cord (3) disconnected, inspect the ventilation fan from inside the container for damage. Check the condition of the power cord (3) and twist lock connector for cuts, fraying, and exposed wires. Check fan captive tiedown knobs (4) and tighten if necessary. Inspect fan from the roof of the container for damage and clogging with debris. Remove debris as necessary. Refer an inoperative or damaged ventilation fan to direct support maintenance.



SPACE HEATER

THIS SECTION COVERS:

Inspect

INITIAL SETUP

CSSL in operation

Maintenance Level

Unit

Tools and Special Tools

Materials/Parts

General Mechanic Tool Kit (WP 0045, Table 2, Item 1)

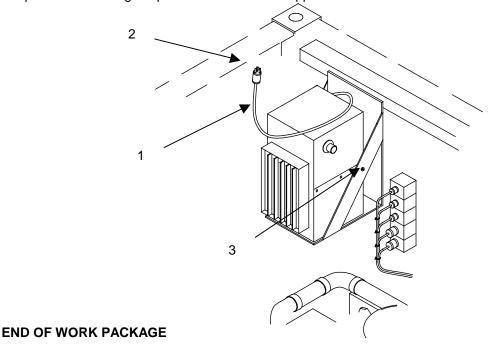


WARNING

This equipment operates at High Voltages. Use extreme caution. Turn OFF power supply and disconnect space heater power cable. Touching a live wire can cause serious injury or death.

INSPECT

With the circuit breaker #9 on breaker panel #1 set to **OFF** and the power cord **(1)** disconnected, inspect the space heater for damage. Check the condition of the power cord **(1)** and twist lock connector **(2)** for cuts, fraying, and exposed wires. Check the heater installation screws **(3)** and tighten if necessary. Inspect fan at rear of heater for damage and /or debris. Remove debris as necessary. Refer an inoperative or damaged space heater to direct support maintenance.



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TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A UNIT MAINTENANCE

WATER HOSES

THIS SECTION COVERS:

Inspect, Repair, Replace

INITIAL SETUP

Water hoses disconnected

Maintenance Level

Unit

Tools and Special Tools

Tool Kit General Mechanic (WP 0045, Table 2, Item 1)

Materials/Parts

Wiping Rags (WP 0072, Table 1, Items 1) Gasket (WP 0072, Table 1, Item 4)

Gasket (WP 0072, Table 1, Item 5)

Hose Clamp (WP 0072, Table 1, Item 18)

INSPECT

Inspect freshwater and wastewater hoses for material damage, leaks, frayed material, presence of gaskets, and proper operation of Quick Disconnect (QD) hose couplings. Repair a hose by replacing a gasket or QD coupling half as required and described below. Replace an entire hose when damaged beyond repair.



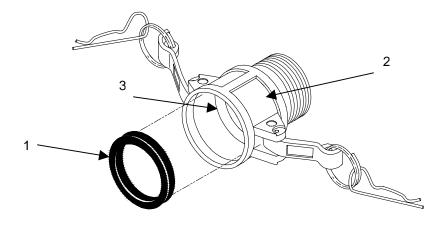
WARNING

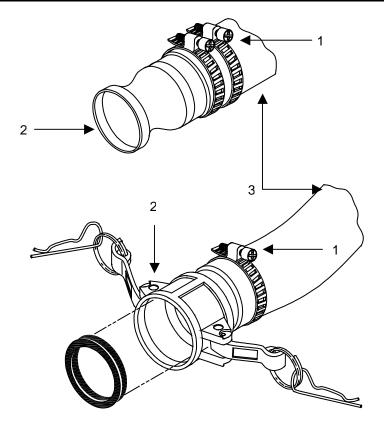
Keep freshwater and wastewater hoses separate at all times. Do not switch components such as seals or coupling halves between freshwater and wastewater hoses as this may result in health hazards due to biological contamination.

REPAIR

Repair hoses by replacing gaskets in female coupling halves and QD coupling halves as follows:

To replace a gasket, use needle-nose pliers, to remove the gasket (1) from female QD coupling half (2). Ensure entire gasket is removed, and groove (3) is clear. Use needle-nose pliers, to install new seal.





To replace a QD fitting, use a flathead screwdriver, loosen the water hose clamp (1) holding the damaged QD coupling half (2) onto the hose (3).

Remove the damaged QD coupling half (2) from the hose (3).

Place a new or serviceable QD coupling half (2) onto the hose (3).

Place a new or serviceable water hose clamp into position over the end of the hose and the sleeve of the coupling and using a flathead screwdriver, tighten the clamp (1).

REPLACE

Replace a freshwater or wastewater hose that leaks or is frayed and worn. Refer to work package 0065 00 for ordering data.

TM 10-3510-223-13&P

CHAPTER 6 DIRECT SUPPORT MAINTENANCE INFORMATION FOR CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT TROUBLESHOOTING PROCEDURES

TROUBLESHOOTING PROCEDURES

The Malfunction Index lists common malfunctions that may occur during laundry inspection and operation.

Find the malfunction the laundry is having in the index and go to the given troubleshooting paragraph in the following pages.

These charts cannot list all malfunctions that may occur, or all tests and inspections needed to find the fault. If your malfunction is not listed in, or is not correctable through this troubleshooting index, notify your supervisor.

DO NOT START THE TASK UNTIL:

- You understand the task
- You understand what you are to do
- You understand what is needed to do the work
- You have the things you need

MALFUNCTION SYMPTOM INDEX

| Malfunction or Symptom | Refer to Troubleshooting Procedure |
|-------------------------------|------------------------------------|
| System Power Loss | 1 |
| Internal Component Power Loss | 2 |
| External Component Power Loss | 3 |



WARNING

The procedures described in this work package must be performed by MOS 51R, 52C, 52D, or 52G qualified personnel. When measuring power supply, ensure multimeter is set correctly to read AC Volts. Serious injury and death can result from electrical shock.

Refer to the CSSL Power Schematic/Wiring Diagram , Figure 10 at end of manual for additional information when isolating electrical malfunctions.

PROCEDURE 1 COVERS:

System Power Loss

INITIAL SETUP:

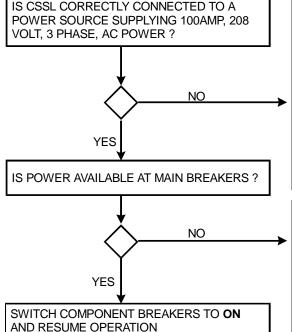
CSSL set up but not in operation

Maintenance Level

Direct Support

Materials/Parts

None



HAVE QUALIFIED PERSONNEL (MOS 51R, 52C, 52D, OR 52G) CONNECT 100AMP POWER CABLE PIGTAIL END TO POWER SOURCE SUPPLYING 100AMP, 208 VOLT, 3 PHASE AC POWER (REFER TO TM 9-6150-226-13). HAVE 100AMP POWER SUPPLY CABLES CONNECTED TO THE CSSL POWER ENTRY BOX CONNECTORS J1 AND/OR J2. (REFER TO WORK PACKAGE 0005 00-7). TURN ON POWER AND SWITCH MAIN BREAKERS IN BOTH POWER DISTRIBUTION BOXES TO **ON**.

USING A MULTIMETER SET TO MEASURE AC VOLTAGE, CHECK THE AVAILABILITY OF POWER AT THE FOLLOWING POINTS IN SEQUENCE:

- 1. AT THE PIGTAIL CABLE CONNECTION TO THE POWER SOURCE
- 2. THE CABLE CONNECTOR PLUG
- 3. THE MAIN BREAKER(S) (CHECK FOR PROPER CONNECTION OF THE VINYL INSULATED SUPPLY WIRES TO THE MAIN BREAKER(S) (THE SEQUENCE SHOULD BE BLACK ON THE TOP, RED AT THE CENTE R AND BLUE AT THE BOTTOM CONNECTOR. SEE WIRING DIAGRAM FIGURE 10
- 4. IF NECESSARY REMOVE REAR COVER OF POWER ENTRY BOX AND ENSURE THE SUPPLY WIRES ARE TIGHTLY CRIMPED TO THE CONTACT PINS OF THE J1 AND J2 RECEPTACLES.
- 5. REPLACE DEFECTIVE COMPONENTS AND WIRING AS DESCRIBED IN WORK PACKAGES 0031 00 THROUGH 0043 00, AS NECESSARY.

PROCEDURE 2 COVERS:

Internal Component Power Loss

INITIAL SETUP:

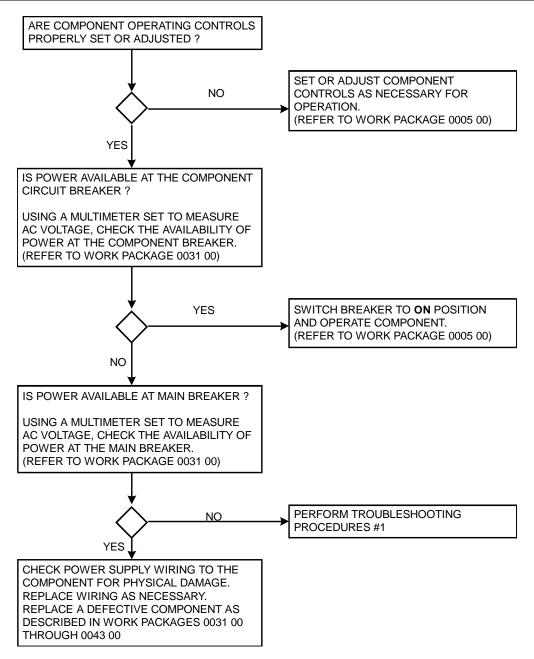
CSSL set up but not in operation

Maintenance Level

Direct Support

Materials/Parts

None



PROCEDURE 3 COVERS:

External Component Power Loss

INITIAL SETUP:

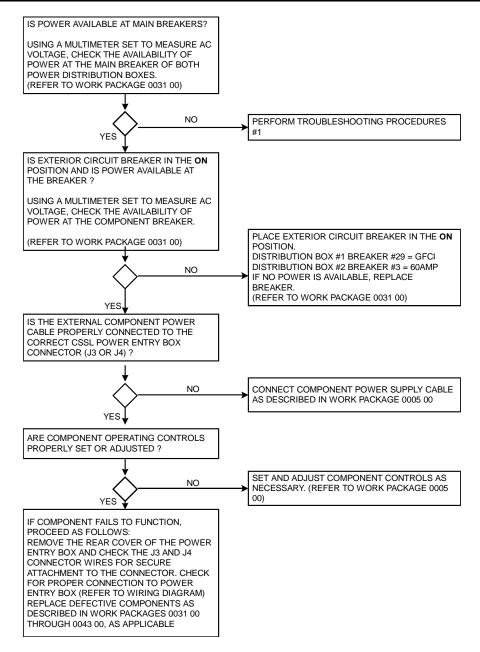
CSSL set up but not in operation

Maintenance Level

Direct Support

Materials/Parts

None



MODIFIED FOLDING STEPS

THIS SECTION COVERS:

Inspect, Replace

INITIAL SETUP

CSSL not stacked

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, General Mechanics, Automotive

(WP 0045, Table 2, Item 1)

Materials/Parts

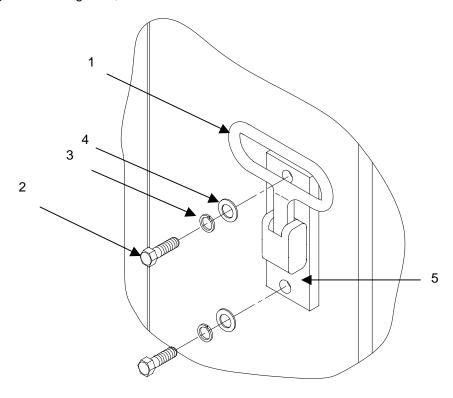
Wiping Rags (WP 0072 00, Table 1, Item 1)

INSPECT

Inspect the general cargo container folding steps (1) for proper functioning. Check mounting bolts (2) for security. Inspect for missing, bent, broken or rusted steps that will not fold.

REPLACE.

To replace a folding step, remove two ½" hex head mounting bolts (2), lockwashers (3), and flatwashers (4) from the folding step mounting plate (5). Remove step and mounting plate. Replace with new one, installing the mounting bolts, lockwashers and flatwashers as removed.



TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE PROCEDURES

POWER ENTRY CONNECTORS

THIS SECTION COVERS:

Test, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Materials/Parts

Wiping Rags (WP 0072 00, Table 1, Item 1) Tags, Marking, (WP 0072 00, Table 1, Item 10)

Tool Kit, Electronic Equipment (WP 0045, Table 2, Item 3) Tape, El. Insul. (WP 0072 00 Table 1, Item 15)

NOTE

Before proceeding with this procedure, check the 100AMP Pigtail power cable for serviceability as described in TM 9-6150-226-13.



WARNING

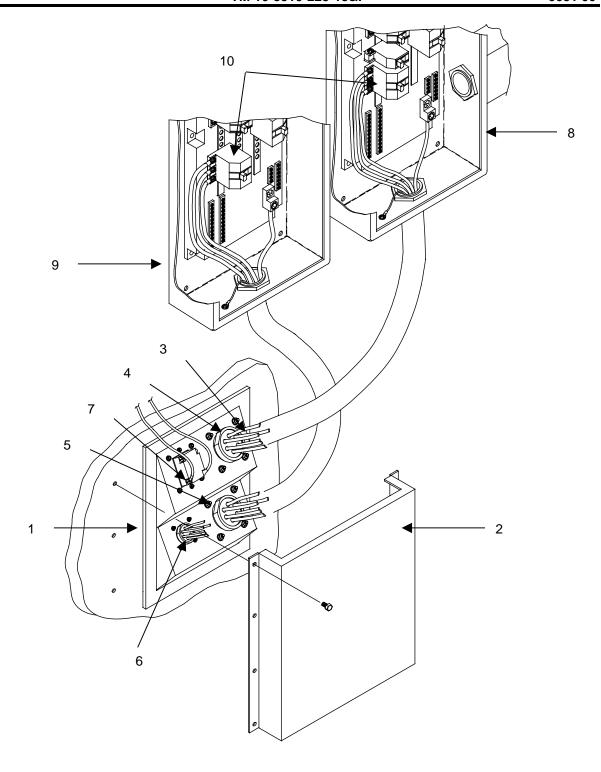
This equipment operates at High Voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Touching a live wire can cause serious injury or death. The procedures in this work package can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

TEST.

With all power supply cables disconnected from the power entry panel (1), remove rear cover (2) of panel. Check the security of the crimped wires (3) on connectors J1 (4), J2 (5), and J4 (6) by pulling on each wire. Check wires are tightly attached to the GFCI Receptacle (7). Check condition of wires. Note cuts, chaffing or abrasions in the insulation where metal wires are exposed. Replace any defective wiring before replacing an entry box connector. Refer to the wiring diagram, Figure 10, and end of manual.

Remove the front of circuit breaker panel #1 (8) and #2 (9) as described in work package 0032 00. With power reconnected to the entry box connectors J1 (4) (upper) and/or J2 (5) (lower), use a multimeter set to read AC voltage to check the availability of power at the main breakers (10) of the power distribution box #1 (8) (connected to J1) and box #2 (9) (connected to J2).

To check the function of the GFCI receptacle J3 (7) and 60AMP Connector plug J4 (6), place circuit breakers 29 on panel #1 (8) and circuit breaker 3 on panel #2 (9), respectively, in the **ON** position. Check availability of power at the breakers. (Replace a defective breaker as described in work package 0032 00). If power is available at the breakers, test the GFCI and 60AMP receptacles from the outside with a probe-type multimeter. Replace a defective plug or receptacle as described in the following procedures.





This equipment operates at High Voltages. Use extreme caution. Disconnect power from CSSL before proceeding with the following procedures. Touching a live wire can cause serious injury or death.

REPLACE.

This procedure requires two MOS 51R, 52C, 52D, or 52G.qualified persons. Switch the main breakers in power distribution panel #1 and #2 to the **OFF** position. Shut down power supply. Disconnect 100AMP power cables from power entry box connector plugs J1 and J2. Disconnect all other power cables connected to the power entry box.

Remove Connectors and Plugs

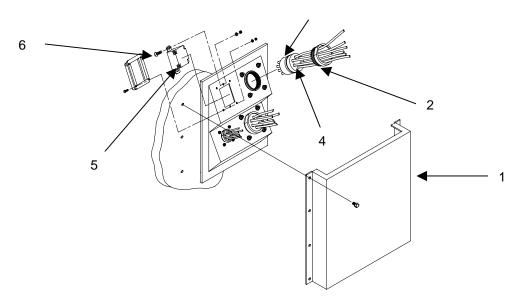


WARNING

Use caution when cutting electrical wires from the connectors or plugs to prevent injuries from cuts.

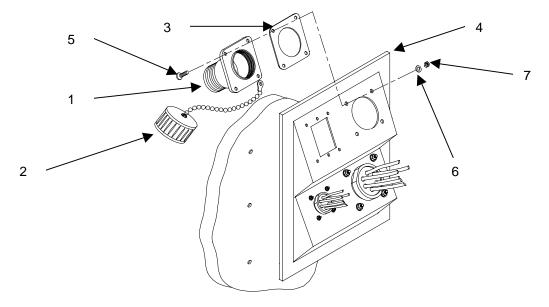
Remove power entry box rear cover (1). Remove defective connector by loosening and removing the retainer ring (reverse thread) (2), securing the connector (3) to the power entry box sleeve. Pull connector out of sleeve. Cut wires (4) as close to the defective connector (3) as possible. Tag wires. To remove the GFCI receptacle (5), remove the hex nuts holding the receptacle and cover (6) to the entry panel. Push the receptacle and cover out to remove it. Retain the cover.





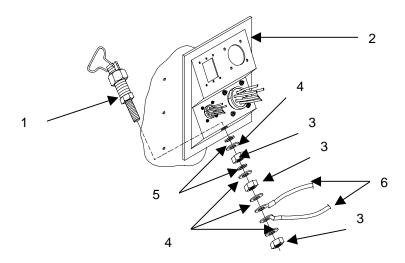
Remove Sleeves.

This procedure requires two MOS 51R, 52C, 52D, or 52G.qualified persons. To remove the connector sleeves (1) dust covers (2) and gasket (3) from the power entry panel (4), loosen and remove the pan head screws (5) flat washers (6) and self locking nuts (7) holding the sleeves (1) to the panel (4). Retain the screws, washers and nuts. Remove and discard the sleeve (1) and gasket (3).



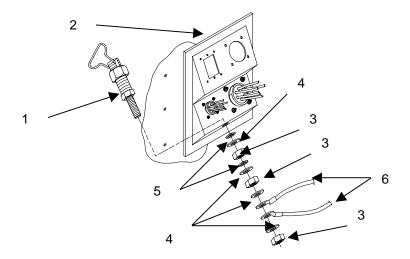
Remove Ground Post.

To remove the ground post (1), remove the rear cover of the power entry box (2). Remove the hex nuts (3), flat washers (4), lock washers (5), and ground wires (6) from the ground terminal. Push the ground post terminal (1) out of the power entry box (2).



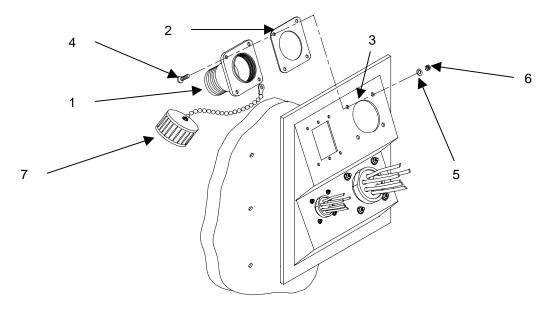
Install Ground Post.

Place a new ground post (1) into position on the power entry box (2). Re-install the hex nuts (3), flat washers (4), lock washers (5), and ground wires (6) onto the ground post in the same sequence as removed. Install the rear cover of the power entry box (2).



Install Sleeves.

Place the new sleeve (1) and gasket (2) into position on the power entry panel (3). Install the pan head screws (4) flat washers (5) and self-locking nuts (6) in the same sequence as removed. Install a new, or a retained dust cover (7) as applicable.

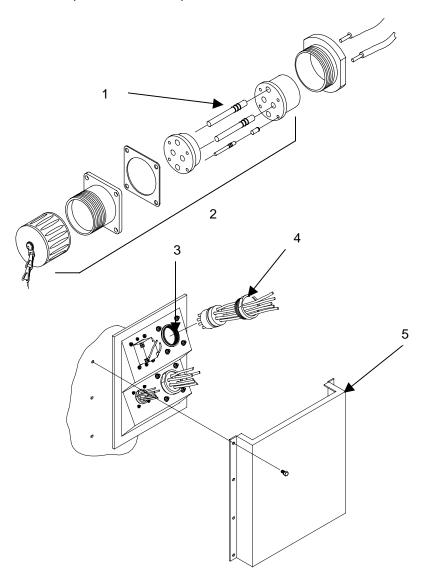


Install Connectors.

NOTE

Electrical contact pins should not separate from conductors (wires) when subjected to a pull out load test of 8 lbs.

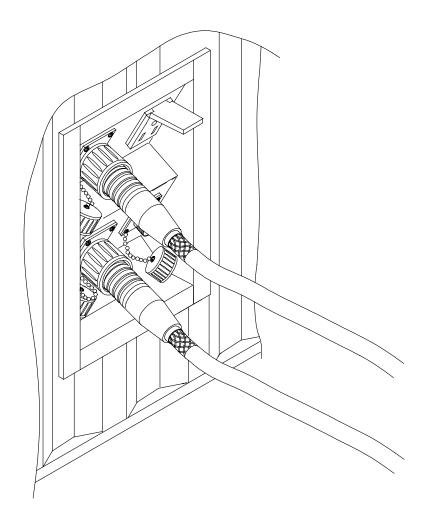
Crimp electrical wires securely to contact pins (1) of connector (2) as tagged. If not tagged, connect as follows: Phase A – Black wire, Phase B – Red wire, Phase C – Blue wire, Neutral – White wire, Ground – Green wire. Slide connector into sleeve (3) and secure with retainer ring (4). Install power entry box rear panel cover (5). Install front of power distribution panels #1 and #2.





Touching a live wire can cause serious injury or death.

Have qualified civilian personnel or MOS 51R, 52C, 52D, or 52G qualified military personnel connect the 100AMP, 3 Phase, 208 VAC power supply cables to the J1 and J2 connectors on the power entry box (Refer to work package 0005 00-7). Switch main breakers on power distribution panel #1 and #2 to **ON**. Install dust cover on any power entry box connector not in use.



END OF WORK PACKAGE

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A **DIRECT SUPPORT MAINTENANCE PROCEDURES**

POWER DISTRIBUTION PANEL

THIS SECTION COVERS:

Test, Replace

INITIAL SETUP

CSSL shut down (Power connected)

Maintenance Level

Direct Support

Tools and Special Tools

Materials/Parts

Wiping Rags (WP 0072 00, Table 1, Item 1) Tags, Marking, (WP 0072 00, Table 1, Item 10)

Tool Kit, Electronic Equipment (WP 0045, Table 2, Item 3) Tape, El. Insul. (WP 0072 00 Table 1, Item 15)

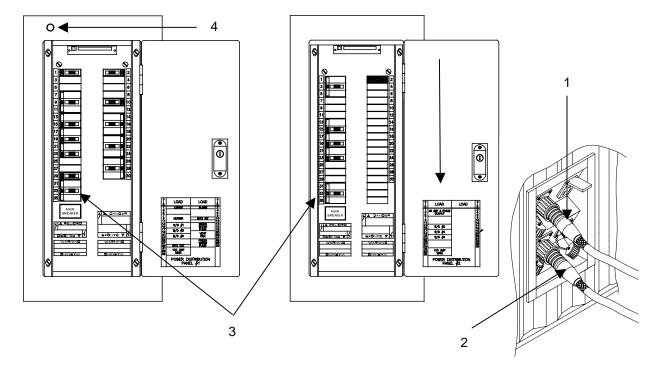


WARNING

This equipment operates at high voltage. Use extreme caution during testing procedure. Touching a live wire can cause serious injury or death. This procedure can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

TEST

With 208 Volt 3 Phase 100AMP power connected to the power entry box plug(s)(1) and (2) and using a multimeter set to read AC Voltage, determine the availability of power at both power distribution panels main breakers (#11) (3). Test individual breakers as necessary to isolate a malfunction. Refer to CSSL power schematic/wiring diagram, Figure 10, at end of manual.



REPLACE

As necessary, replace an electrical box, cover and door, panel board/main breaker, individual circuit breaker, phase indicator, and ground bar, as described in the following procedures.

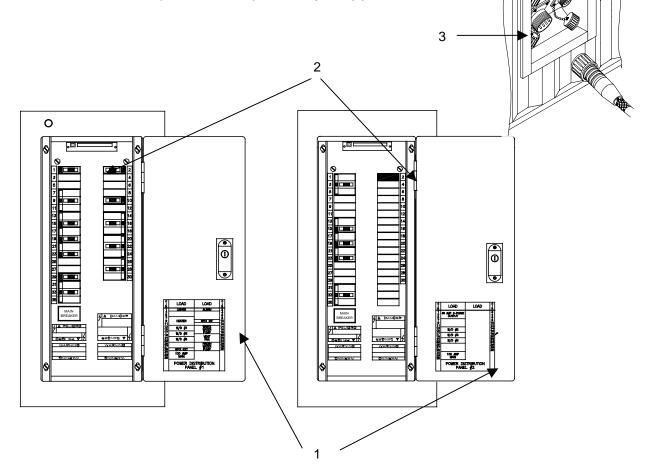


WARNING

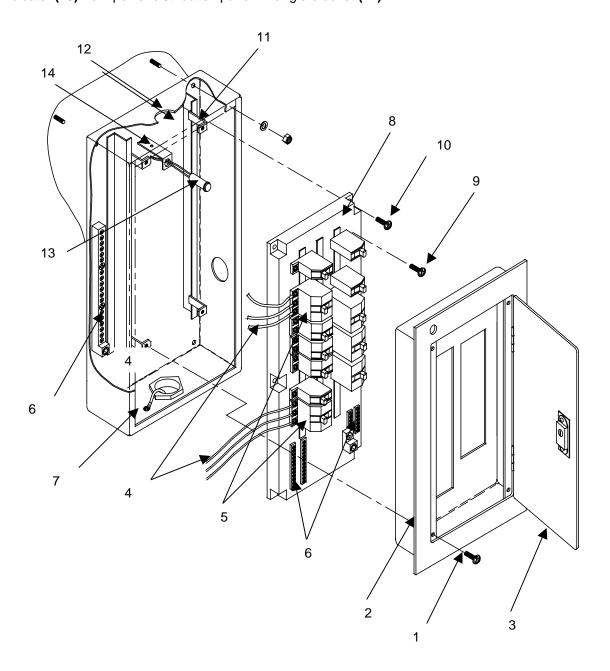
The site power must be disconnected before proceeding further. Touching a live wire can cause serious injury or death. This procedure can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

Remove.

