

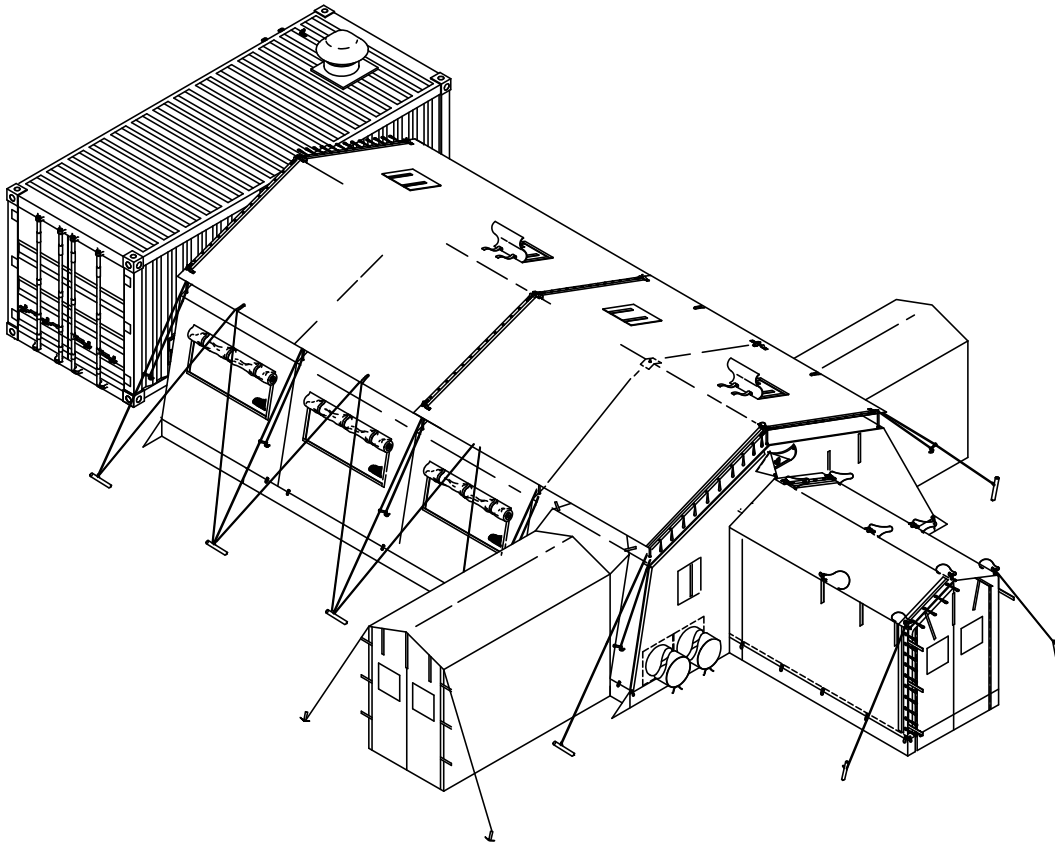
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TECHNICAL MANUAL

**OPERATOR AND FIELD MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)
FOR**

**FORCE PROVIDER
CONTAINERIZED BATCH LAUNDRY (FP-CBL)**

**NSN 3510-01-425-8708 (Green)
NSN 3510-01-550-1505 (Tan)**



DISTRIBUTION STATEMENT A. – Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

12 MARCH 2008

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 this 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.



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



FIRE - flame shows that a material may ignite and cause burns.



FLYING PARTICLES - arrows bouncing off face with face shield shows that particles flying through the air will harm face.



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



HEAVY PARTS - hand with heavy object on top shows that heavy parts can crush and harm.



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



HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.



HOT AREA - hand over object radiating heat shows that part is hot and can burn.



MOVING PARTS - hand with fingers caught between rollers shows that the moving parts of the equipment present a danger to life or limb.



MOVING PARTS - hand with fingers caught between gears shows that the moving parts of the equipment present a danger to life or limb.



MOVING PARTS - human figure with an arm caught between gears shows that the moving parts of the equipment present a danger to life or limb.



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



SLICK FLOOR - wavy line on floor with legs prone shows that slick floor presents a danger for falling.



CHEMICAL - drops of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.