Open the circuit breaker panel doors (1). Set all circuit breakers (2) to OFF, and disconnect power from the power entry box (3).

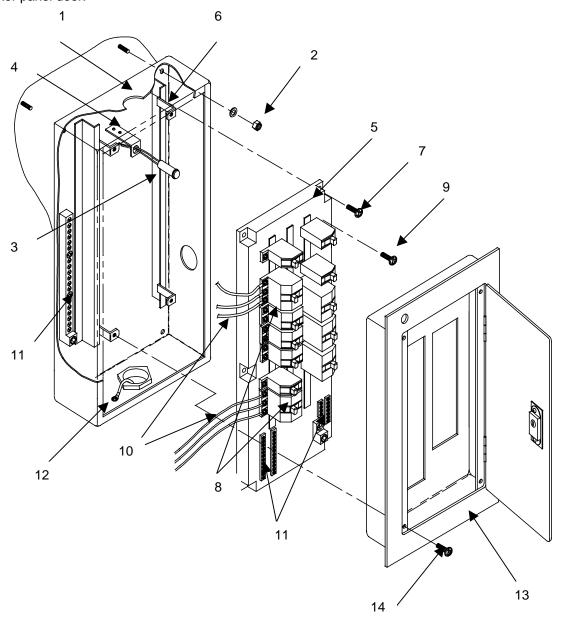


Remove four screws (1) on the panel cover (2) and remove the cover and door (3). Remove and tag wires (4) from all breakers (5) ground bar (3 locations) (6) and breaker box (7). Remove individual breakers (5) from breaker panel (8) by removing flat head screw (9). Remove six screws (10) holding the breaker panel (8) to the bracket (11). Remove breaker panel (8) from circuit breaker box (12). Remove phase indicator (13) from power distribution panel #1 angle bracket (14).



Install

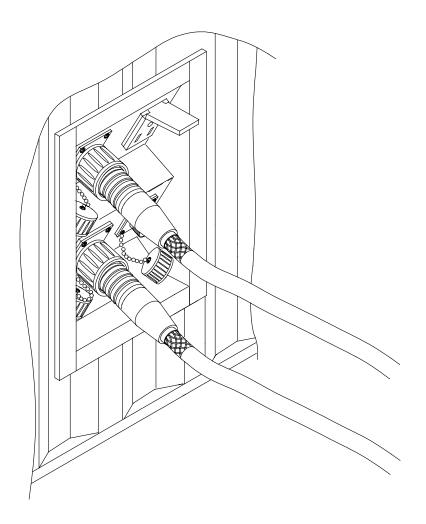
Place a new distribution box (1) (modified as specified in work package 0074 00, Figure 9) onto the wall studs on the container wall and install four retainer hex nuts (2) onto the wall studs. If applicable, place the phase indicator (3) into position on power distribution panel #1 and secure the angle bracket (4). Place new breaker panel (5) into position on the bracket (6) and install six screws (7) holding the panel to the bracket. Install individual breakers (8) onto breaker panel (5) and secure with flat head screw (9). Re-connect tagged wires (10) onto breakers (8) ground bar (3 locations)(11) and breaker box (12). Place new cover and door (13) onto bracket (6) and install four screws (14) to secure it. Close the circuit breaker panel door.





Touching a live wire can cause serious injury or death.

Have qualified civilian personnel or MOS 51R, 52C, 52D, or 52G qualified military personnel connect the 100AMP, 3 Phase, 208 VAC power supply cables to the J1 and J2 connectors on the power entry box. Place any component breakers into the **ON** position as required.



END OF WORK PACKAGE

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

FLUORESCENT LIGHTS

THIS SECTION COVERS:

Test, Replace

INITIAL SETUP

CSSL not in operation Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Elec. Equipment (WP 0045 Table 2 Item 3)

Materials/Parts

Retainer clips (WP 0072, Table 1, Item 19)
Tape, elec. Ins. (WP 0072, Table 1, Item 15)
Tags, marking (WP 0072, Table 1, Item 10)
Light, Fluorescent (WP 0072, Table 1, Item 2)



WARNING

This equipment operates at High Voltages. Use extreme caution. Observe all warnings, and follow all safety procedures. Touching a live wire can cause serious injury or death.

TEST

Isolate electrical malfunction of an interior fluorescent light as described in Procedure 2 of Direct Support Troubleshooting Procedures contained in work package 0029.

REPLACE

Replace an interior fluorescent light as described below. This procedure requires two persons.

NOTE

CSSL interior fluorescent light fixtures are of various manufacture and may differ slightly in the method of installation.

Remove

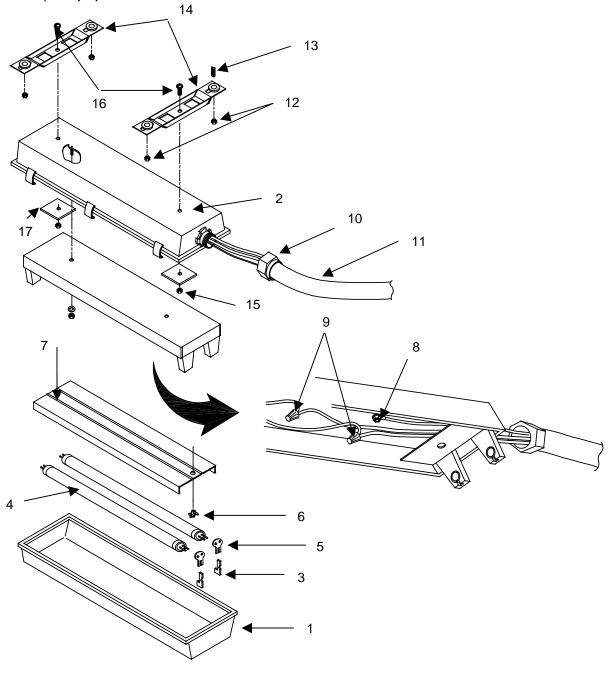
Place Circuit Breaker #1 on Circuit Breaker Panel #1 to **OFF**. Remove dust cover **(1)** from light fixture **(2)**. Pull clips from light bulb sockets **(3)** and turn bulbs **(4)** to remove them. If light bulbs must be replaced, remove insulators **(5** from bulbs.

Loosen inner cover retainer (6) and remove cover (7). Remove ground wire (8) from fixture. Disconnect black and white wires (9). (Wire connectors may be screw caps, or crimp type, and vary with different light fixtures)

Loosen hex retainer nut (10) at conduit (11) and pull conduit from fixture. With second person supporting the lightfixture, remove hex nuts (12) and washers from the ceiling bracket studs (13).

Remove fixture (2) with mounting brackets (14) from the ceiling, being careful not to damage or strip the white, black, and green ground wires as these are pulled from the fixture.

Remove the mounting brackets (14) from the fixture (2) by removing the hex nut (15), screw (16), and retainer plate (17).



Install

Remove dust cover (1) and inner cover (2) from the new fixture (3).

Install mounting brackets (4) onto new fixture, using the hex nut (5), screw (6), and retainer plate (7) removed from old fixture.

Pass the white, black, and green ground wire through the fixture conduit connection (8).

With second person holding the mounting brackets (4) and fixture (3) over the ceiling bracket studs (9) and install hex nuts (10) and washers.

Secure conduit to fixture with hex retainer nut (11).

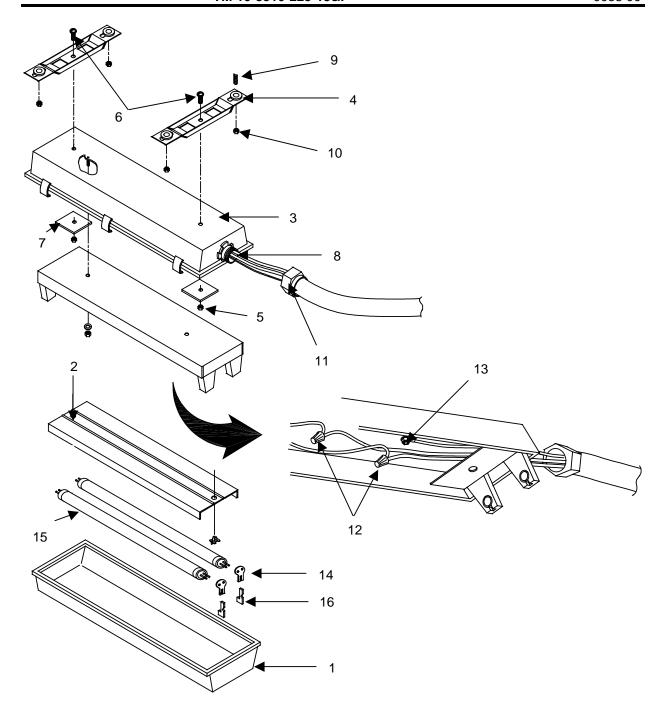
Connect black and white wires (12). (Wire connectors may be screw caps, or crimp type, and vary with different light fixtures)

Connect ground wire (13) to fixture. Replace inner cover (2) and secure it with retainer.

If new light bulbs are to be installed, place the insulators (14) removed from the old light bulbs onto the new bulbs so that the slotted end faces down and outward from the bulb. Install light bulbs (15) and secure with clips (16).

Replace dust cover (1).

Place Circuit Breaker #1 on Circuit Breaker Panel #1 to ON position.



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

FRESHWATER PUMP

THIS SECTION COVERS:

Repair, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit General Mechanics, Automotive - (WP 0045, Table 2, Item 1)

Pipe Wrench, 18" (WP 0045, Table 2, Item 4)

Pipe Wrench, 10" (WP 0045, Table 2, Item 5)

Materials/Parts

Cement, All-Purpose (WP 0072, Table 1, Item 8) Cleaner, All-Purpose (WP 0072, Table 1, Item 9) Wiping Rags (WP 0072, Table 1, Item 1) Solder, Lead-Free (WP 0072, Table 1, Item 6)

Tape, Antiseize (WP 0072, Table 1, Item 3)



WARNING

This equipment operates at High Voltages. The procedures in this work package can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G. Prior to any repair to, or replacement of the pump, set Circuit breaker #28 on panel board #1 to **OFF** and disconnect the freshwater pump power cord. Touching a live wire can cause serious injury or death.

REPAIR

Repair the freshwater pump power cord as described in work package 0074, Figure 1.

REPLACE

Before the freshwater pump (1) can be replaced, ensure that the hose has been disconnected from the freshwater input panel. Connect a garden hose to the fitting at the end of the main supply line (2) and open the gate valves (3) and (4). Also open the freshwater pump drain line gate valve (5).

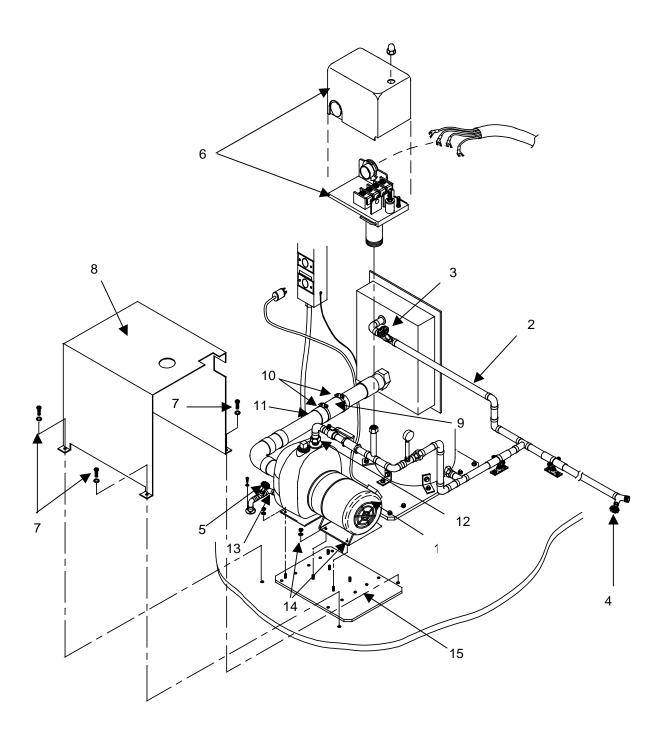
Remove

Remove the pressure switch **(6)** as described in work package 0036. Remove three mounting screws **(7)** holding the freshwater pump cover **(8)** to the floor. Retain screws. Remove the pump cover **(8)**.

Remove the flexible joint (9) in the freshwater supply line by removing the hose clamps (10) at each end and sliding the joint off the PVC pipe (11).

Disconnect the ¾" hex union (12) from top of the pump (1). Disconnect ¾" drain line (13) from pump.

With all supply and drain lines disconnected from the pump, remove the self-locking nuts and flat washers (14) holding the pump (1) to the mounting plate (15) on the floor. Retain hardware.





The water pump is heavy. To avoid injuries, two persons are required to lift the pump.

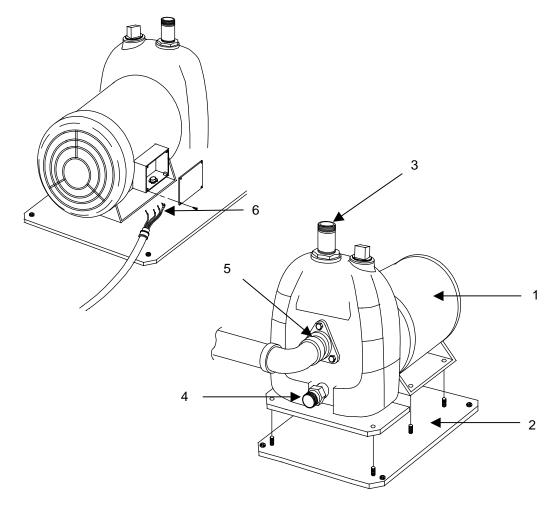
Lift pump (1) up and off the mounting plate (2).

Remove and retain 3/4" union half (3) from the top of the pump.

Remove and retain 3/4" drain line union half (4) from bottom of the pump.

Remove and retain 1.5" PVC plumbing (5) from front of the pump.

Remove and retain the power cord (6) from the pump.

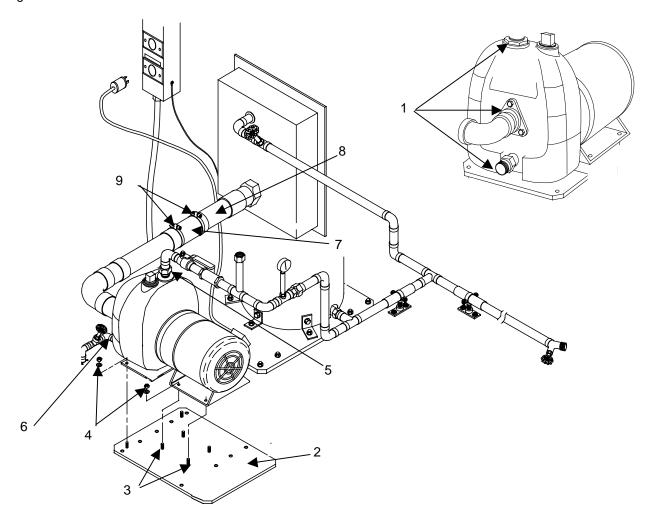


Install

NOTE

Prior to installation of a new pump, its power cord must be modified as described in work package 0074, Figure 1.

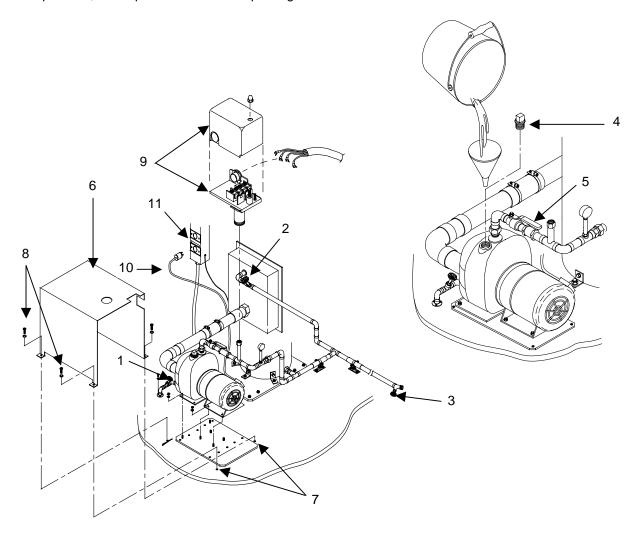
Install the items removed in the previous step onto a new pump (1). Apply antiseize to copper joints being reconnected. Clean PVC pipe ends with all-purpose cleaner and apply all-purpose cement when reconnecting PVC pipe to pump. Place pump onto mounting plate (2), aligning the mounting bolts with holes (3), and install selflocking nuts and flatwashers (4). Reconnect the feeder line with the ¾" union (5) on top of the pump. Reconnect the drain line with the ¾"union (6) to the front of the pump. To replace the flexible hose joint (7) on the supply line (8), slide the hose clamps (9) over the ends of the PVC pipe. Slide the flexible hose joint (7) onto the PVC pipe. Place hose clamps (9) over the ends of the joint and tighten.



If the pump is to be used after installation, priming will be necessary. To prime the freshwater pump, proceed as follows:

Close the gate valve (1 on the pump drain line and the gate valves (2) and (3) on the main supply line. Remove the priming plug (4 on top of the pump. Fill the pump with freshwater and replace the priming plug (4).

Ensure ball valve (5) on freshwater line is in the open position (aligned with pipe) Place the pump cover (6) over the pump and align with the mounting holes (7). Install screws (8). Install the pressure switch (9) as described in work package 0036. Plug the freshwater pump power cord (10) into the receptacle marked on the curbside raceway (11). Replace cable ties as necessary. Set circuit breaker 28 on power distribution panel #1 to ON. Disconnect garden hose from freshwater line drain fitting. To place the pump in operation, follow procedures in work package 0005 00-16.



END OF WORK PACKAGE

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

PRESSURE TANK

THIS SECTION COVERS:

Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Organizational Maintenance, Common No. 1 (WP 0045, Table 2, Item 2)

Materials/Parts

Solder, Leadfree (WP 0072, Table 1, Item 6) Wiping Rags (WP 0072, Table 1, Item 1) Tape, Antiseize (WP 0072, Table 1, Item 3)



WARNING

The pressure tank is heavy. To avoid injuries, two persons are required to perform this procedure.

REPLACE

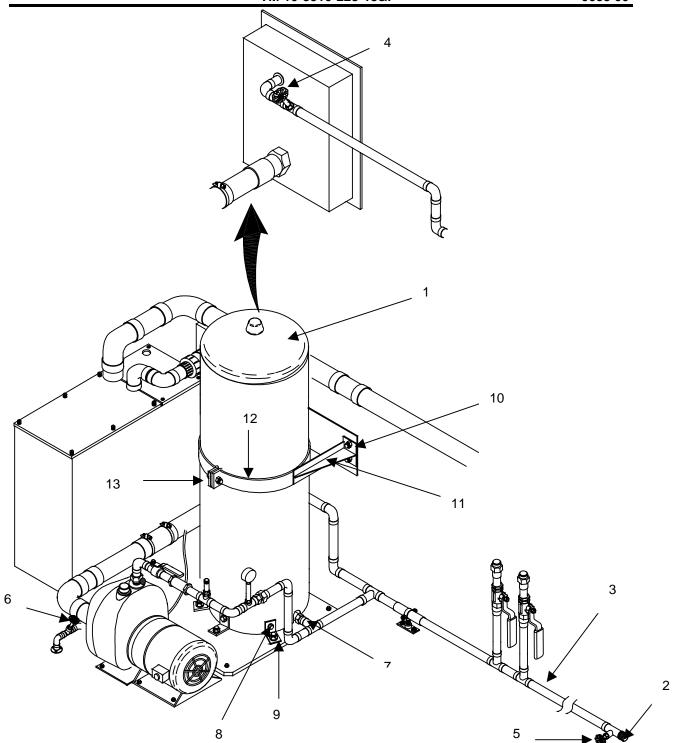
Before the pressure tank (1) can be replaced, ensure that the freshwater hose has been disconnected from the freshwater input panel. Set circuit breaker #10 and #28 in power distribution panel #1 to OFF. Connect a garden hose to the hose fitting (2) at the end of the freshwater line (3) and open the gate valves (4) and (5). Also open the freshwater pump drain line gate valve (6). Let the freshwater line drain.

Remove

Remove the pressure switch as described in work package 0036.

Remove the freshwater pump cover as described in work package 0034.

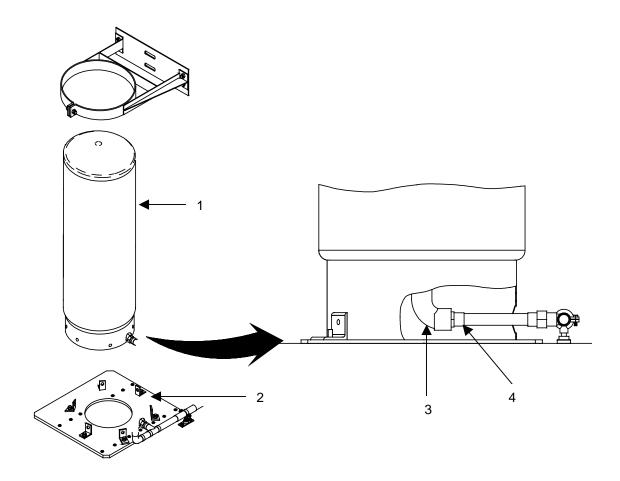
To remove the pressure tank (1) disconnect the water line at the union fitting (7) on the bottom of the tank. Remove six hex head screws, lock washers, and flat washers (8) from the angle brackets (9) and inserts on the pressure tank. Remove four self-locking nuts and washers (10) from the wall support bracket (11). Loosen the retainer strap (12) by removing the hex nut, washer and cap screw (13). Remove the support bracket (11) and strap (12) from the tank.





The pressure tank is heavy. To avoid injuries, two persons are required to lift the pump.

Lift and remove the pressure tank (1) from the mounting plate (2). Place the tank on its side and remove the water inlet line from the tank inlet (3) at the adapter fitting (4).



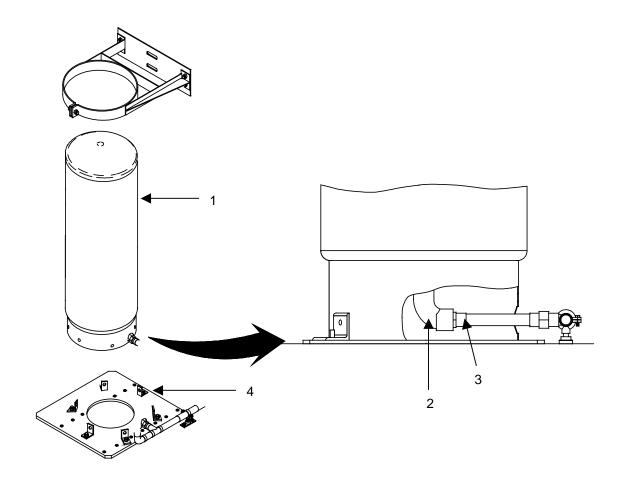
Install



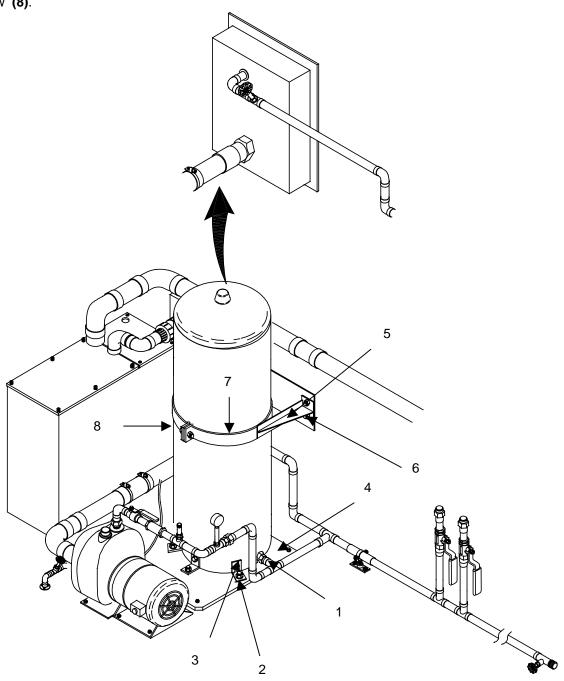
WARNING

The pressure tank is heavy. To avoid injuries, two persons are required to lift the pump.

To install a new pressure tank (1) Place the tank on its side and install the water inlet line onto the tank inlet (2) with the adapter fitting (3). Use antiseize tape on threaded portions. Lift and place the pressure tank (1) onto the mounting plate (4)



Connect the water line at the union fitting (1). Use antiseize tape on threaded portions. Align the tank with the angle brackets (2) and install six hex cap screws, lock washers, and flat washers (3) through the angle brackets (2) on the mounting plate (4) into the inserts on the pressure tank. Install the support bracket (5) with four self-locking nuts and washers (6). Install strap (7) onto the tank and tighten cap screw (8).



Install the pressure switch as described in work package 0036.

Install the freshwater pump cover as described in work package 0034.

Disconnect the garden hose from the hose fitting at the end of the freshwater line.

Close gate valves on freshwater line, and freshwater pump drain line.

Set circuit breakers #10 and #28 on power distribution panel #1 to ON.

Prepare water system for operation as described in work package 0005 00.

END OF WORK PACKAGE

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

INTERNAL FRESHWATER LINE

THIS SECTION COVERS:

Repair

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Org. Maintenance, Common No.1 (WP 0044, Table 2, Item 2)

Pipe Wrench 18" (WP 0045, Table 2, Item 4) Pipe Wrench 10" (WP 0045, Table 2, Item 5)

Tube Cutter. (WP 0045, Table 2, Item 6)

Materials/Parts

Cleaner, All-purpose (WP 0072, Table 1, Item 9) Solder, Lead Free (WP 0072, Table 1, Item 6) Wiping Rags (WP 0072, Table 1, Item 1) Tape, Antiseize (WP 0072, Table 1, Item 3) Cement All-purpose (WP 0072, Table 1, Item 8)

REPAIR

Disconnect the freshwater supply hose from the freshwater input panel before repairing any portion or part of the ½" or ¾ inch internal copper freshwater line. Connect a garden hose to the fitting at the end of the freshwater line, open gate valves on the freshwater line, and let the line drain. Repair any leaks or malfunctioning components in the line as described below.