GENERAL SAFETY WARNINGS DESCRIPTION



WARNING

Electrical high voltage cannot be seen but it can kill you, render you unconscious, or severely burn you. Electricity is unlike most other dangerous things you can come in contact with because it gives no warning and no symptoms to be wary of. To ensure your safety and that of other maintenance personnel, always observe the following precautions:

- FP-CBL must be electrically grounded. Failure to properly ground the FP-CBL IAW MIL-HDBK-419 may result in serious injury or death from electrical malfunction.
- DO NOT perform any maintenance on electrical equipment unless all power is removed.
- BE CERTAIN that there is someone assisting you who can remove power immediately.
- ALWAYS place POWER OFF warning tags on power supply switches so that no one will apply power while you are performing maintenance.
- FOR ARTIFICIAL RESPIRATION, REFER TO FM 21 -11.



WARNING

The FP-CBL weighs approximately 12,200 lb (5,534 kg) loaded. Extreme care should be used at all times when lifting it. Proper lifting equipment and observation of safety precautions is required to safely move and stack FP-CBLs. Under No Circumstances should anyone stand under the FP-CBL when it is being lifted or moved. Serious injury or death to personnel may result.



WARNING

Some items associated with or installed in the FP-CBL required two to four people to lift/move. Use appropriate number of personnel when moving large, bulky, or heavy items. To avoid serious injury, individuals should never attempt to lift an item if it requires more than one person.



WARNING

FP-CBL operates with hot water at approximately 180°F (82°C). Allow water to cool before conducting any type of work on the system. Failure to follow this warning could result in serious injury to personnel from scalding.



WARNING

Avoid skin contact with graywater. Graywater is to be considered hazardous at all times. Full protection in the form of rubber gloves and safety glasses should be used when performing any type of maintenance that involves graywater. Failure to follow this warning could result in serious illness.



WARNING

Leather gloves and eye protection must be worn when performing maintenance. Failure to do so could result in serious injury to eyes or hands.



WARNING

Use caution when operating the washers. The washers are equipped with a suspension to dampen vibration, and the washer drum may be observed to move in the washer cabinet. Injury to personnel may occur if fingers are slipped between the washer drum and the washer cabinet.



WARNING

Power supply shall be shut off and disconnected only by qualified personnel. Power source must be shut off and disconnected before attempting to disassemble power supply equipment. Failure to observe this warning may result in severe injury or death by electrocution.

WARNING



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

WARNING



Use caution when performing tasks requiring personnel access the roof of the FP-CBL. The roof of the FP-CBL may be slick due to damp weather conditions. Even minor precipitation such as frost or dew will make the roof of the FP-CBL slippery. Failure to observe safety precautions may result in serious injury or death to personnel.

WARNING



Solvents, cleaners, and adhesives are toxic, and may be flammable and explosive. Wear protective goggles and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and don't breathe vapors. Do not use near open flame or excessive heat. If you become dizzy, get fresh air immediately and get medical aid. If contact with eyes or skin is made, immediately flush with clean water and get medical aid for eyes immediately.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: Zero in the “Change No.” column indicates an original page or work package.

Date of issue for the original manual is:

Original 12 MARCH 2008

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NUMBER OF WORK PACKAGES IS 103, CONSISTING OF THE FOLLOWING:**

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NSN 3510-01-425-8708 (Green)
NSN 3510-01-550-1505 (Tan)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-SECT, 15 Kansas St., Natick, MA 01760-5052. You may also send in your recommended changes via electronic mail or by fax. Our fax number is DSN 256-5205 and commercial number 508-233-5205. Our e-mail address is soldier.pubs@us.army.mil. A reply will be furnished to you.

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HOW TO USE THIS MANUAL

HOW TO OBTAIN TECHNICAL MANUALS

When a new system is introduced to the Army inventory, it is the responsibility of the receiving units to notify and inform the Unit Publications Clerk that a Technical Manual is available for the new system. Throughout the life cycle of the new system, the Distribution Center DOL-W will also provide updates and changes to the Technical Manual.

To receive new Technical Manuals or change packages to existing Technical Manuals (TM) for fielded equipment, provide the Unit Publications Clerk the full Technical Manual number, title, date of publication, and number of copies required. The Unit Publications Clerk will justify the request through the Unit Publications Officer. When the request is approved, the Unit Publications Clerk will use DA Form 12-R to order the series of Technical Manuals from the Army Publishing Directorate (APD).

Instructions for Unit Publications Clerk

Obtain DA Form 12-R and request a publications account from the APD Web site at <http://www.apd.army.mil>. Once on the Website, click on the "Orders/Subscriptions/Reports" tab. From the dropdown menu, select "Establish an Account," then select "Tutorial" and follow the instructions in the tutorial presentation.

Complete information for obtaining Army publications can be found in DA PAM 25-33.