Repair a leak in any seamless pipe section by soldering. Replace a gate valve (1), pressure relief valve (2), ball valve (3), hose adapter fitting (4), water flow control fitting (5), Tee (6), adapter fitting (7), or elbow fitting (8) by heating the solder joint until the solder is liquefied. Remove the component. Solder a new component securely into place. (Refer to work package 0055 to identify pipe section components)

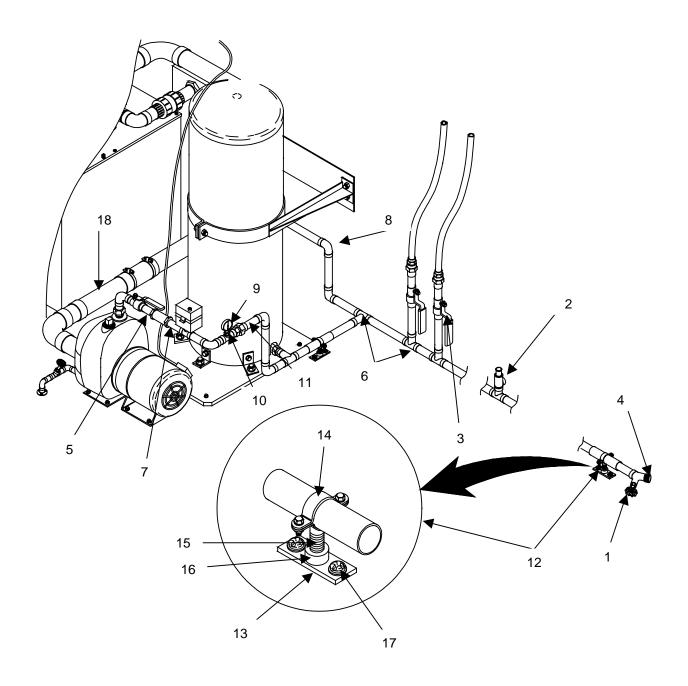
NOTE

If the freshwater pump cover must be removed to access to any portion of the freshwater line to be repaired, remove the cover as described in work package 0034.

Replace the pressure gage (9) by unscrewing the hex nut (10) from the freshwater line (11). Remove the pipe section from the faulty gage and install onto new gage, applying antiseize tape to the threads. Install a new gage (9) onto the freshwater line (11) by tightening the hex nut (10).

Repair a freshwater line retainer bracket (12), by replacing the wall plate (13), the rod mount split-ring hanger (14), the threaded rod (15), the pipe cushion (16) or the wood screw (17), holding the bracket to the floor.

Repair the PVC supply line **(18)** between the freshwater pump and the freshwater inlet panel by cutting out a leaky or damaged section and replacing with a similar, new section. (Refer to work package 0055 00 to identify PVC supply line components) Clean the ends of both connecting sections with all-purpose cleaner, and cement the sections together. Follow product instructions for the use of the all-purpose cement.





This equipment operates at High Voltages. This procedure can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G. Prior to any repair to, or replacement of the pressure switch, ensure Circuit breaker #10 on panel board #1 is set to **OFF**. Touching a live wire can cause serious injury or death.

NOTE

If the freshwater pump cover was removed, reinstall the cover as described in work package 0034.

Replace the pressure switch by removing its cover (1). With the circuit breaker #10 on panel board #1 set to OFF, remove and tag the electrical wires (2) from the pressure switch.

Remove the power cord (3) from the switch housing by removing the locknut (4) and pulling the threaded portion from the housing.

Unscrew the hex union (5) holding the switch to the freshwater line stem (6).

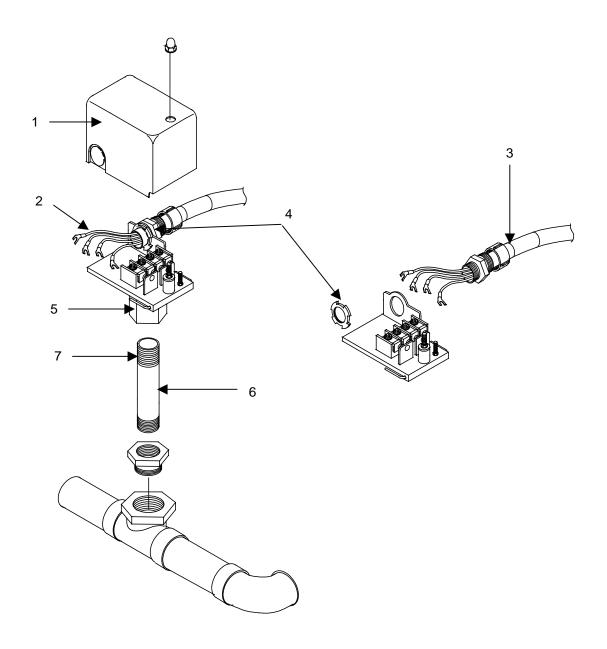
Apply antiseize tape to the threads of the pipe stem (7) and install the new switch onto the freshwater line stem (6) by tightening the hex nut (5).

Reconnect the power cord (3) to the switch housing by tightening the locknut (4).

Reconnect the electrical wires (2) to the switch panel. (Refer to work package 0074 Figure 6 for pressure switch wiring instructions, if necessary) Replace the switch cover.

Reconnect the freshwater supply hose to the freshwater input panel and close gate valves on the freshwater line. Disconnect the garden hose from the fitting at the end of the freshwater line.

Set circuit breaker #10 on panel board #1 to ON. Start pump as described in WP 0005.



END OF WORK PACKAGE

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

WASTEWATER PUMP

THIS SECTION COVERS:

Repair, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, General Mechanics, Automotive (WP 0045, Table 2, Item1)

Materials/Parts

Cleaner, PVC Piping (WP 0072, Table 1, Item 9) Cement, PVC Piping (WP 0072, Table 1, Item 8) Wiping Rags (WP 0072, Table 1, Item 1) Cable Ties (WP 0072, Table 1, Item 16)



WARNING

This equipment operates at High Voltages. Use extreme caution. Ensure main breaker on distribution panel #1 is set to **OFF**. Touching a live wire can cause serious injury or death.

REPAIR

Before repairing or replacing the wastewater pump, ensure all washers have completed their wash cycle. If necessary, drain the wastewater tank by removing the drain plug, so that the water level is below the wastewater pump support bracket. To repair the wastewater pump power cord, remove and install the pump as described below. Repair the pump by replacing the twist lock connector on the power cord as described in work package 0074, Figure 2.

REPLACE

Replace the pump as described below. A flashlight (obtain from footlocker) will be required for this procedure.

Remove

Disconnect the power cables of the wastewater pump (1) and the three float switches (2) from the curbside wall raceway. Cut the cable ties (3). Loosen captive screws (4) on the wastewater tank lid (5) and remove lid. Remove cable clips (6) from inside tank wall and retain.

Feed the three float switch power cords (2) separately through hole (7) in wastewater tank cover. Feed wastewater pump power cord (1) through hole in wastewater tank cover (7).

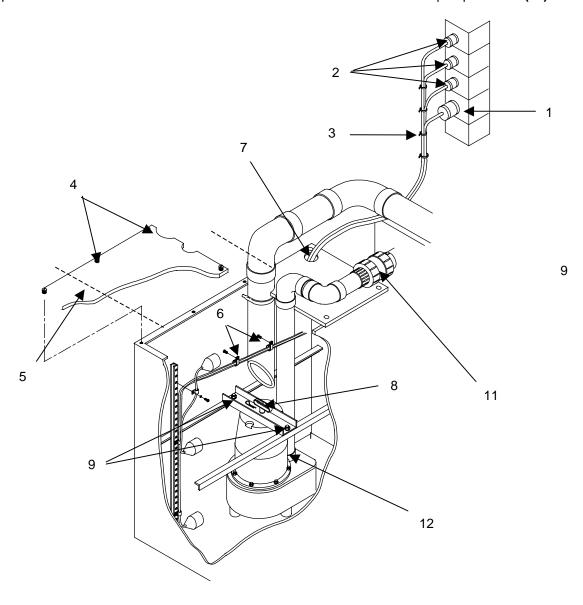
Remove retainer pin from pump handle (8) and remove handle. Loosen and remove two hex bolts (9) from support bracket (10) and remove bracket. Reinstall the handle (8) onto the pump.

Disconnect the 2" PVC wastewater evacuation line at the union (11) on top of the wastewater tank.



The water pump is heavy. To avoid injuries, two persons are required to lift the wastewater pump.

Lift pump from the tank. Remove 2" PVC wastewater evacuation line section from pump at union (12).



Install

NOTE

Prior to installation of a new pump, its power cord must be modified as described in work package 0074, Figure 2.



WARNING

The water pump is heavy. To avoid injuries, two persons are required to lift the wastewater pump.

Before proceeding with the installation of a new pump, drain the wastewater tank completely by removing and reinstalling the drain plug when the tank is empty.

Install 2" PVC wastewater evacuation line section (1) onto new pump at union (2). Ensure pipe is oriented correctly to connect to the union on top of the wastewater tank (3).

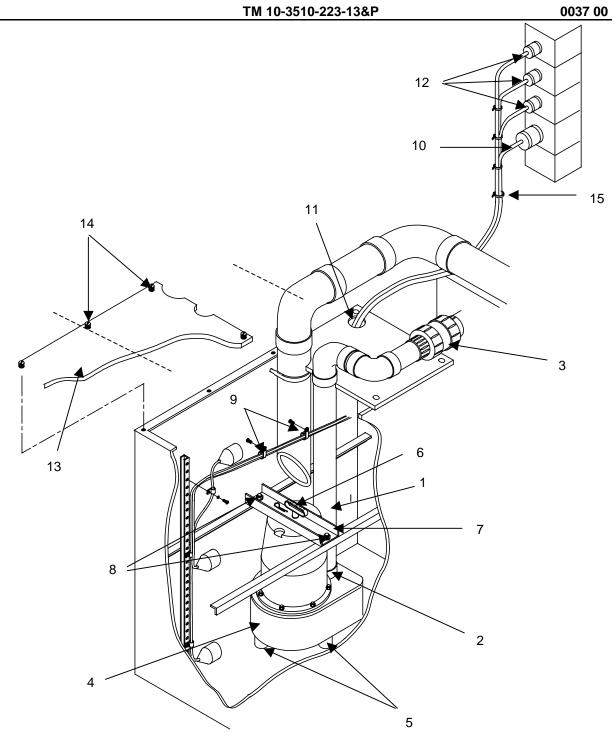
Place new, modified wastewater pump (4) into the foot wells (5) on the bottom of the wastewater tank. Remove retainer pin from pump handle (6) and remove handle.

Place support bracket (7) into position and install two hex bolts (8).

Reinstall the handle (6) onto the pump. Place the power cord into cable clips (9) and install clips onto tank wall. Feed wastewater pump power cord (10) through hole in tank cover (11). Feed the three float switch power cords (12) separately through hole in wastewater tank cover (11).

Place the wastewater tank lid (13) into position and tighten captive screws (14) to secure the lid. Reconnect the power cables of the wastewater pump (10) and the three float switches (12) to the appropriately labeled receptacles on the curbside wall raceway. Install new cable ties (15).

Set main breaker in power distribution panel #1 to **ON**. Push PUMP RUN button on wastewater pump control panel.



END OF WORK PACKAGE

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

FLOAT SWITCHES

THIS SECTION COVERS:

Repair, Replace

INITIAL SETUP

CSSL not in operation (WP 0005)

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Org. Maintenance, Common No.1 (WP 0045, Table 2, Item 2)

Materials/Parts

Wiping Rags (WP 0072, Table 1, Item 1) Cable Ties (WP 0072, Table 1, Item 16)



WARNING

This equipment operates at High Voltages. Use extreme caution. Ensure float switch power cord is disconnected from the receptacle on the curbside wall, and circuit breaker #10 in distribution panel #1 is set to **OFF**. Touching a live wire can cause serious injury or death.

REPAIR

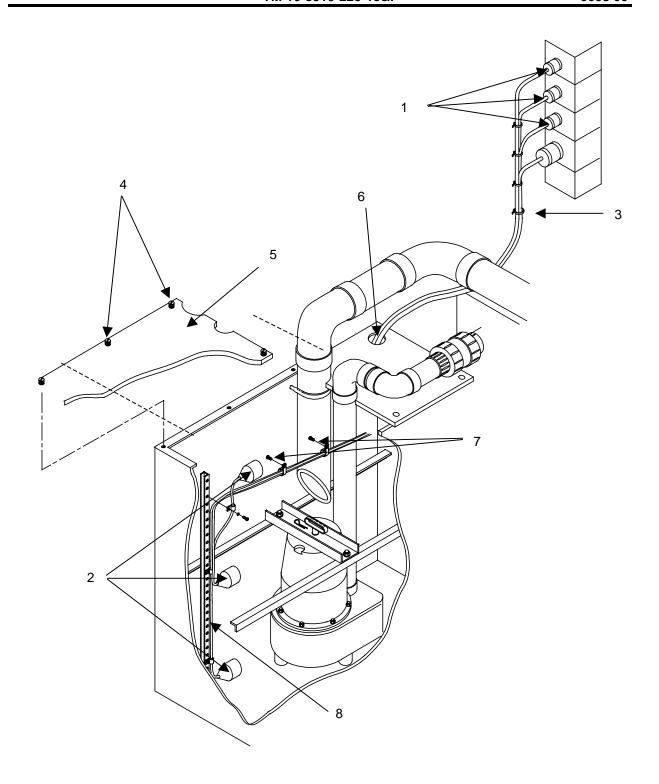
Before repairing or replacing the float switches, ensure all washers have completed their wash cycle. If necessary, drain the wastewater tank so that the water level is below the shut-off switch, by removing and reinstalling the drain plug as necessary. To repair a float switch power cord, remove and install the switch as described below. Replace the power cord as described in work package 0074 Figure 4.

REPLACE

Replace the wastewater tank float switches as described below.

Remove

Disconnect the power cables (1) of the three float switches (2) from the curbside wall raceway. Cut the cable ties (3). Loosen captive screws (4) on the wastewater tank lid (5) and remove lid. Feed the power cord (1) of the switch to be replaced through hole (6) in wastewater tank cover. Remove cable clips (7) from inside tank wall and retain. Remove the switch to be replaced from the interior bracket (8). Remove the switch from the wastewater tank.

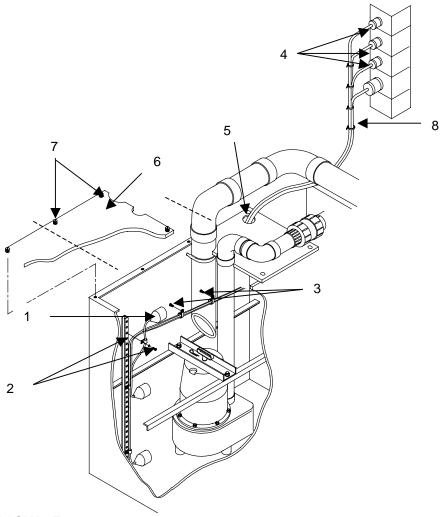


Install

NOTE

Prior to installation of a new float switch, its power cord must be modified as described in work package 0074, Figure 4.

Place new, modified float switch (1) into position onto the interior bracket (2) and install. Float switch positions are as follows: OFF Switch in 1st position from bottom, ON Switch in 3rd position from bottom, and ALARM Switch in 7th position from the bottom. Place the power cords into cable clips (3) and install clips onto tank wall. Feed the appropriate power cord (4) of the new switch through hole in wastewater tank cover (5). Place wastewater tank lid (6) into position and tighten captive screws (7). Re-connect the power cables of the three float switches (4) to the appropriately labeled receptacles on the curbside wall raceway. Secure cords with new cable ties (8). Place circuit breaker #10 in power distribution panel #1 in the **ON** position.



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CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

WASTEWATER ALARM

THIS SECTION COVERS:

Test, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Electrical Equipment (WP 0045 Table 2 Item3)

Materials/Parts

Wiping Rags (WP 0072, Table 1, Item 1)
Tape, elec. Ins. (WP 0072 00 Table 1, Item 15)
Tags (WP 0072 00 Table 1, Item 10)



WARNING

This equipment operates at High Voltages. Use extreme caution. Touching a live wire can cause serious injury or death. The procedures in this work package can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

TEST

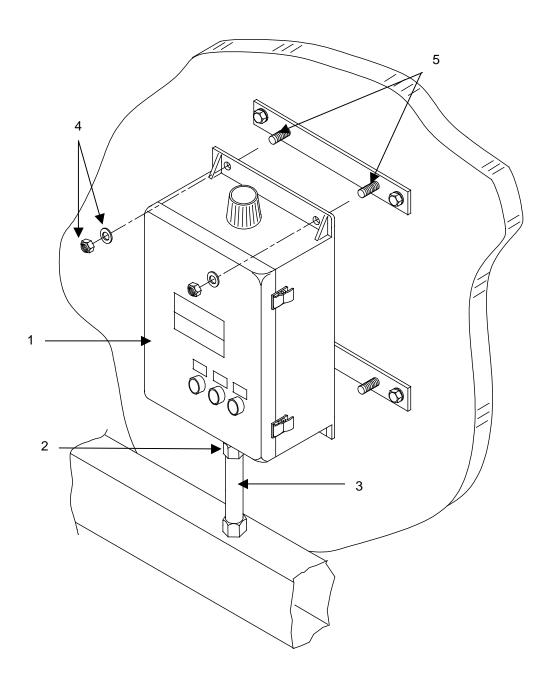
Isolate electrical malfunction of the wastewater alarm as described in Procedure 2 of the Direct Support Troubleshooting Procedures contained in work package 0029.

REPLACE

Before replacing the wastewater alarm, ensure main breaker on distribution panel #1 is set to **OFF**. A flashlight (obtain from footlocker) will be required for this procedure.

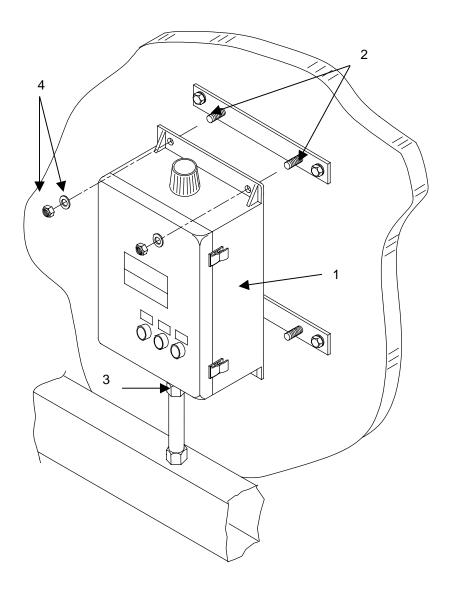
Remove

Open wastewater alarm box (1), disconnect and tag the electrical supply wires from the S1 terminal strip (Refer to panel layout illustration on page 0038 00-4 and the commercial literature furnished with pump control panel) Loosen conduit connector (2) to disconnect conduit (3) from the alarm box. Remove the four hex nuts and washers (4) that hold the alarm box (1) to the wall mounts (5). Remove the box from the wall mounts and conduit.

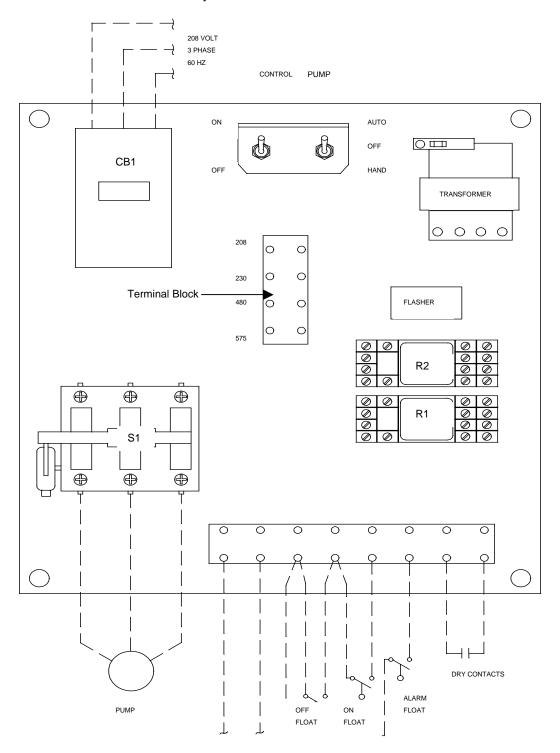


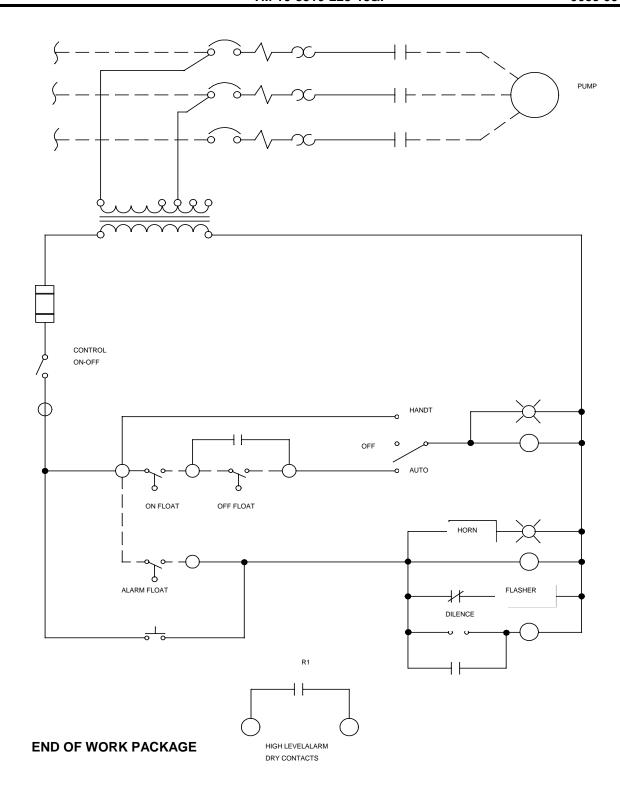
Install

Temporarily place new alarm box (1) into position on wall mount studs (2) and conduit connector (3). Mark center location of conduit connector (3) on bottom of alarm box (1) and drill proper hole size for installation of connector into alarm box. Re-position alarm box (1) onto wall mount studs (2), feed wires through hole, and install conduit connector (3). Install the four hex nuts and washers (4) that hold the alarm box (1) to the wall mounts (2). Tighten conduit connector (3). Re-connect the electrical supply wires onto the S1 terminal strip (Refer to panel layout illustration on page 0039 00-4 and the commercial literature furnished with pump control panel). Set control to **ON** and pump to **AUTO**. Close alarm box door. Set main breaker in power distribution panel #1 to **ON**. Push the ALARM TEST button to test the operation of the new wastewater alarm. Push PUMP RUN to place new wastewater alarm in operation.



Wastewater Alarm Box Three-Phase Layout





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CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

WASTEWATER PVC PIPES

THIS SECTION COVERS:

Repair

INITIAL SETUP

CSSL not in operation (WP 0005)

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Gen. Mech. (WP 0045, Table 2, Item 1) Hacksaw (WP 0045, Table 2, Item 7) Hacksaw Blade (WP 0045, Table 2, Item 8)

Materials/Parts

Cement, PVC Piping (WP 0072, Table 1, Item 8) Wiping Rags (WP 0072, Table 1, Item 1) Cleaner, PVC Piping (WP 0072, Table 1, Item 9)

REPAIR

Before repairing the wastewater PVC Pipes (1), ensure all washers have completed their wash cycle. If necessary, drain the wastewater tank (2) by removing the plug (3) and replacing it when the water level is below the wastewater pump support bracket (4).

If necessary, disconnect the float switch power cords **(5)** from the curbside raceway receptacles **(6)**. Before repairing any portion of the 1½", 2" or 3" wastewater PVC Pipes, open the clean out plug **(7)** at the end of the line and let the line drain. Repair any leaks or malfunctioning components in the line as described below.

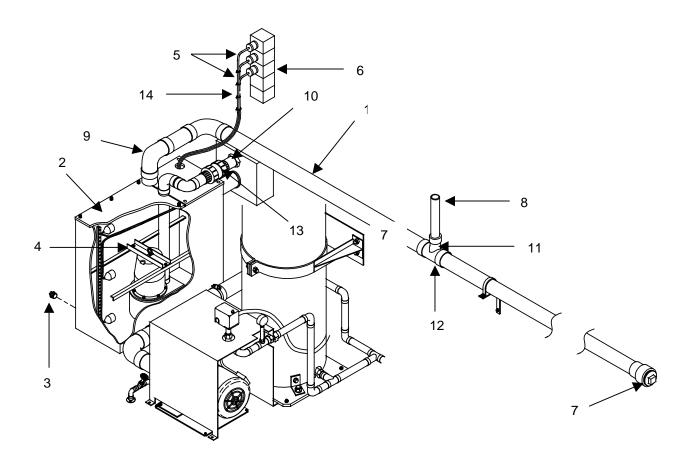


WARNING

Use caution when cutting PVC components. Sharp material edges and hack saw blades might cause injuries such as cuts and bruises.

Repair a leaking or damaged PVC Pipe (1) vent line (8) or component such as an elbow fitting (9), adapter fitting (10), bushing (11), Tee (12), union (13) by cutting out the leaky or damaged section and replacing with a similar, new section. Clean the ends of both connecting sections with all-purpose cleaner, and cement the sections together. Follow product instructions for the use of the all-purpose cement.

Replace clean out plug (7) and reconnect any float switch power cords (5) disconnected from the curbside raceway receptacles (6). Replace any cable ties (14) removed.



CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

WASHER/DRYER

THIS SECTION COVERS:

Repair, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Org. Maintenance Common No.1 (WP 0045, Table 2, Item 2)

Materials/Parts

Wiping Rags (WP 0072, Table 1, Item 1) Vbelt, Pump, (WP 0072, Table 1, Item 20) Vbelt, Drive, (WP 0072, Table 1, Item 21)



WARNING

This equipment operates at High Voltages. Use extreme caution. Observe all warnings, and follow all safety procedures. Touching a live wire can cause serious injury or death. The procedures in this work package can be performed only by qualified civilian or military personnel in MOS 51R, 52C, 52D, or 52G.

REPAIR

Before repairing a washer/dryer, set the main breakers in power distribution panel #1 and #2 (Refer to work package 0004) to **OFF**. Place shipping basket in washer prior to beginning procedure. Repair a washer/dryer by replacing the power cord as described in work package 0074, Figure 5, or the water pump and drive belt as described herein. The washer/dryer must be removed as described below, to make these repairs.