MANUAL STRUCTURE

In this manual, primary chapters appear in upper case/capital letters; work packages are presented in numeric sequence, e.g., 0001, 0002; paragraphs within a work package are not numbered and are presented in a titled format. For a first level paragraph, titles are in all upper case/capital letters, e.g., FRONT MATTER. Subordinate paragraph titles will have the first letter of the first word of each principle word all upper case/capital letters, e.g., Manual Organization and Page Numbering System. The location of additional material that must be referenced is clearly marked. Illustrations supporting maintenance procedures/text are located underneath, or as close as possible to, their referenced paragraph.

FRONT MATTER. Front matter consists of front cover, warning summary, title block, table of contents, and how to use this manual page.

CHAPTER 1 – GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION. Chapter 1 Contains introductory information on the Force Provider Containerized Batch Laundry and its associated equipment as well as theory of operation.

CHAPTER 2 – OPERATOR INSTRUCTIONS. Chapter 2 contains operator procedures.

CHAPTER 3 – TROUBLESHOOTING MASTER INDEX. Chapter 3 provides a troubleshooting index listing all of the problems you are likely to encounter with the FP-CBL as well as references to the individual troubleshooting procedure work packages.

CHAPTER 4 – TROUBLESHOOTING PROCEDURES. Chapter 4 provides troubleshooting procedures.

CHAPTER 5 – PMCS MAINTENANCE INSTRUCTIONS. Chapter 5 contains Preventive Maintenance Checks and Services (PMCS) procedures.

CHAPTER 6 – OPERATOR MAINTENANCE INSTRUCTIONS. Chapter 6 provides maintenance procedures authorized at the operator level that include service upon receipt, repair and replacement of key components, and preparation for storage and shipment.

CHAPTER 7 – SERVICE MAINTENANCE INSTRUCTIONS. Chapter 7 provides maintenance procedures authorized at the unit level that include repair and replacement of key components.

CHAPTER 8 – FIELD MAINTENANCE INSTRUCTIONS. Chapter 8 provides maintenance procedures authorized at the direct support level that include repair and replacement of key components.

CHAPTER 9 – PARTS INFORMATION. Chapter 9 contains Repair Parts and Special Tools List (RPSTL), national stock number index and part number index.

CHAPTER 10 – SUPPORTING INFORMATION. Chapter 10 contains references, maintenance allocation chart and expendable and durable items list.

REAR MATTER. Rear matter consists of alphabetical index, DA Form 2028, authentication page, and back cover.

Manual Organization and Page Numbering System. The manual is divided into ten 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 where XXXX is the work package number (e.g. 0010 is work package 10) and YY represents the number of the page within that work package. A page number such as 0010-1/(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, figures, and tables contained within each chapter and the work package sequence number where it can be found.

Example: If the reader were looking for instructions on Operating Under Usual Conditions, the table of contents indicates that information on operation can be found in chapter 2. Scanning down the listings for chapter 2, information on how to operate the FP-CBL can be found in WP 0007, Operation Under Usual Condition (i.e. Work Package 6).

An Alphabetical Index can be found at the back of the manual; specific topics are listed with the corresponding work package number.

CHAPTER 1

**GENERAL INFORMATION, EQUIPMENT DESCRIPTION,
AND THEORY OF OPERATION
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)**

OPERATOR AND FIELD MAINTENANCE**GENERAL INFORMATION**

SCOPE**Type of Manual**

This technical manual provides Operator and Field maintenance instructions for the Force Provider Containerized Batch Laundry (FP-CBL) NSN 3510-01-425-8708 (Green) and NSN 3510-01-550-1505 (Tan). This manual also provides a Repair Parts and Special Tools List (RPSTL), located in WP 0086 through WP 0096.

Part Number and Equipment Name

Part Number 9-1-0845-1, Force Provider Containerized Batch Laundry (Green version). Part Number 9-1-0845-2, Force Provider Containerized Batch Laundry (Tan version).

Purpose of Equipment

The Force Provider Containerized Batch Laundry provides the capability of washing and drying large batches of clothes in a field environment.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your Force Provider Containerized Batch Laundry 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.

If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeps.ria.army.mil/aepspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), a Product Quality Deficiency Report (PQDR) or a Warranty Claim Action (WCA).

You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. 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.

Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking.

Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking.

SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Destruction of Army materiel to prevent enemy use shall be in accordance with TM 750-244-3.

PREPARATION FOR STORAGE AND SHIPMENT

For storage and shipment, refer to WP 0081 of this manual.

WARRANTY INFORMATION

Warranty information for FP-CBL components is contained in the commercial literature accompanying the components.

Table 1. Nomenclature Cross-Reference List.