Water Pump Belt Replacement. To replace the washer water pump belt, proceed as follows:

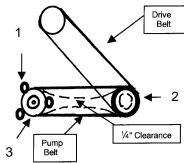
Remove the washer to be repaired as described under REMOVE and REPLACE below.

Lay the washer on its' front for access. Remove broken pump belt.

Loosen three screws (1) from the bottom of the base holding the pump in place. This will provide enough slack to install a new belt.

Place new belt over motor (2) and pump (3) pulleys. Place pump in original position and secure base screws.

Check for proper belt adjustment. When grasping . the installed belt in the middle, there should be $\frac{1}{4}$ " clearance between the inside surfaces of the belt. Adjust belt by repositioning the pump as necessary.



Install the repaired washer/dryer into the CSSL as described under INSTALL, below.

Washer Drive Belt Replacement. To replace the washer drive belt, proceed as follows:

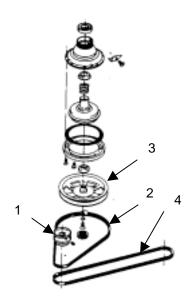
Remove the washer/dryer to be repaired from the CSSL as described under REPLACE and REMOVE, below.

Lay washer on front. Loosen the water pump as described above under Water Pump Belt Replacement, and remove the water pump belt from the drive pulley (1).

Remove the broken drive belt (2) from the drive (1) and drum pulley (3). Move motor on its track towards the drum pulley to obtain sufficient slack, and place a new belt onto the drive and drum pulley.

Reinstall pump belt. Tighten water pump and adjust pump belt (4) as described above under Water Pump Belt Replacement.

Install the repaired washer/dryer into the CSSL as described under REPLACE, below.



REPLACE

Prior to replacing a washer/dryer, open the curbside double service doors on the container to gain access to the rear of the washer/dryer. Disconnect the power cord (1) of the washer/dryer(s) to be replaced from the ceiling raceway (2). Separate the 15-pin electrical cord connector (3) on the rear of the washer. Close both ball valves (4) on freshwater line.



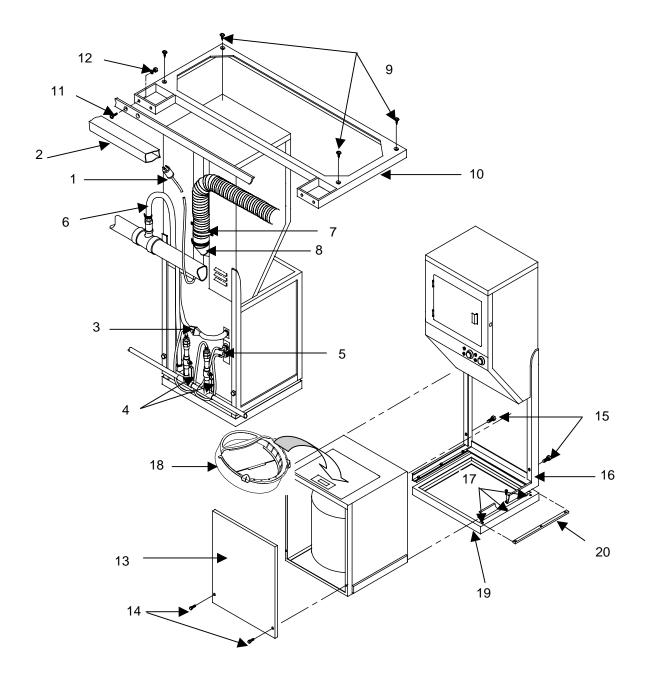
WARNING

The washer/dryer and stand are heavy. To avoid injuries, two persons are required to lift and handle the washer/dryer and stand.

Remove

Remove fresh water hoses (5), wastewater hose (6), and exhaust ducts (7) from washer/dryer(s) to be replaced. Retain hoses and ducts. Remove sheet metal elbow duct (8) from dryer(s) to be replaced and retain. Remove hex screws and flat washers (9) securing top of dryer units to support frame (10). Remove hex nuts (11) and flat washers (12) securing top frame (10) to container wall and lift frame off the washer/dryer units. Remove front (13) of washer by removing two retainer screws (14). Using a cross-tipped screwdriver, remove two bolts (15) from rear of the washer/dryer frame. Slide washer out of the stand (16).

Remove three bolts (17) from each side of the washer/dryer stand (16). Retrieve shipping bracket (18) from top of dryer and install in washer. Lift dryer and stand off the floor mount (19). Retrieve spacer (20) from floor mount and retain.



Install



WARNING

The washer/dryer and stand are heavy. To avoid injuries, two persons are required to lift and handle the washer/dryer and stand.

NOTE

Prior to installation of a new washer, or frame-mounted washer/dryer, modify the washer as described in work package 0074, Figure 5.

Disconnect the 15-pin plastic electrical cord plug (1) at the rear of the new washer/dryer unit. Remove the front (2) of the new washer (3) by removing two retainer screws (4). Using a cross-tipped screwdriver, remove two bolts (5) from the rear of the stand (6). Remove the new washer from the stand.

Place retained spacers (7) into position on floor mount and align holes. Place stand (6) and dryer onto floor mount (8) and spacer (7). Install three bolts (9) on each side of the stand (6) through the spacer into the floor mount.

Slide washer into position on stand (6) and, using a cross-tipped screwdriver install two bolts (5) through rear of frame. Reinstall washer front (2) using retained screws (4).

Install top frame (10) onto container wall using the retained hex nuts and flat washers (11). Install retained hex screws and flat washers (12) securing top of dryer units to top frame (10).



WARNING

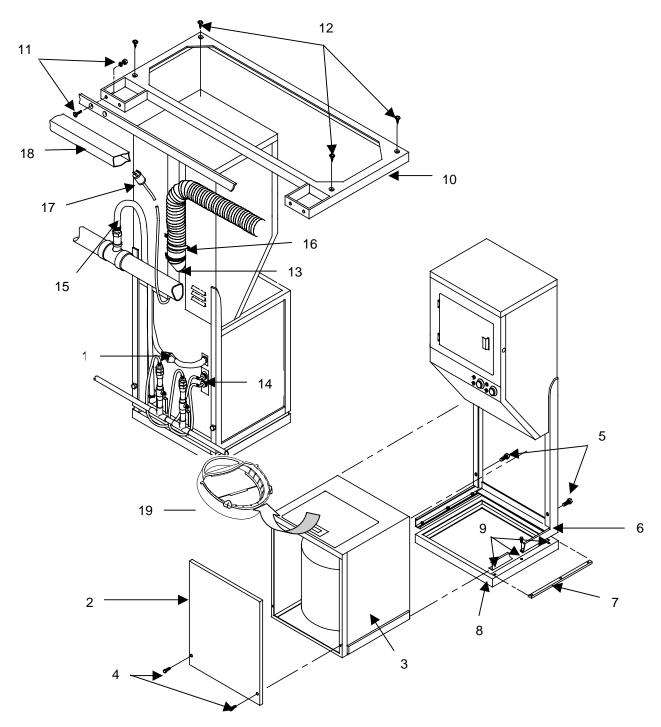
Use caution when installing sheet metal elbow duct. Sharp metal edges may cause injuries such as cuts and bruises.

Install retained sheet metal elbow duct (13) onto dryer duct outlet. Install fresh water hoses (14), wastewater hose (15), and exhaust ducts (16).

Connect 15-pin plastic electrical cord plug and socket connectors (1) on the back of the washer/dryer. Plug power cord (17) into the ceiling raceway (18).

Open washer and remove shipping bracket (19). Place the bracket on top of dryer. Open dryer and remove any items placed there for shipment.

Set main breakers in power distribution panel #1 and #2 to ON.



END OF WORK PACKAGE

0041 00-5/6 Blank

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

VENTILATION FAN

THIS SECTION COVERS:

Test, Repair, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Tool Kit, Org. Maintenance Common No.1 (WP 0045, Table 2, Item 2)

Materials/Parts

Wiping Rags (WP 0072, Table 1, Item 1)



WARNING

This equipment operates at High Voltages. Use extreme caution. Observe all warnings, and follow all safety procedures. Touching a live wire can cause serious injury or death.

TEST

Isolate electrical malfunction of the ventilation fan as described in Procedure 2 of the Direct Support Troubleshooting Procedures contained in work package 0029.

REPAIR

Before repairing the vent fan, set circuit breaker #22 on power distribution panel #1 to **OFF**, and disconnect the power cord from the receptacle. Repair the vent fan by replacing the power cord as described in work package 0074, Figure 3.

REPLACE

NOTE

Prior to installation, modify the ventilation fan as described in work package 0074, Figure 3.

Replace the ventilation fan by following the removal and installation procedures in work package 0005 00. Set circuit breaker #22 on power distribution panel #1 to **ON**.

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A DIRECT SUPPORT MAINTENANCE

SPACE HEATER

THIS SECTION COVERS:

Test, Repair, Replace

INITIAL SETUP

CSSL not in operation

Maintenance Level

Direct Support

Tools and Special Tools

Materials/Parts

Tool Kit, Electronic Equipment (WP 0045, Table 2, Item 3) Wiping Rags (WP 0072, Table 1, Item 1)



WARNING

This equipment operates at High Voltages. Use extreme caution. Observe all warnings, and follow all safety procedures. Touching a live wire can cause serious injury or death.

TEST

Isolate electrical malfunction of the space heater as described in Procedure 2 of the Direct Support Troubleshooting Procedures contained in work package 0029.

REPAIR

Before repairing the space heater (1), set circuit breaker #9 on power distribution panel #1(2) to OFF, and disconnect the power cord (3) from the receptacle on the ceiling raceway (4). Repair the space heater by removing it as described in the following procedures and replacing the power cord as described in work package 0074, Figure 7.

REPLACE

Prior to replacing the space heater (1), open the rear doors (5) on the container to gain access.

Remove

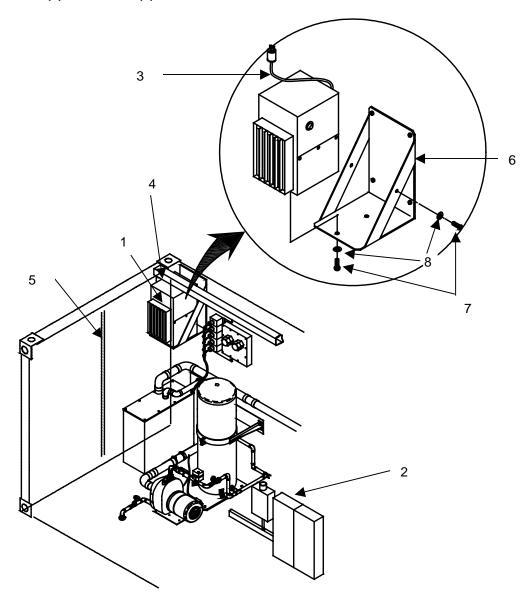
To remove the space heater (1) from the mount (6), remove four screws (7) and washers (8) securing space heater to the mount (6). Retain screws and washers.



WARNING

The space heater is heavy. To avoid injuries, two persons are required to lift the heater.

Lift space heater (1) from mount (6).

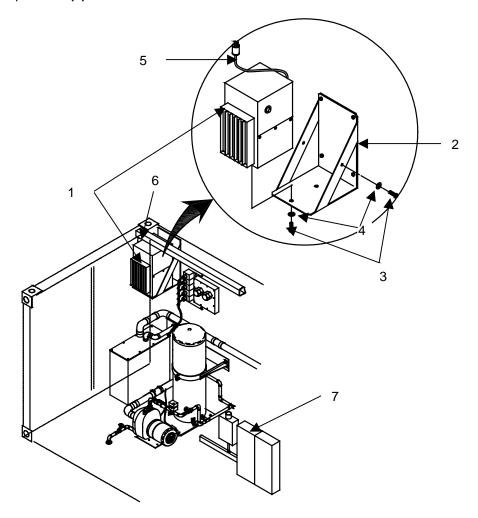


Install

NOTE

Prior to installation, modify the space heater as described in work package 0074, Figure 7 and 8.

Lift new space heater (1) onto mount (2). Align heater so that installation hardware mounting holes are aligned. Install four pan head screws (3) and washers (4) securing space heater (1) to the mount (2). Plug power cord (5) plug into twist-lock receptacle on the ceiling raceway (6). Set circuit breaker #9 on power distribution panel #1 (7) to ON.



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CHAPTER 7
SUPPORTING INFORMATION
FOR
CONTAINERIZED SELF SERVICE LAUNDRY
(CSSL)
MODEL A

TM 10-3510-223-13&P

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A REFERENCES

SCOPE

This work package lists field manuals, forms, technical manuals and miscellaneous publications referenced in this manual or otherwise relevant to the employment of the CSSL.

PAMPHLETS

Functional User's Manual for the

| Army Maintenance Management System (TAMMS) |
|---|
| FIELD MANUALS |
| Basic Cold Weather Manual FM 31-70 First Aid for Soldiers FM 21-11 Decontamination Procedures FM 3-5 Mountain Operations FM 90-6 Northern Operations FM 31-71 |
| FORMS |
| Discrepancy in Shipment Report |
| TECHNICAL MANUALS |
| Destruction of Army Material to Prevent Enemy Use |
| Commercial, Off-the-Shelf Manual |
| Operator, Unit, and Direct Support Maintenance Manual for Distribution Illumination Systems, Electrical (DISE), and Power Distribution Illumination Systems, Electrical (PDISE) consisting of Electrical Feeder System M200, M200 A/P, M100, M100 A/P, M40, M40 A/P, M60, M60 A/P |
| and Electrical Utility Assembly M46 |
| and Special Tools List), General Cargo Container |

MISCELLANEOUS PUBLICATIONS

| Army Medical Department Expendable/Durable Items | CTA 8- | 100 |
|--|---------|-----|
| Expendable/Durable Items | CTA 50- | 970 |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A MAINTENANCE ALLOCATION CHART (MAC)

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

This MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component levels, which are shown on the MAC in column (4) as:

Field - includes two columns, Unit Maintenance and Direct Support maintenance. The Unit maintenance column is divided again into two more subcolumns, C for Operator or Crew and O for Unit Maintenance.

Sustainment – includes two subcolumns, general support (H) and depot (D)

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

Maintenance Functions

Maintenance functions will be limited to and are defined as follows:

- 1. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel.) This includes scheduled inspection and gagings and evaluation of cannon tubes.
- 2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.
- 3. Service. Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:
 - Unpack. To remove from packing box for service or when required for the performance of maintenance operations.
 - b. Repack. To return item to packing box after service and other maintenance operations.
 - c. Clean. To rid the item of contamination.

- d. Touch up. To spot paint scratched or blistered surfaces.
- e. Mark. To restore obliterated identification.
- 4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
- Align. To adjust specified variable elements of an item to bring about optimum or desired performance
- 6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
- 7. Remove/install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
- 8. Paint. To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.
- 9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.
- 10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

NOTE

The following definitions are applicable to the "repair" maintenance function:

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

Disassembly/assembly. The step- by -step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e. identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

- 11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
- 12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles.) considered in classifying Army equipment/components.

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists FGC numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2), Component/Assembly. Column (2) contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to "Maintenance Functions" outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The system designations for the various maintenance levels are as follows:

Field:

- C Operator or Crew maintenance
- O Unit maintenance
- F Direct Support maintenance

Sustainment:

- L Specialized Repair Activity
- H General Support maintenance
- D Depot maintenance

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NOTE

The "L" maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the "H" column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetic order, which is keyed to the remarks table entries.

Explanation of Columns in the Tools and Test Equipment Requirements

Column (1) - Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) - Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) - Nomenclature. Name or identification of tool or test equipment.

Column (4) - National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) - Tool Number. The manufacturer's part number, model number, or type number.

Explanation of Columns in Remarks

Column (1) - Remarks Code. The code recorded in Column (6) of the MAC.

Column (2) - Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

Table 1. MAINTENANCE ALLOCATION CHART FOR CONTAINERIZED SELF SERVICE LAUNDRY

| (1) | (2) | (3) | | | (4 |) | | (5) | (6) |
|-----------------|--|--------------------------------------|-------------------|--------------|-------------------|--------------------|---------------------|-----------------|--------|
| GROUP NUMBER | COMPONENT/ ASSEMBLY | MAINTENANCE FUNCTION | MAINTENANCE LEVEL | | | | TOOLS AND EQUIPMENT | REMARKS CODE | |
| | | | FIELD SUSTAINMENT | | | REFERENCE CODE | | | |
| | | | | JNIT | DIRECT SUPPORT | GENERAL SUPPORT | DEPOT | CODE | |
| 00 | CONTAINERIZED SELF SERVICE LAUNDRY | | С | 0 | F | Н | D | | |
| 01 | CARGO CONTAINER | Inspect Repair | | | 0.10 0.25 | | | | А |
| 0101 | FOLDING STEPS | Inspect Replace | | | 0.10 0.10 | | | 1 | |
| 02 0201 | ELECTRICAL SYSTEM POWER ENTRY CONNNECTORS | Inspect Test Replace | | 0.10 | 0.25 0.50 | | | 1 3 | |
| 0202 | POWER DISTRIBUTION PANEL | Inspect Test Replace | | 0.10 | 0.10 1.50 | | | 3 | |
| 0203 | FLUORESCENT LIGHTS | Inspect Repair Test Replace | | 0.10 0.10 | 0.10 | | | 3 | |
| 0204 | INTERIOR SWITCHES AND RECEPTACLES | Inspect Replace | | 0.10 0.30 | 1.00 | | | 1 | |
| 0205 | EXTERIOR POWER CABLES | Inspect | | | | | | | В |
| 03 0301 | FRESHWATER SYSTEM FRESHWATER PUMP | Inspect Repair Replace | | 0.20 | 0.50 0.50 | | | 1,4,5 | C D |
| 0302 | PRESSURE TANK | Inspect Replace | | 0.10 | 2.00 | | | 2 | |
| 0303 | PRESSSURE SWITCH/GAUGE | Inspect Repair Replace | | 0.10 | 0.20 0.20 | | | 1,4,5 | E |
| 0304 | INTERNAL FRESHWATER LINE WASTEWATER SYSTEM | Inspect Repair | | 0.10 | 0.20 | | | 2,4,5,6 | |

MAINTENANCE ALLOCATION CHART - continued

| (1) | (2) | (3) | | | (4) | | | (5) | (6) |
|-----------------|-------------------------|--------------------------------------|---|--------------|----------------------|--------------------|-------|---|-----------------|
| GROUP NUMBER | COMPONENT/ ASSEMBLY | MAINTENANCE FUNCTION | | M | AINTENANC | CE LEVEL | | TOOLS AND EQUIPMENT REFERENCE CODE | REMARKS CODE |
| | | | | FIEL | D | SUSTAIN | IMENT | | |
| | | | | UNIT | DIRECT SUPPORT | GENERAL SUPPORT | DEPOT | | |
| | | | С | 0 | F | Н | D | | |
| 0401 | WASTEWATER PUMP | Inspect Repair Replace | | 0.20 | 0.50 0.50 | | | 1 | F |
| 0402 | FLOAT SWITCHES | Inspect Repair Replace | | 0.20 | 0.50 0.50 | | | 2 2 | G |
| 0403 | WASTEWATER ALARM | Inspect Test Replace | | 0.10 | 0.10 0.75 | | | 3 | |
| 0404 | WASTEWATER PVC PIPES | Inspect Repair | | 0.20 | 0.50 | | | 1,7,8 | |
| 05 | WASHER/DRYER | Inspect Repair Replace | | 0.20 | 1.5 1.0 | | | 1 1 | H I |
| 06 | VENT FAN | Inspect Test Repair Replace | | 0.20 | 0.10 0.75 0.50 | | | 2 1 1 | J |
| 07 | TEMPER SECTION | Inspect | | | | | | | К |
| 08 | SPACE HEATER | Inspect Test Repair Replace | | 0.10 | 0.20 1.00 0.25 | | | 2 1 1 | L M |
| 09 | 3000 GALLON TANK | Inspect | | 0.20 | | | | | |
| 10 | WATER HOSES | Repair Replace | | 0.30 0.50 | | | | 1 | N |
| | | | | | | | | | |

Change 1 0045 00-6

Table 2. TOOLS AND TEST EQUIPMENT.

| (1) | (2) | (3) | (4) | (5) |
|-------------------------------|----------------------|--|--------------------------|-------------------|
| TOOLS OR TEST EQUIPMENT | MAINTENANCE LEVEL | NOMENCLATURE | NATIONAL STOCK NUMBER | TOOL NUMBER |
| 1 | 0 | Tool Kit, General Mech. Automotive | 5180-00-177-7033 | SC 5180-90-CL-N26 |
| 2 | F | Tool Kit Org. Maintenance Common No. 1 | 4910-00-754-0654 | SC 4910-95-A74 |
| 3 | F | Tool Kit Electronic Equipment | 5180-01-460-9328 | SC 5180-91-R64 |
| 4 | F | Pipe Wrench 14" | 5120-00-277-1478 | |
| 5 | F | Pipe Wrench 10" | 5120-00-277-1477 | |
| 6 | F | Tube Cutter | 5110-00-288-6520 | |
| 7 | F | Hacksaw | 5110-00-289-9657 | |
| 8 | F | Hacksaw Blade | 5110-00-277-4588 | |

Table 3. REMARKS.

| (1) | (2) |
|-----------------|---|
| REMARKS CODE | REMARKS |
| А | For General Cargo Container Repair Procedures Refer to TM 55-8115-204-23&P. Repair of modified folding steps are covered in work package 0030 00 of this TM (10-3510-223-13&P). |
| В | See DISE Technical Manual, TM 9-6150-226-13 |
| С | Freshwater pump commercial manual |
| D | Prepare new freshwater pump power cord as described in Figure 1 of Work Package 0073 00 |
| E | Prepare new pressure switch power cord as described in Figure 6 of Work Package 0073 00 |
| F | Prepare new wastewater pump power cord as described in Figure 2 of Work Package 0073 00 |
| G | Prepare new float power cord as described in Figure 4 of Work Package 0073 00 |
| Н | See washer/dryer commercial manual |
| 1 | Prepare new washer/dryer power cord as described in Figure 5 of Work Package 0073 00 |
| J | Prepare new ventilation fan power cord as described in Figure 3 of Work Package 0073 00 |
| K | See TEMPER technical manual, TM 10-8340-224-13 |
| L | See Space Heater Commercial Manual |
| М | Prepare new heater power cord as described in Figure 7 of Work Package 0073 00 |
| N | Refer to Tank, Fabric, Self-Supporting, 3000 Gallon Water, TM 5-5430-227-12&P |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

SCOPE

This RPSTL lists and authorizes spare and repair parts; special tools; special tests, measurement and diagnostic equipment (TMDE); and other special support equipment required for performance of unit and direct support maintenance of the CSSL. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

GENERAL

In addition to this section, this RPSTL is divided into the following additional sections:

Repair Parts Sections. These sections contain lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These sections also include parts that must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Hardware is listed with the components used. Bulk materials are listed by item name in FIG. BULK at the end of the sections. Repair parts kits are listed separately in their own functional group and section. Repair parts for reparable special tools are also listed in a separate section. Items listed are shown on the associated illustrations.

Special Tools List Sections. Sections containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.

Cross-Reference Index Sections. There are two cross-reference indexes in this RPSTL; the National Stock Number (NSN) Index, and the Part Number Index. The NSN index refers you to the figure and the item number. The part number index also refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE RPSTL

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR Code (Column (2)). The Source, maintenance, and recoverability (SMR) code is a 5-position code containing supply / requisitioning information, maintenance category authorization criteria and disposition instruction, as shown in the following breakout.

| Source Code Maintenand | | ance Code | Recoverability Code | |
|------------------------|---|---|--|--|
| ХХ | X | X | X | |
| 1st two positions: | 3rd Position: | 4th Position: | 5th Position: | |
| How you get an item | Who can install replace or use the item | Who can do complete repair* on the item | Who determines disposition action on an item | |

*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

Source Code. The source code, tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanation of source codes follows.

| Source Code PA PB PC** PD | Explanation Stock items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the third position of the SMR code. | | |
|---|--|--|--|
| PE PF** PG | NOTE: Items coded PC are subject to deterioration. | | |
| KB KD KF | Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied. | | |
| MO - Made at unit/AVUM Level MF- Made at DS/AVIM Level MH - Made at GS Level) ML - Made at Specialized Repair Act. (SRA) MD - Made at Depot | Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material that is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance. | | |
| AO - Assembled by Unit/AVUM Level AF - Assembled by DS/AVIM Level AH - Assembled by GS level AL - Assembled by SRA order the item from the higher level of maintenance. AD - Assembled by Depot | Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the third position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance. | | |
| XA | Do not requisition an "XA" coded item. Order its next higher assembly. (Also, refer to the NOTE below.) | | |
| XB | If an "XB" item is not available from salvage, order it using the CAGEC and part number given. | | |
| XC XD | Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number. Item is not stocked. Order an "XD" coded item through normal supply channels using the Commercial and Government Entity Code (CAGEC) and part number given, if no NSN is available. | | |

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance.

| Maintenance Code | Application/Explanation |
|------------------|--|
| С | Crew or operator maintenance done within unit/AVUM maintenance. |
| 0 | Unit level/AVUM maintenance can remove, replace, and use the item. |
| F | Direct support/AVIM maintenance can remove, replace, and use the item. |
| Н | General support maintenance can remove, replace, and use the item. |
| L | Specialized repair activity can remove, replace, and use the item. |
| D | Depot level can remove, replace, and use the item. |

Fourth Position. The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions).

NOTE

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

| Maintenance Code | Application/Explanation |
|---------------------|---|
| 0 | Unit/AVUM is the lowest level that can do complete repair of the item. |
| F | Direct support/AVIM is the lowest level that can do complete repair of the item. |
| Н | General support is the lowest level that can do complete repair of the item. |
| L | Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item. |
| D | Depot is the lowest level that can do complete repair of the item. |
| Z | Nonrepairable. No repair is authorized. |
| В | No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level. |

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

| Code | Application/Explanation |
|------|--|
| Z | Nonrepairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3rd position of SMR Code. |
| 0 | Repairable item. When uneconomically repairable, condemn and dispose of the item at organizational or aviation unit level. |
| F | Repairable item. When uneconomically repairable, condemn and dispose of the item at the direct support or aviation intermediate level. |
| Н | Repairable item. When uneconomically repairable, condemn and dispose of the item at the general support level. |
| D | Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level. |
| L | Repairable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA). |
| Α | Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/ directives for specific instructions. |

NATIONAL STOCK NUMBER (NSN) (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code that is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacture, (individual company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When an item with an assigned NSN is requisitioned, the part number for the item received may be different than the part number of the item being replaced.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

The federal item name and, when required, a minimum description to identify the item.

Part numbers of bulk materials are referenced in this column in the line entry to be manufactured/fabricated.

Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nucear attack.

The statement "END of FIGURE≅ appears just below the last item description in Column (5) for a given figure in both the repair parts list and special tools list.

QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of quantity indicates that the quantity is a variable with each application.

EXPLANATION OF CROSS REFERENCE INDEX FORMAT AND COLUMNS

National Stock Number (NSN) Index

STOCK NUMBER Column. This column lists the NSN in national item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN, i.e.



When using this column to locate an item, ignore the first four digits of the NSN. Use the complete NSN (13 digits) when requisitioning by stock number.

FIG. COLUMN. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

ITEM COLUMN. The Item number identifies the item associated with the figure listed in the adjacent FIG. Column. This item is also identified by the NSN listed on the same line.

PART NUMBER INDEX. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e. vertical arrangement of letter and number combination which place the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9, and each following letter or digit in like order).

CAGEC COLUMN. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER COLUMN. Indicates the primary number used by the manufacturer (individual, firm, corporation, or government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards and inspection requirements to identify an item or range of items.

STOCK NUMBER COLUMN. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

FIG. COLUMN. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list.

ITEM COLUMN. The item number is that number assigned to the item as it appears in the figure referenced in adjacent figure number column.

REFERENCE DESIGNATOR Column. Indicates the reference designator assigned to the item.

FIG. COLUMN. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list.

ITEM COLUMN. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

STOCK NUMBER COLUMN. This column lists the NSN for the item.

CAGEC COLUMN. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER COLUMN. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

SPECIAL INFORMATION.

USABLE ON CODE (UOC). The useable on code appears in the lower left corner of the Description Column heading. Useable on codes are shown as "UOC" in the Description Column (justified left) on the first line under the applicable item description/nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes used in this RPSTL are:

There are no Usable On Codes applicable to the Containerized Self Service Laundry

FABRICATION INSTRUCTIONS. Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description column of the line entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in TB 10-4500-200-13.

INDEX NUMBER. Items that have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

ASSOCIATED PUBLICATIONS. The publications listed in work package 0002 00 under REFERENCES pertain to components and associated equipment of the Containerized Self Service Laundry.

HOW TO LOCATE REPAIR PARTS.

When National Stock Numbers or Part Numbers are NOT known. First, using the table of contents, determine the assembly or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

Second, find the figure covering the assembly group or subassembly group to which the item belongs.

Third, identify the item on the figure and note the number(s).

Fourth, look in the repair parts list for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

When National Stock Number or Part Number IS known. First, if you have the NSN, look in the STOCK NUMBER column of the NSN index. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second, turn to the figure and locate the item number. Verify that the item is the one you are looking for.

When Part Number is known. First, if you have the P/N and not the NSN, look in the PART NUMBER column of the P/N index. Identify the figure and item number.

Second, look up the item on the figure in the applicable repair parts list.

TM 10-3510-223-13&P GROUP 01 CARGO CONTAINER

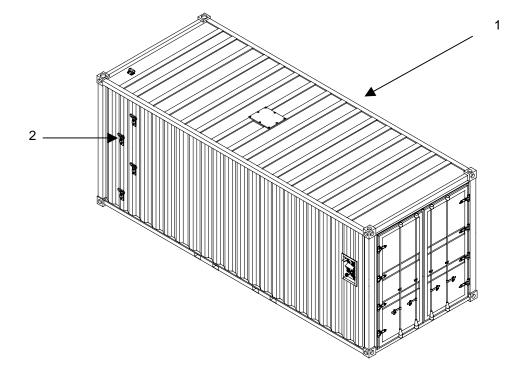


Figure 1. Group 01 Cargo Container 0047 00-(1 Blank)/2

GROUP 01 CARGO CONTAINER REPAIR PARTS LIST

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|-------------|-------------|-----|-------|-----------------|--------------------------------------|-----|
| ITÉM NO. | SMR CODE | NSN | CAGEC | PART NUMBER | DÉSCRIPTION AND USABLE ON CODE (UOC) | QTY |
| | | | | | GROUP 01 CARGO CONTAINER | |
| | | | | | FIG. 1 CARGO CONTAINER | |
| 1 | PAFZZ | | 0VMH6 | 8115MU290020202 | SHELTER, ISO 20FT | 1 |
| 2 | PAFZZ | | 81337 | 5-13-6630 | STEP, FOLDING MODIFIED | 3 |
| | | | | END OF FIGURE | | |

GROUP 0201 POWER ENTRY CONNECTORS

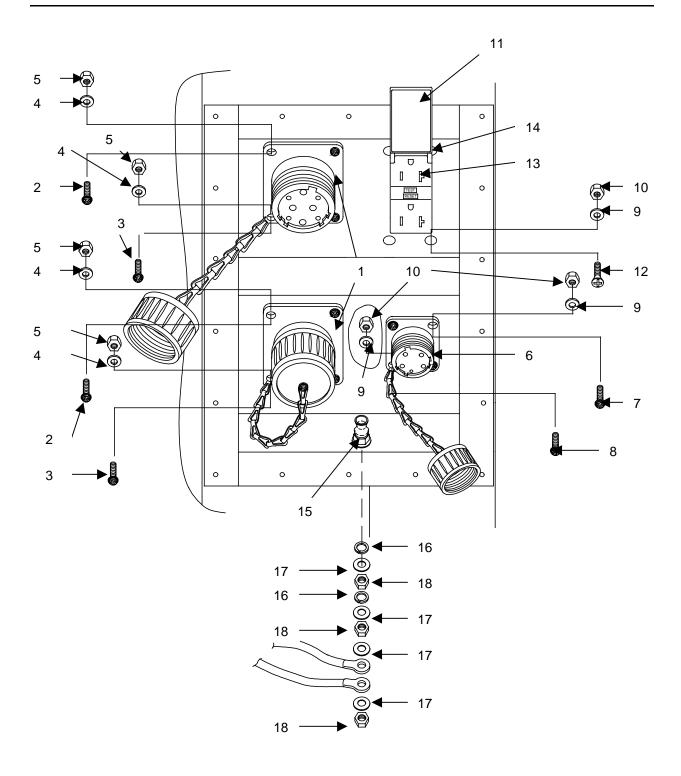


Figure 2. Group 0201 Power Entry Connectors 0048 00-(1 Blank)/2

GROUP 0201 POWER ENTRY CONNECTORS REPAIR PARTS LIST

| (4) | (2) | (2) | /4\ | (E) | (6) | (7) |
|-------------|------------|-----|-------|----------------|---|--------------|
| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON | (7) |
| NO. | CODE | NSN | CAGEC | PART NUMBER | CODE (UOC) GROUP 02 ELECTRICAL SYSTEM | QTY |
| | | | | | | |
| | | | | | GROUP 0201 POWER ENTRY CONNECTORS | |
| | | | | | FIG. 2 POWER ENTRY CONNECTORS | |
| 1 | | | 96906 | MS90558C44412P | PLUG, WALL MOUNT W/ PROTECTIVE COVER | 2 |
| 2 | | | 96906 | MS51958-81 | SCREW, PAN HEAD, .250-28UNF X .75 LG | 6 |
| 3 | | | 96906 | MS51958-82 | SCREW, PAN HEAD, .250-28UNF X .87 LG | 2 |
| 4 | | | 96906 | MS15795-858 | WASHER, FLAT-METAL, ROUND .266 ID X .458 OD. X .036 THK | 8 |
| 5 | | | 96906 | MS21044C4 | NUT, SELF-LOCKING, HEX .2500- 28UNF | 8 |
| 6 | | | 96906 | MS90555C324135 | RECEPTACLE, WALL MOUNT W/ PROT. COVER | 1 |
| 7 | | | 96906 | MS51958-81 | SCREW, PAN HEAD, 10-32UNF X .75 LG | 3 |
| 8 | | | 96906 | MS51958-82 | SCREW, PAN HEAD, 10-32UNF X .87 LG | 1 |
| 9 | | | 96906 | MS15795-846 | WASHER, FLAT-METAL, ROUND .203 ID X .375 OD. X .020 THK | 8 |
| 10 | | | 96906 | MS21044C3 | NUT, SELF-LOCKING, HEX #10- 32UNF | 8 |
| 11 | | | 2F367 | WPFS26 | PLATE, WALL, ELECTRICAL, SINGLE GANG | 1 |
| 12 | | | 96906 | MS51960-67 | SCREW, MACH-FLAT, CSK HEAD 10- 32UNF | 4 |
| 13 | | | 75582 | 6899 | INTERRUPTER, GROUND FAULT | 1 |
| 14 | | | 96906 | MS21043-06 | (GFCI) NUT, SELF-LOCKING, HEX #6-32UNC | 2 |
| 15 | | | 96906 | MS39347-4 | TERMINAL, POST, SERVICE AND GROUNDING | 1 |
| 16 | | | 96906 | MS 35338-143 | WASHER, LOCK 1/2 | 2 |
| 17 | | | 96906 | MS51969-5 | WASHER, FLAT .531 ID X1.062 OD X.095 | 4 |
| 18 | | | 96906 | MS 51969-5 | NUT, PLAIN, HEX 1/2-32UNC | 3 |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P GROUP 0202 POWER DISTRIBUTION PANEL

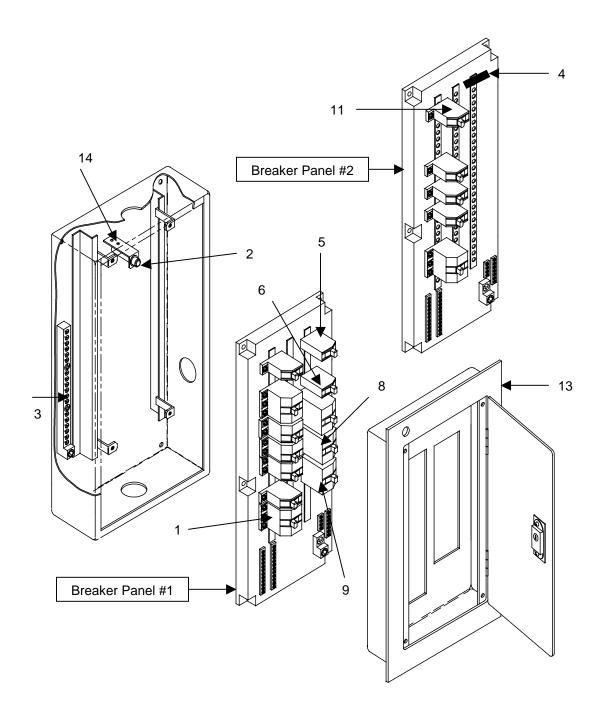


Figure 3. Group 0202 Power Distribution Panel 0049 00-(1 Blank)/2

GROUP 0202 POWER DISTRIBUTION PANEL REPAIR PARTS LIST

| (4) | (0) | (0) | (4) | (5) | (0) | (7) |
|-------------|------------|-----|-------|---------------|--|-----|
| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON | (7) |
| NO. | CODE | NSN | CAGEC | PART NUMBER | CODE (UOC) | QTY |
| | | | | | GROUP 02 ELECTRICAL SYSTEM | |
| | | | | | GROUP 0202 POWER DISTRIBUTION PANEL | |
| | | | | | FIG. 3 POWER DISTRIBUTION PANEL | |
| 1 | | | 88753 | NQOD430M100CU | PANELBOARD-100AMP MAIN BREAKER | 2 |
| 2 | | | 52797 | 2A-5D4 | PHASE INDICATOR CIRCUIT BREAKER PANEL | 1 |
| 3 | | | 88753 | PK18GTA-L | KIT, GROUND BAR | 2 |
| 4 | | | 88753 | QOFP | FILLER PLATE | 1 |
| 5 | | | 56303 | QOB115 | CIRCUIT BREAKER 15AMP, 1 POLE | 2 |
| 6 | | | 56303 | QOB120 | CIRCUIT BREAKER 20AMP, 1 POLE | 2 |
| 7 | | | 56303 | QOB230 | CIRCUIT BREAKER 30AMP, 2 POLE | 6 |
| 8 | | | 56303 | QOB310 | CIRCUIT BREAKER 10AMP, 3 POLE | 1 |
| 9 | | | 56303 | QOB315 | CIRCUIT BREAKER 15AMP, 3 POLE | 2 |
| 10 | | | 56303 | QOB330 | CIRCUIT BREAKER 30AMP, 3 POLE | 2 |
| 11 | | | 56303 | QOB360 | CIRCUIT BREAKER 60AMP, 3 POLE | 1 |
| 12 | MFFFF | | 81337 | 5-13-6624-2 | ELECTRICAL BOX, MODIFIED ASSY | 2 |
| 13 | MFFFF | | 81337 | 5-13-6627-2 | ELECTRICAL BOX COVER MODIFIED | 2 |
| 14 | MFFF | | 81337 | 5-13-6625 | PHASE INDICATOR BRACKET | 1 |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P GROUP 0203 FLUORESCENT LIGHTS

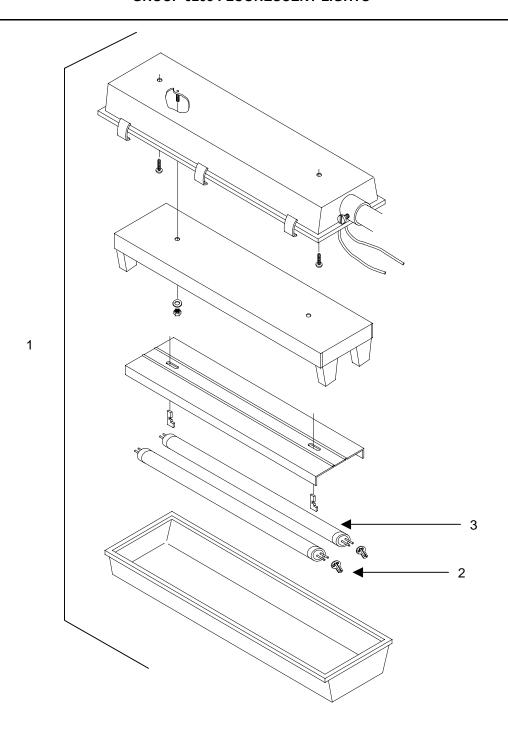


Figure 4. Group 0203 Fluorescent Lights 0050 00-(1 Blank)/2

GROUP 0203 FLUORESCENT LIGHTS REPAIR PARTS LIST

| (1) | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON | (7) |
|-----|------------|-----|-------|---------------|---|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | CODE (UOC) | QTY |
| | | | | | GROUP 02 ELECTRICAL SYSTEM | |
| | | | | | GROUP 0203 FLUORESCENT LIGHTS | |
| | | | | | FIG. 3 FLUORESCENT LIGHTS | |
| 1 | | | 2F367 | 6F555 | FIXTURE, FLUORESCENT, MOISTURE /DUST RESISTANT | 2 |
| 2 | | | 57094 | MT91505 | RETAINER, ELECTRICAL | 4 |
| 3 | | | 2F367 | 3V477 | LIGHT, FLUORESCENT, GENERAL PURPOSE, 48" | 4 |
| | | | | END OF FIGURE | | |

GROUP 0204 INTERIOR SWITCHES AND RECEPTACLES

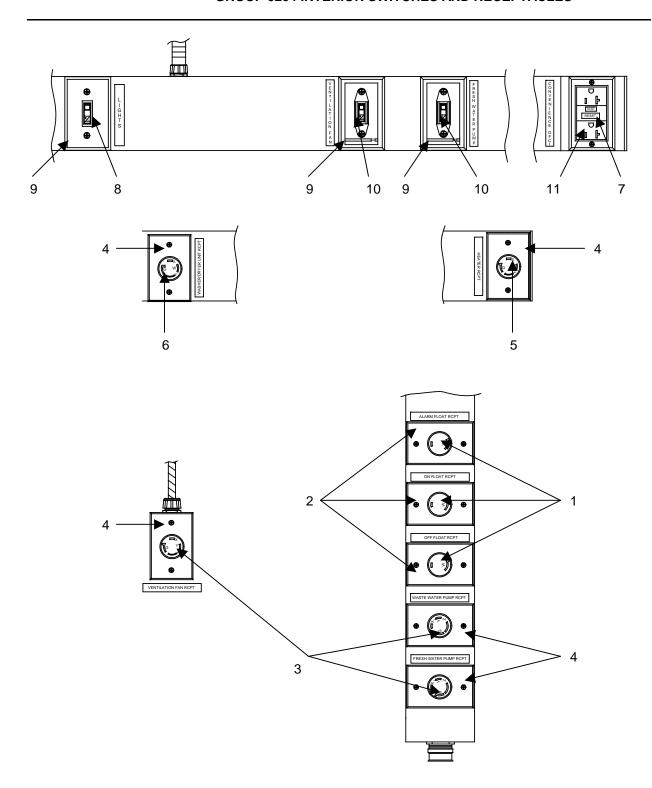


Figure 5. Group 0204 Interior Switches and Receptacles 0051 00-(1 Blank)/2

GROUP 0204 INTERIOR SWITCHES AND RECEPTACLES REPAIR PARTS LIST

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|------|------|-----|-------|---------------|---|-----|
| ITEM | SMR | | | | DESCRIPTION AND USABLE ON | |
| NO. | CODE | NSN | CAGEC | PART NUMBER | CODE (UOC) | QTY |
| | | | | | GROUP 02 ELECTRICAL SYSTEM | |
| | | | | | GROUP 0204 INTERIOR SWITCHES AND RECEPTACLES | |
| | | | | | FIG. 5 INTERIOR SWITCHES AND RECEPTACLES | |
| 1 | | | 9C624 | 7535 | CONNECTOR, RECEPTACLE TWIST- LOCK 15 AMP | 3 |
| 2 | | | 9C624 | A7 | WALL PLATE RECEPTACLE ALLUMINUM ANODIZED | 3 |
| 3 | | | 9C624 | 2420A | CONNECTOR, RECEPTACLE TWIST-LOCK 20 AMP | 3 |
| 4 | | | 9C624 | A720 | WALL PLATE RECEPTACLE ALLUMINUM ANODIZED | 10 |
| 5 | | | 9C624 | 2720A | CONNECTOR, RECEPTACLE TWIST-LOCK 30 AMP | 1 |
| 6 | | | 9C624 | 2710A | CONNECTOR, RECEPTACLE TWIST-LOCK 30 AMP | 6 |
| 7 | | | 9C624 | 6899-W | INTERRUPTER RECEPTACLE, GROUND FAULT, 20 AMP | 1 |
| 8 | | | 9C624 | CS1 15W | AC SWITCH, 15 AMP, SINGLE POLE | 1 |
| 9 | | | 9C624 | A1 | SWITCH PLATE, 1 GANG, METAL, ALUMINUM | 3 |
| 10 | | | 88753 | KF2 | MOTOR STARTER, MANUAL, 3 POLE SWITCH | 2 |
| 11 | | | 9C624 | S26 | WALL PLATE, GFCI | 3 |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P GROUP 0205 EXTERIOR POWER CABLES

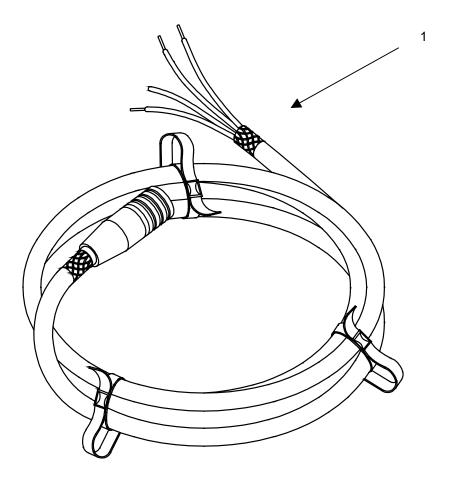


Figure 6. Group 0205 Exterior Power Cables 0052 00-(1 Blank)/2

GROUP 0205 EXTERIOR POWER CABLES REPAIR PARTS LIST

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) GROUP 0205 EXTERIOR POWER CABLES | (7) QTY |
|--------------------|--------------------|------------|--------------|------------------------------------|---|------------|
| | | | | | FIG. 6 EXTERIOR POWER CABLES | |
| 1 | PAFZZ | | 80063 | SC-D-883964 GP9-3 END OF FIGURE | CABLE ASSEMBLY, ELECTRICAL, 100AMP | 2 |

TM 10-3510-223-13&P GROUP 0301 FRESHWATER PUMP

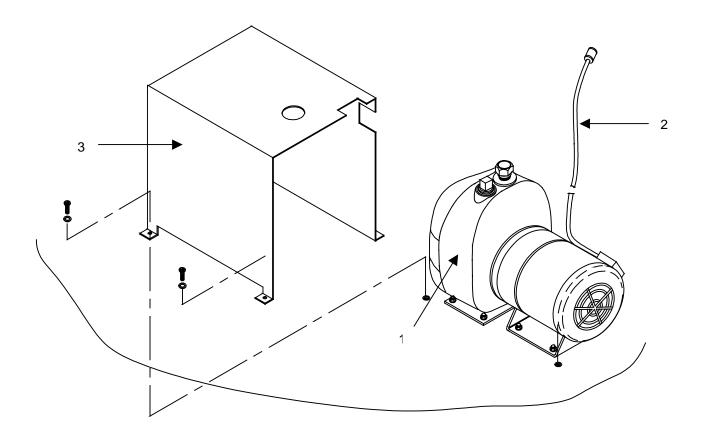


Figure 7. Group 0301 Freshwater Pump 0053 00-(1 Blank)/2

GROUP 0301 FRESHWATER PUMP REPAIR PARTS LIST

| (1) | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) | | |
|---------------|------------|-----|-------|-------------|---|-----|--|--|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY | | |
| | | | | | GROUP 0301 FRESHWATER PUMP | | | |
| | | | | | FIG. 7 FRESHWATER PUMP | | | |
| 1 | PAFZZ | | 96046 | 027458t | PUMP UNIT, CENTRIFUGAL (FRESH WATER) | 1 | | |
| 2 | MFFZZ | | 81337 | 5-13-6557 | POWER CORD ASSEMBLY/ ATTACHMENT, FRESHWATER PUMP | 1 | | |
| 3 | PAFZZ | | 81337 | 6-1-6688 | PUMP COVER, CSSL | 1 | | |
| END OF FIGURE | | | | | | | | |

GROUP 0302 PRESSURE TANK

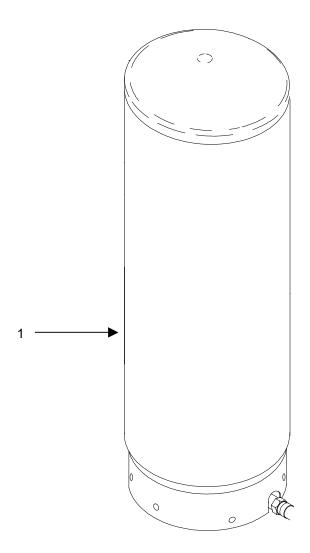


Figure 8. Group 0302 Pressure Tank
0054 00-(1 Blank)/2

GROUP 0302 PRESSURE TANK REPAIR PARTS LIST

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|-------|---------------|---------------------------------------|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 0302 PRESSURE TANK | |
| | | | | | FIG. 8 PRESSURE TANK | |
| 1 | PAFZZ | | 81337 | 5-13-6536 | TANK PREPRESSURIZED DIAPHRAGM TYPE | 1 |
| | | | | END OF FIGURE | | |

GROUP 0304 INTERNAL FRESHWATER LINE

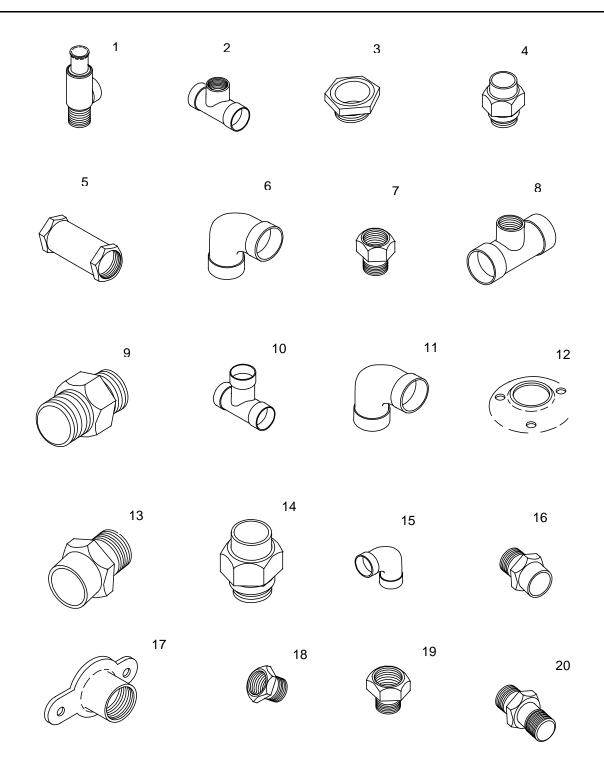


Figure 9. Group 0304 Internal Freshwater Line (Sheet 1)
0055 00-(1 Blank)/2

GROUP 0304 INTERNAL FRESHWATER LINE REPAIR PARTS LIST

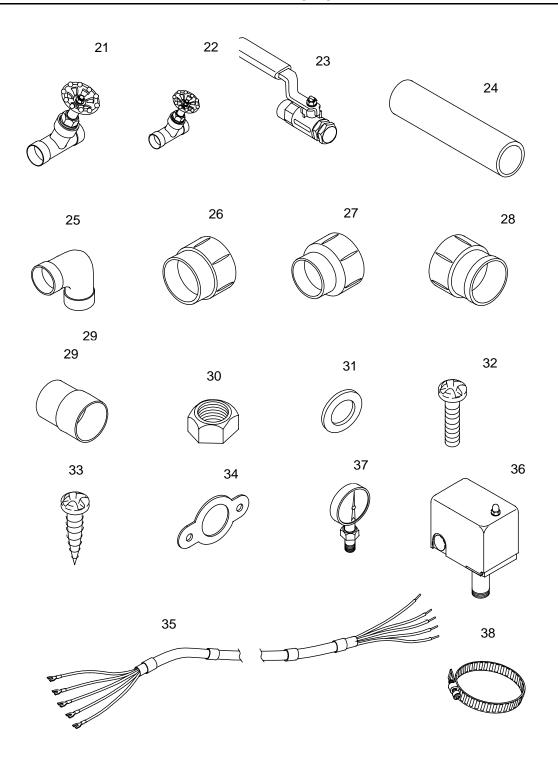


Figure 9. Group 0304 Internal Freshwater Line (Sheet 2)

0055 00-3

GROUP 0304 INTERNAL FRESHWATER LINE REPAIR PARTS LIST

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|--------|------------------------------|--|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 0304 INTERNAL FRESHWATER LINE | |
| | | | | | FIG. 10 INTERNAL FRESHWATER LINE SYSTEM | |
| 1 | PAFZZ | | 25795 | 2X318 | FITTING, CALIBRATED PRESSURE RELIEF VALVE | 1 |
| 2 | PAFZZ | | 18906 | 4712,NS ¾ All | FITTING, TEE COOPPER TO COPPER TO FEMALE NPT | 1 |
| 3 | PAFZZ | | 394287 | 44605K8 | FITTING, HEX BUSHING, STD BLACK PIPE, 1 ½" X ¾" | 1 |
| 4 | PAFZZ | | 25795 | 1A542 | FITTING, DIELECTRIC UNION, RATED 250 PSI AT 180 ⁰ ¾"MNPT X ¾" IRON PIPE X COPPER SOLDER JOINT | 1 |
| 5 | PAFZZ | | 39428 | 4762K29 | FITTING, WATER FLOW CONTROL, INLINE, MT SELF-CLEANING, FEMALE PIPE THD, 11" | 1 |
| 6 | PAFZZ | | 18906 | 107-C-2, NS ¾" | FITTING, 90O ST ELBOW-CLOSE RUFF FITTING TO COPPER | 1 |
| 7 | PAFZZ | | 18906 | 4560K151 | FITTING, NIPPLE CLOSE LG: 1.00"IPS, IPS: 3/8" | 1 |
| 8 | PAFZZ | | 18906 | 4712NS 3/4" x 3/4" x 3/8" | FITTING, TEE, COPPER TO COPPER TO FEMALE NPT | 1 |
| 9 | PAFZZ | | 18906 | 102 NS ¾" | FITTING, UNION, COPPER TO COPPER | 1 |
| 10 | PAFZZ | | 39428 | 5520K57 NS 3/4" | FITTING, TEE, COPPER ALL ROUND | 14 |
| 11 | PAFZZ | | 39428 | 107-C NS ¾" | FITTING, 90 ⁰ ELBOW, CLOSE RUFF, COPPER TO COPPER | 5 |
| 12 | PAFZZ | | 81337 | 5-13-6616 | DRAIN PLATE 1/2" WATER TUBE | 1 |
| 13 | PAFZZ | | 18906 | 4733-4 | FITTING, UNION, COPPER TO MALE NPT ½" | 1 |
| 14 | PAFZZ | | 39428 | 4837K3 | FITTING, DIELECTRIC PIPE BUSHING, 3/4" X 1/2" | 1 |
| 15 | PAFZZ | | 18906 | 107-C NS ½" | FITTING, 90° ELBOW, CLOSE RUFF, COPPER TO COPPER | 2 |
| 16 | PAFZZ | | 18906 | 104 | FITTING, MALE ADAPTER, COPPER TO MALE NPT, 3/4" | 16 |
| 17 | PAFZZ | | 18906 | 4703-5-W | FITTING, WING ADAPTER, COPPER TO FEMALE NPT, 3/4" | 1 |
| 18 | PAFZZ | | 18906 | 104-2 | FITTING, MALE STREET ADAPTER TO MALE NPT, 3/4" | 1 |
| 19 | PAFZZ | | 18906 | 4704-F | FITTING, FLUSH ADAPTER, COPPER TO MALE NPT, 3/4" | 1 |
| 20 | PAFZZ | | 32911 | PP25052 | FITTING, HOSE ADAPTER, 34"MHT X 34"FIP | 14 |
| 21 | PAFZZ | | 25795 | 5E448 | GATE VALVE, SOLDER CONNECTION, 3/4" | 2 |
| 22 | PAFZZ | | 25795 | 5E447 | GATE VALVE, SOLDER CONNECTION, 1/2" | 1 |
| 23 | PAFZZ | | 39428 | 4726K55 | BALL VALVE, BRONZE, SOLDER ENDS, 3/4" | 13 |
| | | | | | | |

0055 00-4

GROUP 0304 INTERNAL FRESHWATER LINE

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|-------|---------------|--|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| 24 | PAFZZZ | | 39428 | 4511K73 | PLAIN END, FLEXIBLE PIPE COUPLING, 1.5 IN X 1.5 IN | 1 |
| 25 | PAFZZ | | 56879 | 32915 | FITTING, $90^{\rm O}$ STREET ELBOW, 1.5 IN, PVC | 1 |
| 26 | PAFZZ | | 56879 | 70415 | FITTING, MALE ADAPTER, 1.5 IN X 1.5 IN, PVC | 1 |
| 27 | PAFZZ | | 56879 | 70221 | FITTING, REDUCING BUSHING, 2 IN X 1.5 IN, PVC | 1 |
| 28 | PAFZZ | | 56879 | 70320 | FITTING, FEMALE ADAPTER, 2 IN X 2 IN, PVC | 1 |
| 29 | PAFZZ | | 18906 | 4733-4 | FITTING, REDUCER, COPPER, ¾" X ½" | 1 |
| 30 | PAFZZ | | 96906 | MS21083C3 | NUT, SELF-LOCKING, #10-32 | 2 |
| 31 | PAFZZ | | 96906 | MS15795-847 | WASHER, FLAT, #10 | 2 |
| 32 | PAFZZ | | 96906 | MS51958-67 | SCREW, MACHINE, PAN HD, #10-32 X 1.00 LG | 2 |
| 33 | PAFZZ | | 33428 | 90822A450 | SCREW, SELF-DRILLING HEX WASHER, HD #10 | 3 |
| 34 | PAFZZ | | 81337 | 5-13-6623 | GASKET, FITTING, WING ADAPTER | 1 |
| 35 | PAFZZ | | 81337 | 5-13-6563 | POWER CORD ASSY, PRESSURE SWITCH | 1 |
| 36 | PAFZZ | | 88753 | 9013GSG3J99 | PRESSURE SWITCH 15-30 PSI | 1 |
| 37 | PAFZZ | | 39428 | 4089K3 | PRESSURE GAGE, ASME GRADE 8, BRONZE BOURDON TUBE, BRASS SOCKET, POLYCARBONATE LENS, 2 IN DIAL, ¼" MPT | 1 |
| 38 | PAFZZ | | 39428 | 5661K12 | HOSE CLAMP 1.75-2.62 WORMDRIVE | 2 |
| | | | | END OF FIGURE | | |

GROUP 0401 WASTEWATER PUMP

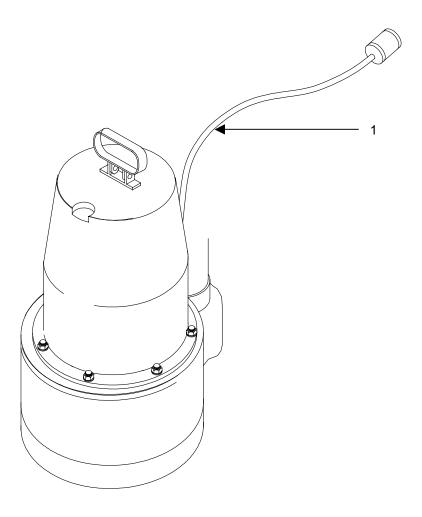


Figure 10. Group 0401 Wastewater Pump

0056 00-(1 Blank)/2

GROUP 0401 WASTEWATER PUMP REPAIR PARTS LIST

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) | (7) QTY |
|--------------------|--------------------|------------|--------------|--------------------|--|------------|
| | | | | | GROUP 0401 WASTEWATER PUMP | |
| | | | | | FIG. 10 WASTEWATER PUMP | |
| 1 | MFFZZ | | 81337 | 5-13-6558 | PLUG ATTACHMENT POWER CORD WASTEWATER PUMP | 1 |
| | | | | END OF FIGURE | | |

GROUP 0402 FLOAT SWITCH

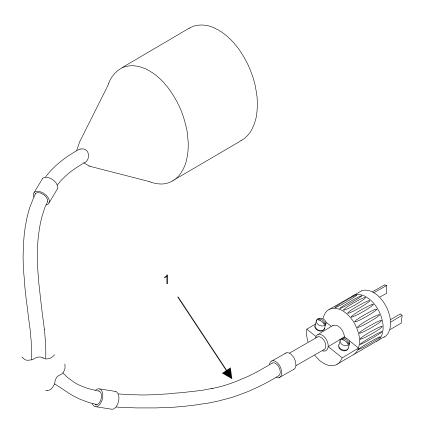


Figure 11. Group 0402 Float Switch 0057 00-(1 Blank)/2

GROUP 0402 FLOAT SWITCH REPAIR PARTS LIST

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) GROUP 0402 FLOAT SWITCH | (7) QTY |
|--------------------|--------------------|------------|--------------|----------------------------|--|------------|
| 1 | MFFZZ | | 81337 | 5-13-6561 END OF FIGURE | FIG. 11 FLOAT SWITCH PLUG ATTACHMENT POWER CORD FLOAT | 1 |

GROUP 0403 WASTEWATER ALARM

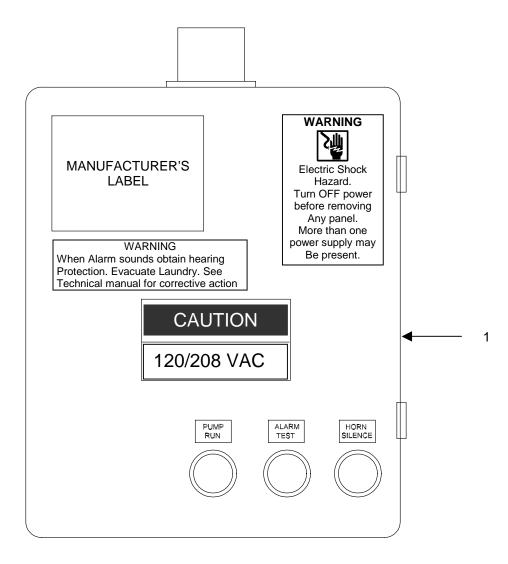


Figure 12. Group 0403 Wastewater Alarm

0058 00-(1 Blank)/2

GROUP 0403 WASTEWATER ALARM REPAIR PARTS LIST

| (1) | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-----|------------|-----|-------|---------------|---------------------------------------|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 0403 WASTEWATER ALARM | |
| | | | | | FIG. 12 WASTEWATER ALARM | |
| 1 | PAFZZ | | 25681 | S4063 | SIMPLEX 3 PHASE CONTROL PANEL (PUMPS) | 1 |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P GROUP 0404 WASTEWATER PIPES

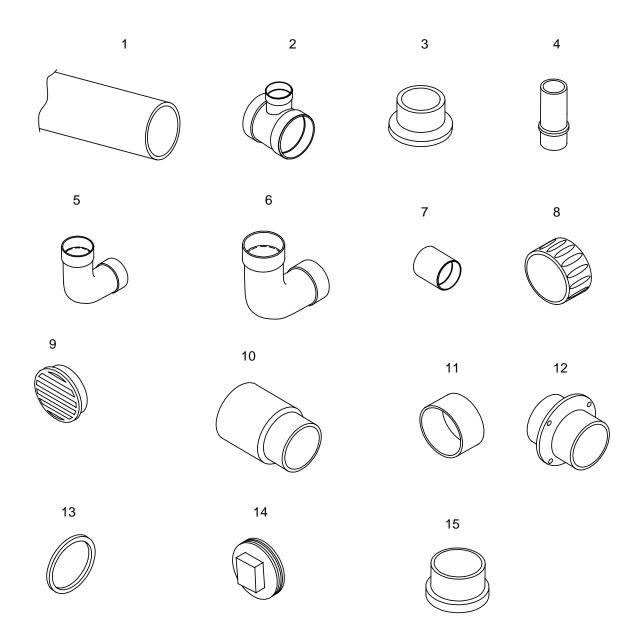


Figure 13. Group 0404 Wastewater Pipes 0059 00-(1 Blank)/2

GROUP 0404 WASTEWATER PIPES REPAIR PARTS LIST

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|-------|---------------|--|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 0404 WASTEWATER PIPES | |
| | | | | | FIG. 13 WASTEWATER PIPES | |
| 1 | PAFZZ | | 56879 | 70011 | PIPE, SCHEDULE 40, PVC-DWV, NS 1.50 IN DIAMETER | 1 |
| 2 | PAFZZ | | 56879 | 61131 | FITTING, REDUCING, SANITARY, TEE SCHEDULE 40, PVC, 3" X 3" X 1.5" | 7 |
| 3 | PAFZZ | | 56879 | 34257 | FITTING, REDUCING, BUSHING, 1.5" X .75" | 6 |
| 4 | PAFZZ | | 56879 | 350407 | FITTING, INSERT MALE ADAPTER.75" | 6 |
| 5 | PAFZZ | | 56879 | 72820 | FITTING, 90° SANITARY, ELBOW, 2.00" | 2 |
| 6 | PAFZZ | | 56879 | 72830 | FITTING, 90° SANITARY, ELBOW, 3.00" | 2 |
| 7 | PAFZZ | | 56879 | 70320 | FITTING, FEMALE ADAPTER, SCHEDULE 40, PVC-DWV, 2" X 2" | 1 |
| 8 | PAFZZ | | 56879 | 37220 | FITTING, IPS UNION, SCHEDULE 40, PVC-DWV, 2" | 1 |
| 9 | PAFZZ | | 56879 | 70320 | FITTING, PVC PIPE FIT FLOOR STRAINER SCHEDULE 40, PVC-DWV, 3" | 1 |
| 10 | PAFZZ | | 56879 | 60430 | FITTING, MALE ADAPTER SCHEDULE 40, PVC 3" X 3" | 1 |
| 11 | PAFZZ | | 56879 | 60330 | FITTING, FEMALE ADAPTER SCHEDULE 40, PVC 3" X 3" | 1 |
| 12 | PAFZZ | | 56879 | 5-13-6594 | COUPLING, WASTEWATER PANEL | 1 |
| 13 | PAFZZ | | 56879 | 5-13-6622 | GASKET, WASTEWATER TANK | 2 |
| 14 | PAFZZ | | 56879 | 61630 | FITTING, CLEANOUT WITH THREADED PLUG, 3" | 1 |
| 15 | PAFZZ | | 56879 | 70420 | FITTING, ADAPTER, MALE, 2" X 2" | 1 |
| | | | | END OF FIGURE | | |

GROUP 05 WASHER/DRYER

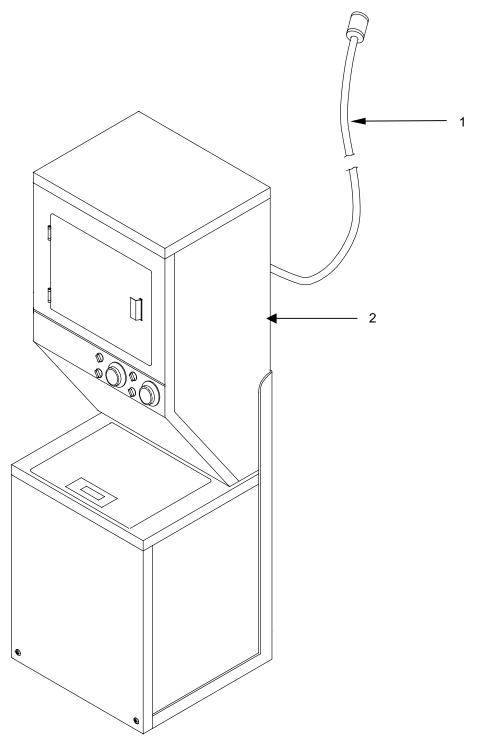


Figure 14. Group 05 Washer/Dryer 0060 00-(1 Blank)/2

GROUP 05 WASHER/DRYER REPAIR PARTS LIST

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|-------|---------------|--|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 05 WASHER/DRYER | |
| | | | | | FIG. 14 WASHER/DRYER | |
| 1 | MFFZZ | | 81337 | 5-13-6562 | POWER CORD ASSEMBLY/ ATTACHMENT, WASHER/DRYER | 1 |
| 2 | MFFZZ | | 81337 | 5-13-6628 | WASHER/DRYER MECHANICAL MODIFIED | 1 |
| | | | | END OF FIGURE | | |

GROUP 06 VENTILATION FAN

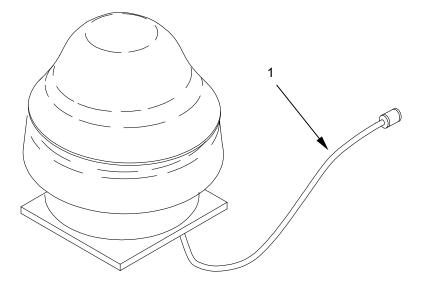


Figure 15. Group 06 Ventilation Fan 0061 00-(1 Blank)/2

GROUP 06 VENTILATION FAN REPAIR PARTS LIST

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) | (7) QTY |
|--------------------|--------------------|------------|--------------|--------------------|--|------------|
| | | | | | GROUP 06 VENT FAN ASSEMBLY | |
| | | | | | FIG. 15 VENT FAN ASSEMBLY | |
| 1 | MFFZZ | | 81337 | 5-13-6559 | POWER CORD ASSEMBLY/ATTACHMENT VENT FAN | 1 |
| | | | | END OF FIGURE | | |

GROUP 07 TEMPER Sections

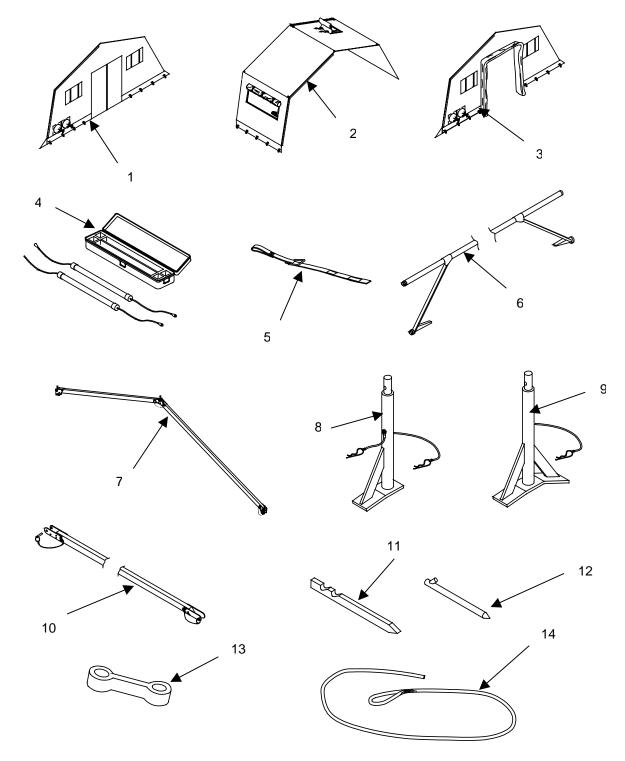


Figure 16. Group 07 TEMPER Sections 0062 00-(1 Blank)/2

GROUP 07 TEMPER Sections REPAIR PARTS LIST

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|-------------|-------------|------------------|-------|---------------|---------------------------------------|-----|
| ÌTÉM NO. | SMR CODE | NSN | CAGEC | PART NUMBER | DÉSCRIPTION AND USABLE ON CODE (UOC) | QTY |
| | | - | | - | GROUP 07 TEMPER | |
| | | | | | FIG. 16 TEMPER | |
| 1 | PAFZZ | 8340-01-186-3014 | 81337 | | TEMPER, End Section | 1 |
| 2 | PAFZZ | 8340-01-186-3021 | 81337 | | TEMPER, Window Section | 1 |
| 3 | PAFZZ | | 81337 | 9-1-0606 | TEMPER, End Section, Modified | 1 |
| 4 | PAFZZ | 6320-01-465-8931 | | | Light Set, General Illumination | 1 |
| 5 | PAOZZ | 8465-01-220-1419 | 81337 | 5-4-4005 | Strap, Light Support Assembly, Type I | 4 |
| 6 | PAFZZ | 8340-01-186-3005 | 81337 | 5-4-3336 | Purlin Assembly | 5 |
| 7 | PAFZZ | 8340-01-240-5854 | 81337 | 5-4-4006 | Arch Assembly | 2 |
| 8 | PAFZZ | 8340-01-186-3009 | 81337 | 5-4-3341 | Eave Extender | 4 |
| 9 | PAFZZ | 8340-01-186-3008 | 81337 | 5-4-3340 | Ridge Extender | 1 |
| 10 | PAFZZ | 8340-01-186-3004 | 81337 | 5-4-3335 | Header Assembly | 2 |
| 11 | PAOZZ | 8340-00-261-9751 | 81337 | 5-4-1 | Tent Pin, Wood, 24" | 6 |
| 12 | PAOZZ | 8340-00-823-7451 | 81337 | 5-4-791 | Tent Pin, Steel, 12" | 24 |
| 13 | PAOZZ | 8340-00-205-2759 | 81337 | | Slip, Tent Line | 6 |
| 14 | PAOZZ | 8340-00-252-2273 | 81337 | | Line, Tent | 6 |
| | | | | END OF FIGURE | | |

GROUP 08 SPACE HEATER

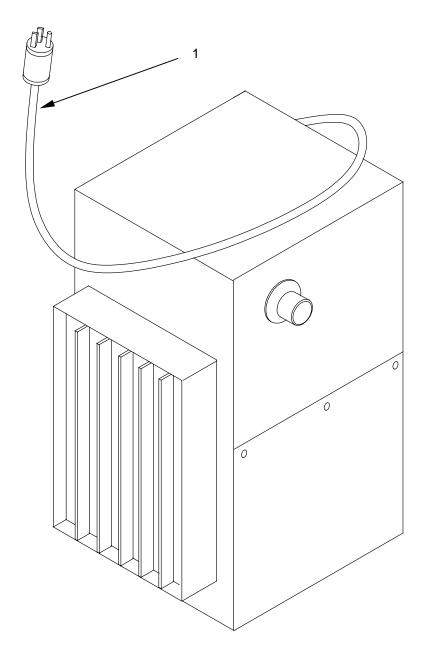


Figure 17. Group 08 Space Heater 0063 00-(1 Blank)/2

GROUP 08 SPACE HEATER REPAIR PARTS LIST

| (1) ITEM | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-------------|------------|-----|-------|---------------|---|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 08 SPACE HEATER | |
| | | | | | FIG. 17 SPACE HEATER | |
| 1 | MFFZZ | | 81337 | 5-13-6560 | POWER CORD ASSEMBLY/ATTACHMENT, HEATER | 1 |
| | | | | END OF FIGURE | | |

GROUP 09 3000 GALLON WATER TANK

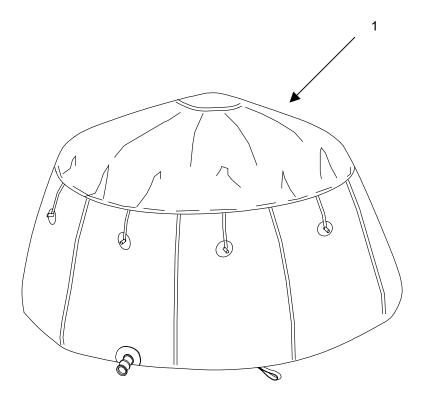


Figure 18. Group 09 3000 Gallon Water Tank 0064 00-(1 Blank)/2

GROUP 09 3000 GALLON TANK REPAIR PARTS LIST

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) | (7) QTY |
|--------------------|--------------------|------------------|--------------|--------------------|--|------------|
| | | | | | GROUP 09 3000 GALLON TANK | |
| | | | | | FIG. 18 3000 GALLON TANK | |
| 1 | PAFZZ | 5430-01-170-6984 | 81349 | MIL-T-53048 | TANK , FABRIC, SELF-SUPPORTING, 3,000 GALLON WATER | 2 |
| | | | | END OF FIGURE | | |

GROUP 10 WATER HOSES

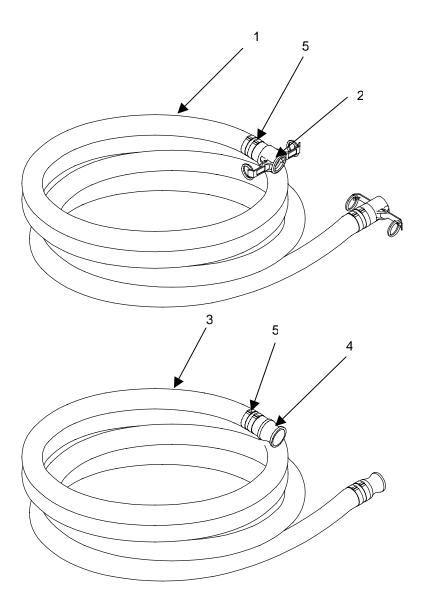


Figure 19. Group 10 Water Hoses 0065 00-(1 Blank)/2

GROUP 10 WATER HOSES REPAIR PARTS LIST

| (1) | (2) SMR | (3) | (4) | (5) | (6) DESCRIPTION AND USABLE ON CODE | (7) |
|-----|------------|-----|-------|---------------|--|-----|
| NO. | CODE | NSN | CAGEC | PART NUMBER | (UOC) | QTY |
| | | | | | GROUP 10 WATER HOSES | |
| | | | | | FIG. 19 WATER HOSES | |
| 1 | PAFZZ | | 81337 | 5-13-6635 | HOSE 2", 50 FOOT, FRESH WATER | 1 |
| 2 | PAFZZ | | 39428 | 51415K35 | C-COUPLER, HOSE SHANK AND COUPLER SIZE 2 IN 250 PSI | 2 |
| 3 | PAFZZ | | 81337 | 5-13-6636 | HOSE 2", 50 FOOT, WASTE WATER | 1 |
| 4 | PAFZZ | | 39428 | 51415K65 | E-ADAPTER, ADAPTER AND HOSE SHANK SIZE 2 IN 250 PSI | 2 |
| 5 | PAFZZ | | 39428 | 5661K12 | HOSE CLAMP 1.75-2.62 WORMDRIVE | 4 |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A **BULK MATERIAL REPAIR PARTS LIST**

| (1) ITEM NO. | (2) SMR CODE | (3) NSN | (4) CAGEC | (5) PART NUMBER | (6) DESCRIPTION AND USABLE ON CODE (UOC) | (7) QTY |
|--------------------|--------------------|------------|--------------|-----------------------|--|------------|
| | | | | | GROUP 11 BULK MATERIAL | |
| 1 | MOOZZ | | 56879 | 70031 | Pipe, Schedule 40, PVC-DWV Nominal Size: 3" Dia | AR |
| 2 | MOOZZ | | 56879 | 70021 | Pipe, Schedule 40, PVC-DWV Nominal Size: 2" Dia | AR |
| 3 | MOOZZ | | 56879 | 70011 | Pipe, Schedule 40, PVC-DWV Nominal Size: 1.5" Dia | AR |
| 4 | MOOZZ | | 81346 | Type L | Seamless Copper Water Tube Nominal Size: 3/4" | AR |
| 5 | MOOZZ | | 81346 | Type L | Seamless Copper Water Tube Nominal Size: 1/2" | AR |
| 6 | MOOZZ | | 81349 | M22759/16-12-5 | Wire, Electric Fluoropolymer Insulated | AR |
| | | | | | | |
| | | | | END OF FIGURE | | |

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A NATIONAL STOCK NUMBER INDEX

| STOCK NUMBER | FIG. | ITEM |
|------------------|------|------|
| | | |
| 5430-01-170-6984 | 18 | 1 |
| 8340-01-186-3014 | 16 | 1 |
| 8340-01-186-3021 | 16 | 2 |
| 6320-01-465-8931 | 16 | 4 |
| 8465-01-220-1419 | 16 | 5 |
| 8340-01-186-3005 | 16 | 6 |
| 8340-01-240-5854 | 16 | 7 |
| 8340-01-186-3009 | 16 | 8 |
| 8340-01-186-3008 | 16 | 9 |
| 8340-01-186-3004 | 16 | 10 |
| 8340-00-261-9751 | 16 | 11 |
| 8340-00-823-7451 | 16 | 12 |
| 8340-00-205-2759 | 16 | 13 |
| 8340-00-252-2273 | 16 | 14 |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A SPECIAL TOOLS LIST

NATIONAL STOCK NUMBER FIG. ITEM

There are no special tools required for the CSSL or its associated equipment.

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A PART NUMBER INDEX

| PART NUMBER | FIG | ITEM | PART NUMBER | FIG | ITEM |
|---------------------------|-----|----------|----------------------------|-----|----------|
| 8115MU290020202 | 1 | 1 | SC-D-883964 GP9-3 | 6 | 1 |
| 5-13-6630 | | 2 | 027458t | 7 | 1 |
| MS90558C44412P | 2 | 1 | 5-13-6557 | | 2 |
| MS51958-81 | | 2 | 6-1-6688 | | 3 |
| MS51958-82 | | 3 | WX203 | 8 | 1 |
| MS15795-858 | | 4 | ITR31-16550 | | 2 |
| MS21044C4 | | 5 | 2X318 | 9 | 1 |
| MS90555C324135 | | 6 | 4712,NS ¾ AII | | 2 |
| MS51958-81 | | 7 | 44605K8 | | 3 |
| MS51958-82 | | 8 | 1A542 | | 4 |
| MS15795-846 | | 9 | 4762K29 | | 5 |
| MS21044C3 | | 10 | 107-C-2, NS ¾" | | 6 7 |
| WPFS26 | | 11 | 4560K151 | | 8 |
| | | 12 | 4712NS 3/4" x 3/4" x 3/8" | | 9 |
| MS51960-67 | | 13 | 102 NS ¾" 5520K57 NS ¾" | | 10 |
| 6899 | | | 107-C NS ¾" | | 11 |
| MS21043-06 | | 14 15 | 5-13-6616 | | 12 |
| MS39347-4 | | 16 | 4733-4 | | 13 |
| MS 35338-143 MS51969-5 | | 17 | 4837K3 | | 14 |
| MS 51969-5 | | 18 | 107-C NS ½" | | 15 |
| NQOD430M100CU | 3 | 1 | 104 | | 16 |
| 2A-5D4 | · · | 2 | 4703-5-W | | 17 |
| | | 3 | 104-2 | | 18 |
| PK18GTA-L | | 4 | 4704-F | | 19 |
| QOFP | | | PP25052 | | 20 |
| QOB115 | | 5 | 5E448 | | 21 |
| QOB120 | | 6 | 5E447 | | 22 |
| QOB230 | | 7 | 4726K55 | | 23 |
| QOB310 | | 8 | 4511K73 | | 24 |
| QOB315 | | 9 | 32915 | | 25 |
| QOB330 | | 10 | 70415 | | 26 |
| QOB360 | | 11 | 70221 | | 27 |
| 5-13-6624-2 | | 12 | 70320 | | 28 |
| 5-13-6627-2 | | 13 | 4733-4 | | 29 |
| 5-13-6625 | | 14 | MS21083C3 | | 30 |
| 6F555 | 4 | 1 | MS15795-847 | | 31 |
| MT91505 | | 2 | MS51958-67 | | 32 |
| 3V477 | | 3 | 90822A450 | | 33 34 |
| 7535 | 5 | 1 | 5-13-6623 | | 35 |
| A7 | | 2 | 5-13-6563 9013GSG3J99 | | 36 |
| 2420A | | 3 | 4089K3 | | 37 |
| A720 | | 4 | 5661K12 | | 38 |
| 2720A | | 5 | WS0738BF | 10 | 1 |
| 2710A | | 6 | 5-13-6558 | | 2 |
| 6899-W | | 7 | A2-3 | 11 | 1 |
| | | 8 | 5-13-6561 | | 2 |
| CS1 15W | | 9 | S4063 | 12 | 1 |
| A1 | | 10 | 70011 | 13 | 1 |
| KF2 | | | 61131 | | 2 |
| S26 | | 11 | 34257 | | 3 |

0069-00-1

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A PART NUMBER INDEX

| PART NUMBER | FIG | ITEM |
|-------------|-----|------|
| 350407 | | 4 |
| 72820 | | 5 |
| 72830 | | 6 |
| 70320 | | 7 |
| 37220 | | 8 |
| 70320 | | 9 |
| 60430 | | 10 |
| 60330 | | 11 |
| 5-13-6594 | | 12 |
| 5-13-6622 | | 13 |
| 61630 | | 14 |
| 70420 | | 15 |
| LSE7806ACE | 14 | 1 |
| 5-13-6562 | | 2 |
| ITRIO-130SD | | 3 |
| 5-13-8634 | 15 | 1 |
| 5-13-6559 | | 2 |
| 1-6-3605 | 16 | 3 |
| 5-4-4005 | | 5 |
| 5-4-3336 | | 6 |
| 5-4-5854 | | 7 |
| 5-4-3009 | | 8 |
| 5-4-3340 | | 9 |
| 5-4-3335 | | 10 |
| 5-4-1 | | 11 |
| 5-4-791 | | 12 |
| 82UH10 | 17 | 1 |
| 5-13-6560 | | 2 |
| MIL-T-53048 | 18 | 1 |
| 5-13-6635 | 19 | 1 |
| 51415K35 | | 2 |
| 5-13-6636 | | 3 |
| 51415K65 | | 4 |
| 5661K12 | | 5 |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

INTRODUCTION

Scope

This section lists COEI and BII for the CSSL to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the CSSL. As part of the end item, these must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the CSSL in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the CSSL during operation and when it is transferred between property accounts. Listing these items is your authority to request / requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column 1, Illu Number, gives you the number of the item illustrated.

Column 2, National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

Column 3, Description, CAGEC, and Part Number, identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (commercial and Government entity code) (in parenthesis) and the part number.

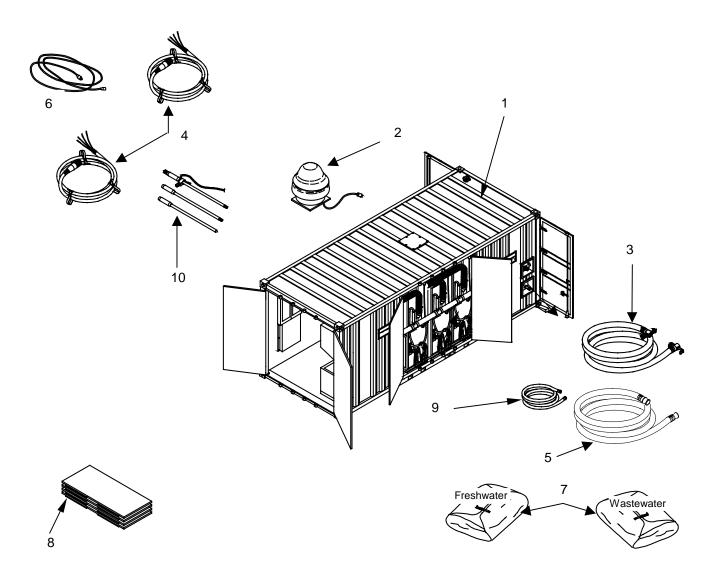
Column 4, Usable on code, gives you a code if the item you need is not the same for different models of equipment. There is no usable on code for the CSSL.

Column 5, UM (unit of measure), indicates how the item is issued for the National Stock Number shown in column 2.

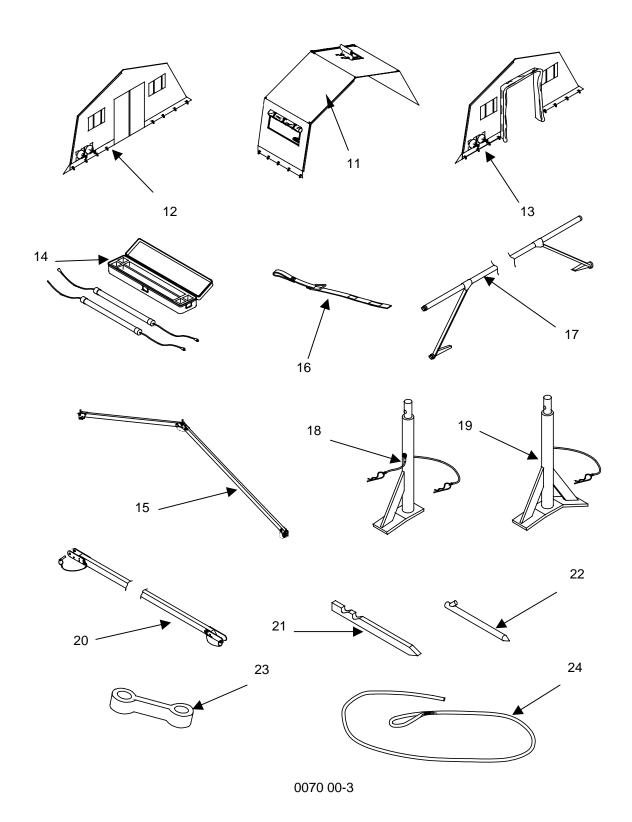
Column 6, Qty Rqr, indicates the quantity required.

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

COMPONENTS OF END ITEM (COEI) LIST



TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST



TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Table -1. Components of End Item List.

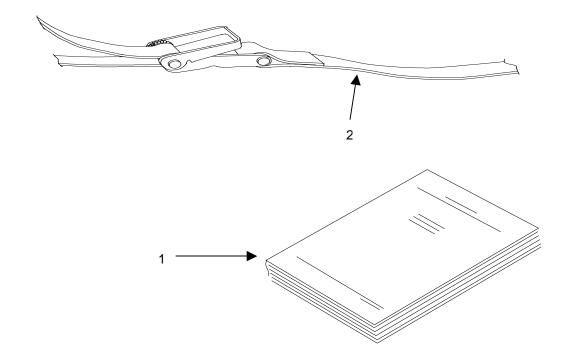
| (1) ILLUS NUMBER | (2) NATIONAL STOCK NUMBER | (3) DESCRIPTION, LOCATION, PART NUMBER, AND (CAGEC) | (4) USABLE ON CODE | (5) U/M | (6) QTY RQR |
|------------------------|---------------------------------|---|--------------------------|------------|-------------------|
| 1 | | Shelter, Modified, Welded Assembly, 5-13-6538 (81337) | | EA | 1 |
| 2 | | Ventilation Fan, 5-13-6629 (81337) | | EA | 1 |
| 3 | | Hose Assembly, Fresh Water, 5-13-6635 (81337) | | EA | 1 |
| 4 | | 100 AMP Cable/Pigtail, 13227E7024 | | EA | 2 |
| 5 | | Hose Assembly, Discharge, Waste Water, 5-13-6636 (81337) | | EA | 1 |
| 6 | | Extension Cord | | EA | 1 |
| 7 | 5340-01-170-6984 | 3000 Gallon Fabric Water Tank | | EA | 2 |
| 8 | 7105-00-269-9275 | Table, Folding Legs | | EA | 4 |
| 9 | 4720-00-729-5334 | Garden Hose | | EA | 1 |
| 10 | 5975-00-676-3791 | Ground Rod Assy, Sectional w/Attachments | | EA | 1 |
| 11 | 8340-01-186-3021 | TEMPER, Window Section | | EA | 1 |
| 12 | 8340-01-186-3014 | TEMPER, End Section | | EA | 1 |
| 13 | | TEMPER, End Section, Modified, 1-6-3605 (81337) | | EA | 1 |
| 14 | 6230-01-465-8931 | Light Set, General Illumination | | EA | 1 |
| 15 | 8340-01-240-5854 | Arch Assembly | | EA | 2 |
| 16 | 8465-01-220-1419 | Strap, Light Support, Type I | | EA | 4 |
| 17 | 8340-01-186-3005 | Purlin Assembly | | EA | 5 |
| 18 | 8340-01-186-3009 | Eave Extender | | EA | 4 |
| 19 | 8340-01-186-3008 | Ridge Extender | | EA | 1 |
| 20 | 8340-01-186-3004 | Header Assembly | | EA | 2 |
| 21 | 8340-00-261-9751 | Tent Pin, Wood, 24" | | EA | 6 |
| 22 | 8340-00-823-7451 | Tent Pin, Steel, 12" | | EA | 24 |
| 23 | 8340-00-205-2759 | Slip, Tent Line | | EA | 6 |
| 24 | 8340-00-252-2237 | Line, Tent (19-ft) | | EA | 6 |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

BASIC ISSUE ITEMS (BII) LIST

Table -2. Basic Issue Items List

| | (1) ILLUS NUMBER | (2) NATIONAL STOCK NUMBER | (3) DESCRIPTION, PART NUMBER AND CAGEC | (4) USABLE ON CODE | (5) U/M | (6) QTY RQR |
|---|------------------------|---------------------------------|---|--------------------------|------------|-------------------|
| Ī | 1 | N/A | TM 10-3510-223-13&P | | EA | 1 |
| | 2 | | Strap, Tiedown Assembly 5-13-6618 (81337) | | EA | 4 |



CONTAINERIZED SELF SERVICE (CSSL) MODEL A ADDITIONAL AUTHORIZATION LIST (AAL)

INTRODUCTION

Scope

This section lists additional items you are authorized for the support of the CSSL.

General

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

Explanation of Columns in the AAL:

Column (1) National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

Column (2) Description, CAGEC, and Part Number, identifies the Federal Item Name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGE (Commercial and Government Entity Code) (in parenthesis) and the part number.

Column (3), Usable On Code, when applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (4), UM (unit of measure) indicates how the item is issued for the National Stock Number shown in column (1).

Column (5), Qty Recm, indicates the quantity recommended.

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List.

| (1) NATIONAL STOCK NUMBER | (2) DESCRIPTION, (CAGEC) AND PART NUMBER | (3) USABLE ON CODE | (4) U/M | (5) QTY RECM |
|------------------------------------|---|--------------------------|------------|--------------------|
| 1 | Fire Extinguisher, (81348) 6-1-8285 NSN 4210-00-889-2491 | | EA | 1 |
| 2 | Footlocker, 8460-00-243-3234 | | EA | 1 |
| 3 | Flashlight | | EA | 1 |
| 4 | Vbelt, Pump (0GAZ1) 211124 | | EA | 1 |
| 5 | Vbelt, Drive (0GAZ1) 211125 | | EA | 1 |

CONTAINERIZED SELF SERVICE (CSSL) MODEL A EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

This section lists expendable and durable items that you will need to operate and maintain the CSSL. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanations of Columns in the Expendable / Durable Items List

Column (1) Item Number. This number is assigned to each entry in the list and is referenced in the narrative instructions to identify the item {e.g.,"Use wiping rags (WP0072, Table 1, Item 1)"}.

Column (2) Level. This column includes the lowest level of maintenance that requires the listed item.

- **C** Operator or Crew
- O Unit Maintenance
- **F** Direct Support Maintenance
- **H** General Support Maintenance
- **D** Depot Maintenance

Column (3) National Stock Number. This is the NSN assigned to the item that you can use to requisition it.

Column (4) Item Name, Description, CAGEC, and Part Number. This column provides the other information you need to identify the item.

Column (5), U/M (unit of measure) indicates how the item is issued for the National Stock Number shown in column (1).

EXPENDABLE AND DURABLE ITEMS LIST

Table 1. Expendable and Durable Items List.

| (1) ITEM NUMBER | (2) LEVEL | (3) NATIONAL STOCK NUMBER | (4) ITEM NAME, DESCRIPTION, (CAGEC), PART NUMBER | (5) U/M |
|-----------------------|--------------|------------------------------|--|------------|
| 1 | O, F | 7920-00-205-3570 | Wiping Rags | LB |
| 2 | O, F | | Light Fluorescent General Purpose, 48" (2F367) 3V477 | EA |
| 3 | F | | Tape, Antiseize (58536) AA56092-2-2 | RL |
| 4 | 0 | | Gasket, Buna-N Rubber, 2", MIL-C-27487 | EA |
| 5 | 0 | | Gasket, Buna-N Rubber, 1 1/2", MIL-C-27487 | EA |
| 6 | F | | Solder, Lead Free, (OJ940), 14-7080-0125 | LB |
| 7 | 0 | 5970-00-644-3167 | Tape, (58536) | RL |
| 8 | F | | Cement, All-Purpose, CVC Piping, (56879), 15010 | LB |
| 9 | F | | Cleaner, All-Purpose, PVC Piping, (56879), 2X318 | LB |
| 10 | F | 9905-00-537-8954 | Tags, marking | HD |
| 11 | 0 | 7920-00-291-8305 | Broom | EA |
| 12 | 0 | 7920-00-267-1218 | Mop Handle | EA |
| 13 | 0 | 7920-00-141-5550 | Mop Head | EA |

TM 10-3510-223-13&P CONTAINERIZED SELF SERVICE (CSSL) MODEL A EXPENDABLE AND DURABLE ITEMS LIST

| (1) ITEM NUMBER | (2) LEVEL | (3) NATIONAL STOCK NUMBER | (4) ITEM NAME, DESCRIPTION, (CAGEC), PART NUMBER | (5) U/M |
|-----------------------|--------------|------------------------------|---|------------|
| 14 | 0 | 7240-00-161-1143 | Trash Can | EA |
| 15 | F | 5970-00-644-3167 | Tape, Electrical Insulation, ¾ inch width | RL |
| 16 | F | | Strap, Tiedown (OU583) SAE A533671, MS3367-6-9 | PK |
| 17 | F | | Clamp, Loop, Plastic Wire Support (96906) MS25281- R10 | EA |
| 18 | O, F | | Hose Clamp 1.75-2.62, Wormdrive (39428) 5661k12 | EA |
| 19 | O, F | 5935-00-610-5871 | Retainer Clips (Fluorescent Lightbulb) | PK |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A MANDATORY REPLACEMENT PARTS LIST

INTRODUCTION

Scope

This work package includes a list of all mandatory replacement parts referenced in the task initial setups and procedures. These are items that must be replaced during maintenance whether they have failed or not. This includes items based on usage intervals such as miles, time, rounds fired, etc.

MANDATORY REPLACEMENT PARTS LIST

There are no mandatory replacement parts for the CSSL.

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A ILLUSTRATED LIST OF MANUFACTURED ITEMS

INTRODUCTION

Scope

This work package contains complete instructions for making items authorized to be manufactured or fabricated at the direct support maintenance level. A complete system Power Schematic/ Wiring Diagram, Figure 10, is found at the end of the manual. Individual wiring diagrams are presented in this work package for manufactured items.

How to use the Index of Manufactured Items

The part number index below is organized in alphanumeric order. It is provided for cross-referencing the part number of the item to be manufactured to the figure that covers its fabrication procedures. A system wiring diagram is furnished to aid in installation of components.

Explanation of the Illustrations of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the figures. Refer to the RPSTL work package 0045 00 for further information about manufactured items. Bulk materials needed for manufacture of an item are listed by part number, or specification number in a tabular listing on the illustration.

Safety Warnings and Cautions

Follow the warnings and cautions in this work package as well as the respective work packages containing the direct support repair / replace procedure for the item.

INDEX OF MANUFACTURED ITEMS

| Part Number | <u>Description</u> | Figure Number |
|-------------|---|---------------|
| 5-13-6557 | Power Cord Assembly/Attachment Fresh Water Pump | 1 |
| 5-13-6558 | Plug Attachment Power Cord Wastewater Pump | 2 |
| 5-13-6559 | Power Cord Assembly/Attachment Vent Fan | 3 |
| 5-13-6561 | Plug Attachment Power Cord Float | 4 |
| 5-13-6562 | Power Cord Assembly/Attachment Washer/Dryer | 5 |
| 5-13-6628 | Washer/Dryer Mechanical Modified | 5 |
| 5-13-6563 | Power Cord Assembly/Attachment Pressure Switch | 6 |
| 5-13-6580 | Power Cord Assembly/Attachment Heater | 7 |
| 5-13-6560 | Heater Modification | 8 |
| 5-13-6624 | Electrical Box Modified Assembly | 9 |

CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A ILLUSTRATED LIST OF MANUFACTURED ITEMS

Figure 1

Power Cord Assembly/Attachment Fresh Water Pump.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

NOTES:

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Blue insulation sleeving (FIND 4) shall be used to cover the white wire to change the color code of that wire for wiring purposes.
- 6. Securely crimp terminal lugs to conductors. Terminal lugs shall not separate from conductors when subjected to a pull out load of 8 Pounds.

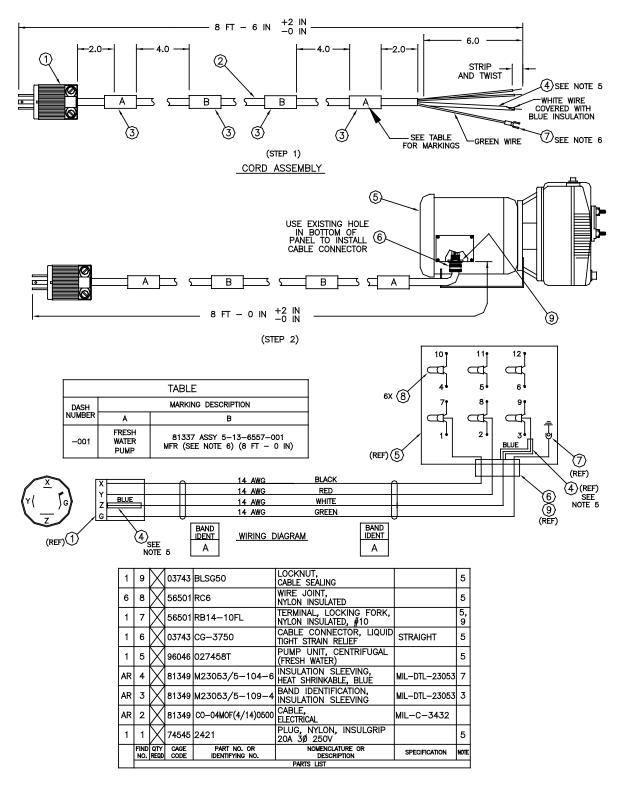


Figure 2

Plug Attachment Power Cord Wastewater Pump.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Blue insulation sleeving (FIND 3) shall be used to cover the white wire to change the color code of that wire for wiring purposes.
- 6. Place plug (FIND 1), one each of the band identifications (FIND 2) and insulation sleeving (FIND 3) into bag (FIND 5), and attach to pump unit (FIND 4). These bagged items shall be installed when pump is installed.

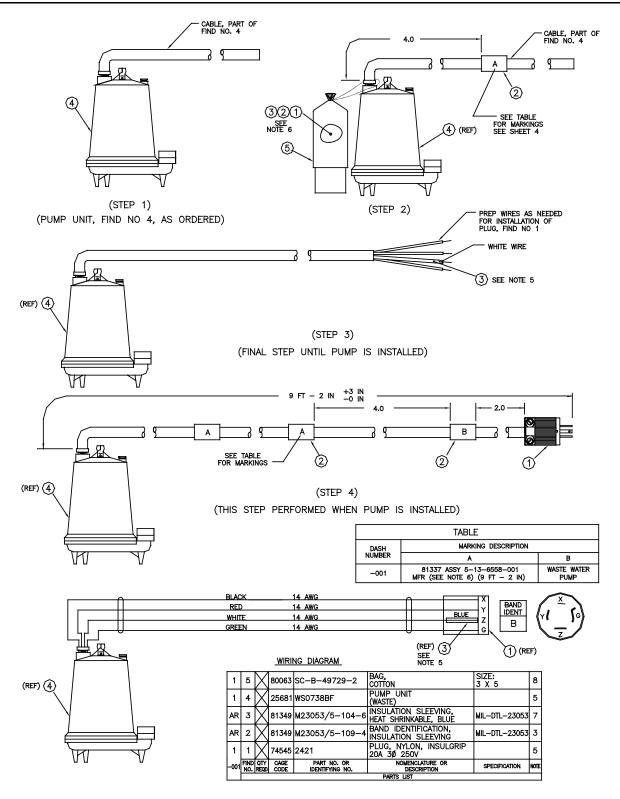


Figure 3

Power Cord Assembly/Attachment Vent Fan



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Blue insulation sleeving (FIND 4) shall be used to cover the white wire to change the color code of that wire for wiring purposes.

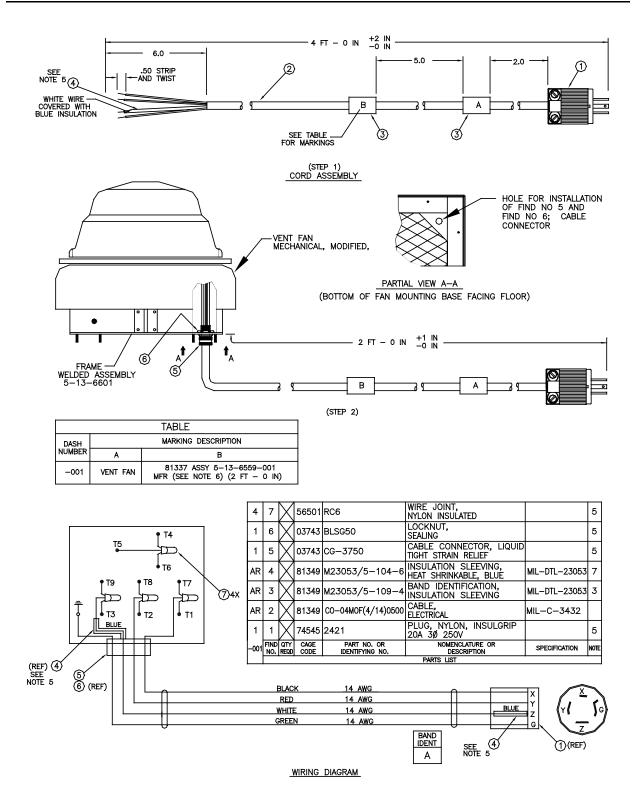


Figure 4

Plug Attachment Power Cord Float.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Place plug (FIND 1), and 1 each of the band identification letters B and C (FIND 2), into bag (FIND 4), and attach to float (FIND 5)

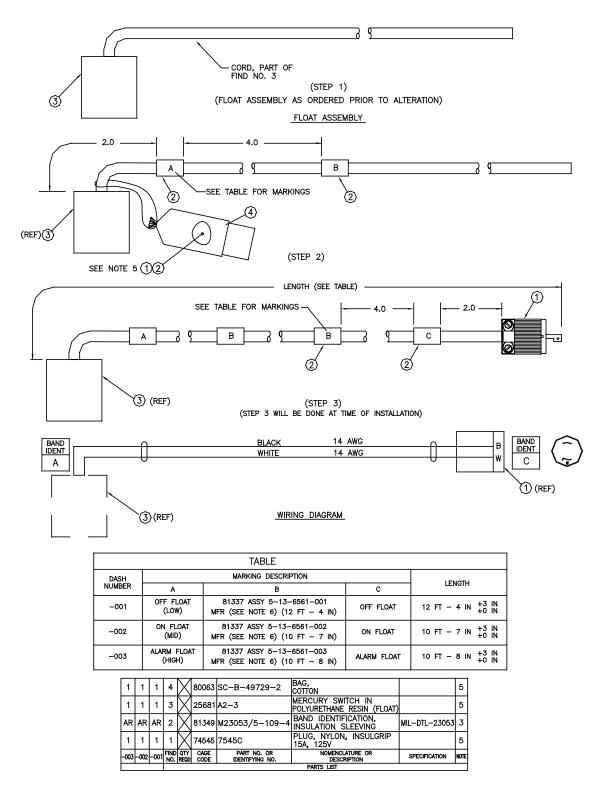


Figure 5

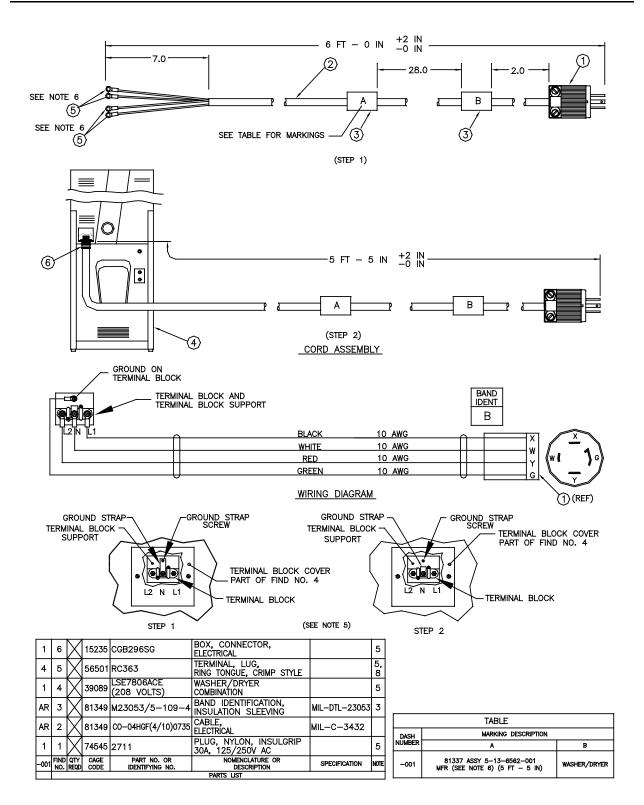
Power Cord Assembly/Attachment Washer/Dryer.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

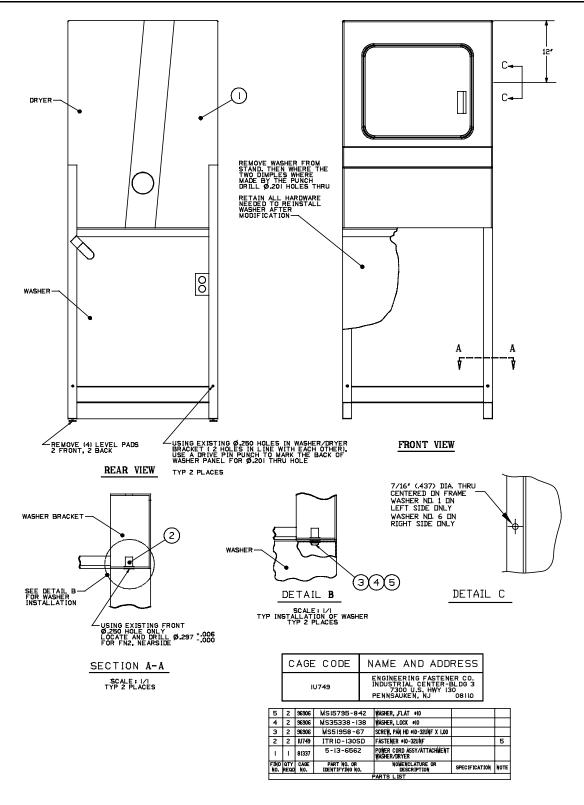
- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Remove the terminal block cover. Remove the ground strap screw from the terminal block support. Fold the ground strap over so both ends of the ground strap are attached to the center terminal post. Connect the neutral (white) wire of the power supply cord to the center (silver) terminal of the terminal block. Connect the grounding wire (green) of the cord to the terminal block support using the ground strap screw. Connect the other two wires of the cord to the outer terminals of the terminal block. Replace the terminal block cover.
- 6. Securely crimp terminal lugs to conductors. Terminal lugs shall not separate from conductors when subjected to a pull out load of 8 Pounds.



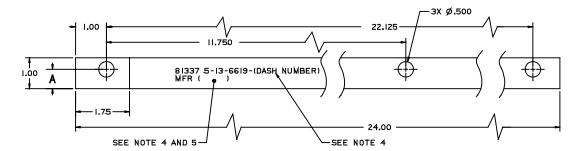
CONTAINERIZED SELF SERVICE LAUNDRY (CSSL) MODEL A ILLUSTRATED LIST OF MANUFACTURED ITEMS

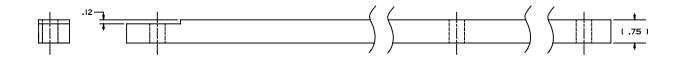
Washer/Dryer Mechanical Modification

- 1. Using the existing holes in the washer/dryer frame as a guide, punch to mark the back of the dryer panel.
- 2. Remove washer from frame. Retain hardware for re-installation.
- 3. Drill holes to size specified in drawing on each side of the washer where dimples were made by the punch.
- 4. Install fasteners specified on the drawing parts list into the washer holes.
- 5. Re-install the washer into the frame using retained hardware.
- 6. Install hardware into frame and washer specified on drawing.
- 7. Using a metal drill bit, drill hole into dryer frame as specified on drawing.
- 8. Fabricate the spacer described on page 0074 00-14 from materials indicated and to the dimensions shown.



| DASH | BLOCK |
|-------------|----------|
| DASH NUMBER | A LENGTH |
| -1 | .63 |
| -2 | .37 |





NOTES:

- I. MATERIAL: .750 THK ALUMINUM ALLOY PLATE, 6061 TEMPER T6 PER SAE/AMS-QQ-A-250/II.
- 2. FOR WORKMANSHIP GUIDANCE REFER TO GUIDELINE 9 OF MIL-HDBK-454. THIS BOOK IS FOR GUIDANCE ONLY.
- 3. FINISH: P510.2 AE PER MIL-F-14072.
- 4. THIS ITEM SHALL BE MARKED FOR DESIGN IDENTIFICATION:

MARKINGS SHALL BE STENCILED .12 *.03 INCH HIGH BLACK CHARACTERS, GOTHIC STYLE LETTERING/ARABIC NUMERALS PER MARKING PROCESSES TABLE II, GROUP II PER MIL-M-13231 AND MARKING METHODS PER MIL-STD-130. LOCATE MARKINGS APPROXIMATELY WHERE INDICATED.

- 5. ENTER MANUFACTURER'S CAGE CODE NUMBER PER MIL-STD-130.
- 6. ENGINEERING DATA PROVIDED ON THIS DRAWING SHALL BE SUFFICIENT TO FABRICATE THE ITEM. ALTERNATE METHODS OF FABRICATION ARE PERMITTED, PROVIDED THAT THE PERFORMANCE DATA AND DESIGN REQUIREMENTS ARE MET TO SATISFY THE DESIGN OF THE END-ITEM.

Figure 6

Power Cord Assembly/Attachment Pressure Switch.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Red insulation sleeving (FIND 4) shall be used to cover the white wire to change the color code of that wire for wiring purposes.
- 6. Blue insulation sleeving (FIND 5) shall be used to cover the white wire to change the color code of that wire for wiring purposes.
- 7. Securely crimp terminal lugs to conductors. Terminal lugs shall not separate from conductors when subjected to a pull out load of 8 Pounds.
- Remove the existing knockout on the left side of the box for installation of the box connector (FIND 6) and locknut (FIND 7)

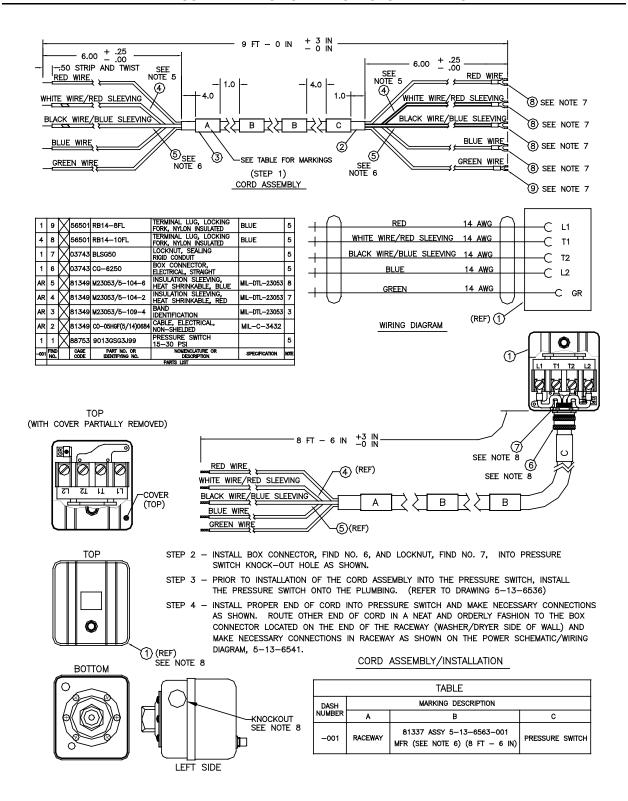


Figure 7

Power Cord Assembly/Attachment Heater.



WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- 1. Fabricate new cord from materials specified and dimensions shown in the drawing.
- 2. Mark cord as shown in table.
- 3. Connect the new cord to the water pump and plug as shown in the wiring diagram.
- 4. Enter manufacturer's CAGE Code in accordance with MIL-STD-130.
- 5. Blue insulation sleeving (FIND 4) shall be used to cover the white wire to change the color code of that wire for wiring purposes.

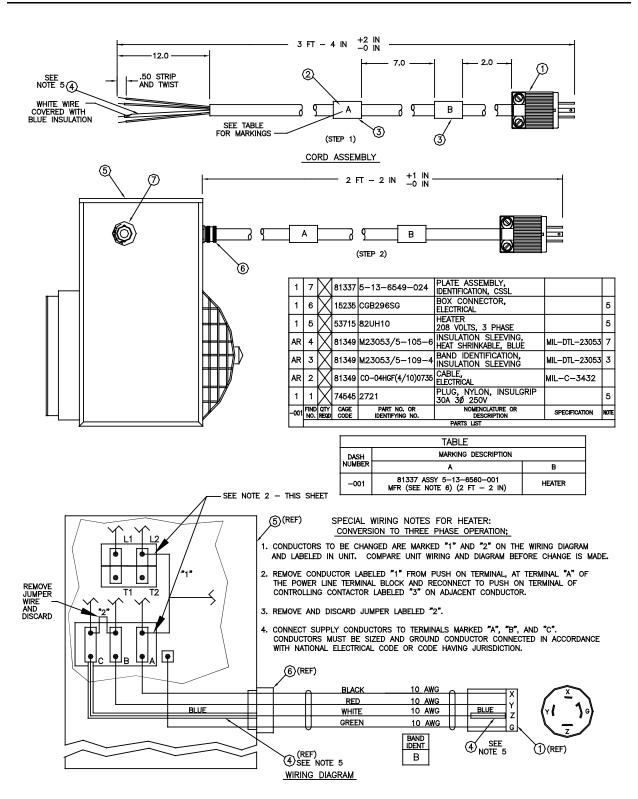


Figure 8

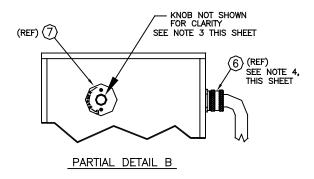
Heater Modification.

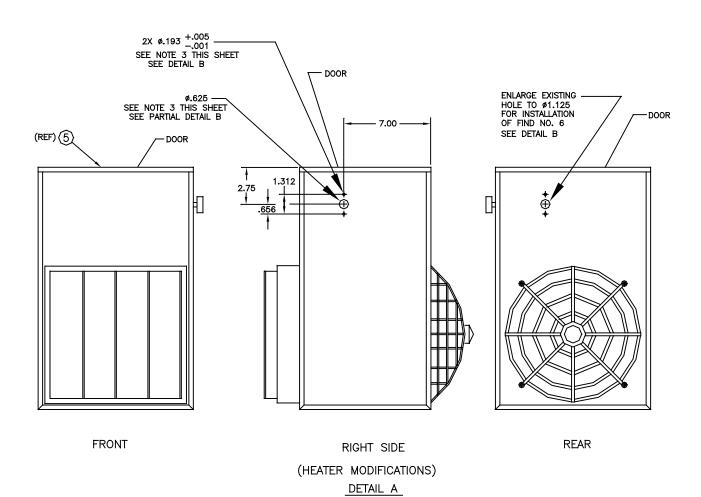


WARNING

Ensure that only specified materials are used in the construction of the power cord. Install new cord completely before applying power to the appliance. Serious injuries or electrocution could result.

- Remove heater thermostat control switch knob and thermostat control switch from rear of heater and retain.
- 2. Drill new mounting holes in location shown on right side of heater for reinstallation of switch and knob.
- 3. Reinstall thermostat control switch, identification plate, and thermostat control knob at new location on right side of heater.
- 4. Enlarge hole on rear of heater to size shown (Previous location of thermostat control switch) and install the box connector and cable into enlarged hole as shown.





0074 00-20

Figure 9

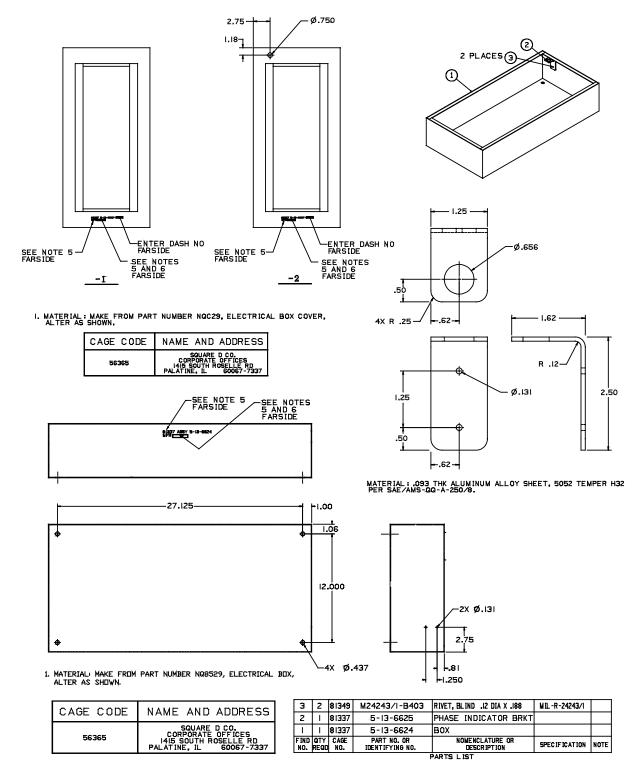
Electrical Box Modified Assembly.



WARNING

Be careful when modifying the electrical box to avoid injuries from sharp metal corners.

- 1. Make From part number NQB529, Electrical Box. Alter as shown.
- Vendor identification markings shall be obliterated without damage to the item and re-identified as in note 5.
- 3. For workmanship guidance refer to MIL-HDBK-454.
- 4. Finish: P371.1 AE per MIL-F-14072.
- 5. Markings shall be stenciled .12" inch high black characters, gothic style lettering/Arabic numerals per marking processes Table II, Group II per MIL-STD-13231 and marking methods per MIL-STD-130. Locate markings approximately where indicated.
- 6. Enter manufacturer's CAGE Code number per MIIL-STD-139.
- 7. Engineering data provided on this illustration is sufficient to fabricate the item. Alternate methods of fabrication are permitted, provided that the performance data and design requirements are met to satisfy the design of the end item.



END OF WORK PACKAGE

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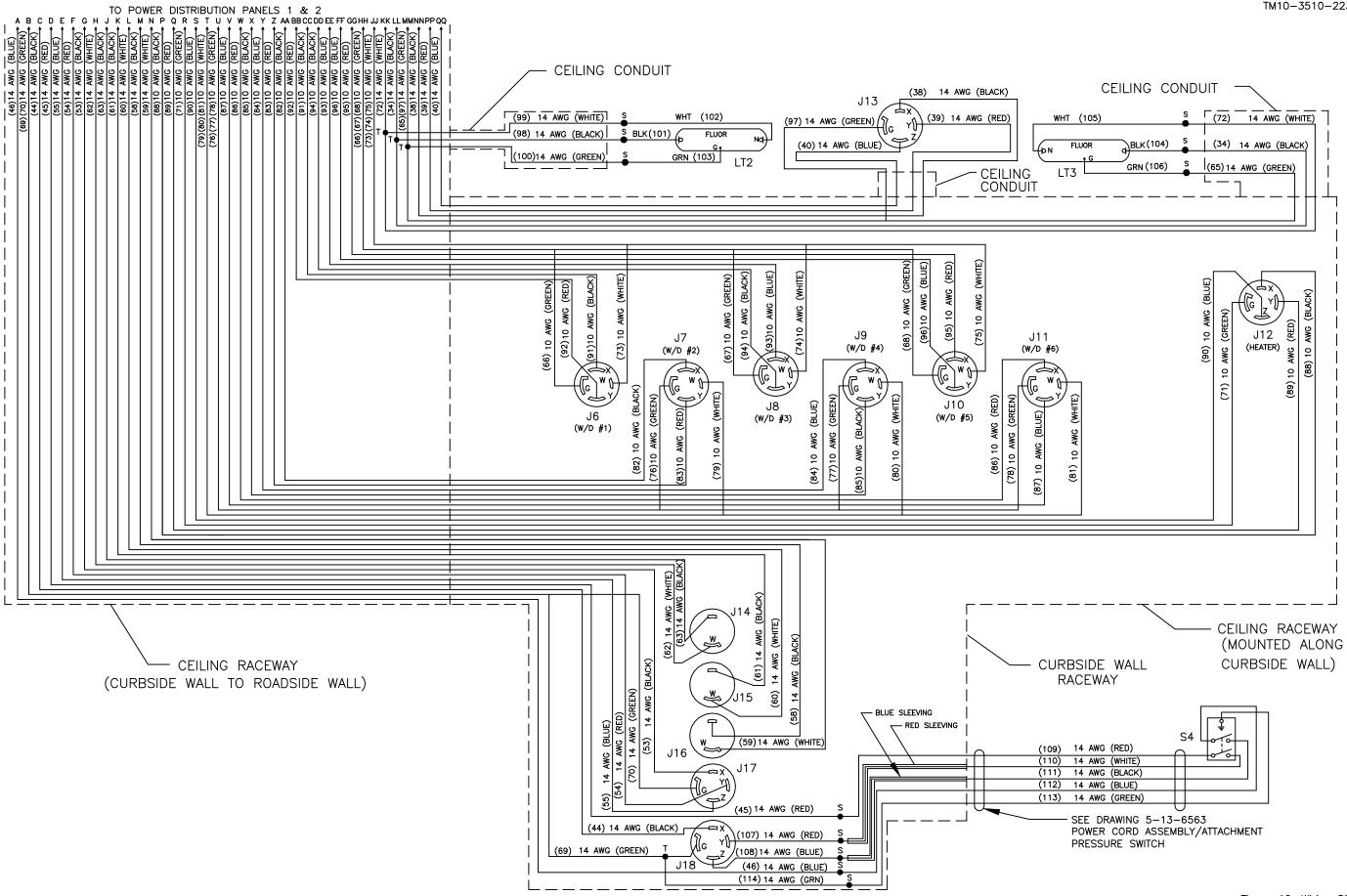
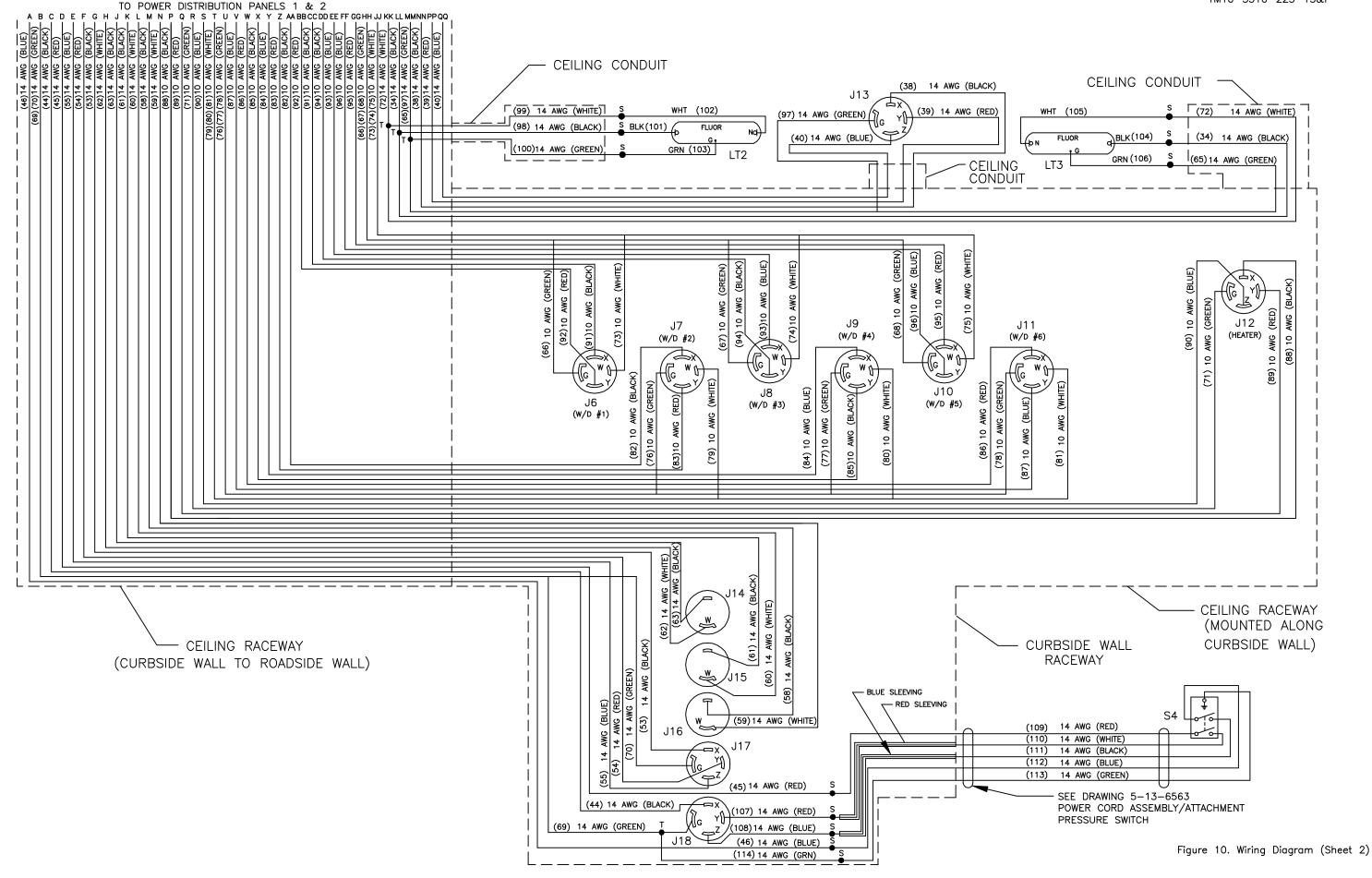


Figure 10. Wiring Diagram (Sheet 1)



By Order of the Secretary of the Army:

ERIC K. SHINSEKI General, United States Army Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0113509

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To: amssbriml@natick.army.mil

Subject: DA Form 2028

- 1. From: Joe Smith
- 2. Unit: home
- 3. Address: 4300 Park
- 4. City: Hometown
- 5. St: MO
- 6. Zip: 77777
- 7. Date Sent: 19-OCT-93
- 8. Pub no: 55-2840-229-23
- 9. Pub Title: TM
- 10. Publication Date: 04-JUL-85
- 11. Change Number: 7
- 12. Submitter Rank: MSG
- 13. Submitter FName: Joe
- 14. Submitter MName: T
- 15. Submitter LName: Smith
- 16. Submitter Phone: 123-123-1234
- 17. Problem: 1
- 18. Page: 2
- 19. Paragraph: 3
- 20. Line: 4
- 21. NSN: 5
- 22. Reference: 6
- 23. Figure: 7
- 24. Table: 8
- 25. Item: 9
- 26. Total: 123
- 27. Text:

This is the text for the problem below line 27.

| R | RECOMMENDED CHANGES TO PUB | | | | ICATIONS | S AND | Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals | | | DATE |
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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 decigrams = .035 ounce 1 dekagram = 10 grams = .35 ounce 1 hectogram = 10 dekagrams = 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 milliliters = .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 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 | 5/9 (after | Celsius | _C |
|----|-------------|-----------------|-------------|----|
| | temperature | subtracting 32) | temperature | |

PIN: 079038-000