COMMON NAME	OFFICIAL NOMENCLATURE
Air Conditioner	Environmental Control Unit or Field Deployable Environmental Control Unit
Bootwall	Modified TEMPER endwall
Breaker Box	Circuit Breaker Box
FP-CBL	Force Provider Containerized Batch Laundry
ECU	Environmental Control Unit
M-80	M-80 Water Heater
QD, QDC	Quick Disconnect Coupling
SEP	Sewage Ejection Pump
TEMPER	Tent, Extendable, Modular, Personnel
TRICON	Triple Container

Table 2. List Of Abbreviations And Acronyms.

ABBREVIATION / ACRONYM	MEANING
A, Amp	Amperes
AC	Alternating Current
AVIM	Aviation Intermediate Maintenance
AVUM	Aviation Unit Maintenance
BII	Basic Issue Item
BOI	Basis of Issue
BTU	British Thermal Unit
C°	Degrees Celsius
CAGEC	Commercial and Government Entity Code
COEI	Component of End Item
CPC	Corrosion Prevention and Control
CTA	Common Table of Allowances
CWK	Cold Weather Kit
DA	Department of the Army
DD	Department of Defense
DISE	Distribution Illumination System, Electrical
ea	Each
ECU	Environmental Control Unit
EIR	Equipment Improvement Recommendation

Table 2. List Of Abbreviations And Acronyms.

ABBREVIATION / ACRONYM	MEANING
EMP	Electromagnetic Pulse
F°	Degrees Fahrenheit
FDECU	Field Deployable Environmental Control Unit
Fig.	Figure
FM	Field Manual
ft	Foot
ft-lb	Foot/pound(s)
F x F	Female by Female
G	Gram
Gal	Gallon
GFCI	Ground Fault Circuit Interrupt
GPM	Gallons per Minute
HCI	Hardness Critical Item
Hz	Hertz
ISO	International Organization for Standardization
K	Thousand
kg	Kilogram(s)
kPa	Kilopascal(s)
KW	Kilowatt(s)
l	Liter(s)
lb	Pound(s)
m, M	Meter(s)
MAC	Maintenance Allocation Chart
MOS	Military Occupational Specialty
MSCW	Modification System Cold Weather
MTOE	Modified Table of Organization and Equipment
No.	Number
NIIN	National Item Identification Number
NSN	National Stock Number
P/N	Part Number
PC/PCB	Printed Circuit Board
Ph	Phase
PDISE	Power Distribution Illumination System, Electric
PMCS	Preventive Maintenance Checks and Services
POL	Petroleum, Oils, and Lubricants
Pr	Pair
PVC	Polyvinyl Chloride
Qty	Quantity
QD or QDC	Quick Disconnect
SOP	Standard Operating Procedure
SF	Standard Form
SEP	Sewage Ejection Pump
SMR	Source, Maintenance, and Recoverability
SRA	Specialized Repair Activity
TEMPER	Tent, Extendable, Modular, Personnel
TOC	Table of Contents
TOE	Table of Organization and Equipment
TM	Technical Manual
TMDE	Test, Measurement, and Diagnostic Equipment
TRICON	Triple Container
V	Volts
VAC	Volt Alternating Current
WP	Work Package
WT	Weight

SUPPORTING INFORMATION FOR REPAIR PARTS, SPECIAL TOOLS, AND SUPPORT EQUIPMENT

Refer to the Maintenance Allocation Chart (MAC) in Work Package 0097 for a listing of maintenance items and tools or test equipment. Refer to the Repair Parts and Special Tools List (RPSTL) in WP 0086 through WP 0096 for details concerning repair parts. No special tools are required for operating or maintaining the FP-CBL.

WARNINGS, CAUTIONS AND NOTES

Be alert and note WARNINGS, CAUTIONS, and NOTES. These provide for safe operation of the equipment, and protect you and your equipment from injury and damage.

END OF WORK PACKAGE

OPERATOR AND FIELD MAINTENANCE**EQUIPMENT DESCRIPTION AND DATA**

CHARACTERISTICS, CAPABILITIES AND FEATURES

The FP-CBL contains two commercial type washers and dryers and is capable of handling 150-200 pounds of laundry per hour. The FP-CBL is assembled, operated, and disassembled by MOS 92S, Laundry and Textile Specialist; however, power supply connections must be made by MOS 21R, 21P, 63J, or qualified civilian personnel.

Characteristics

- Housed in modified ISO container (Figure 1).
- Two industrial frontloading washers and dryers.
- Four person assembly and disassembly (not including TEMPER and M-80).
- A 32-foot, Type XIX TEMPER with modified end section (bootwall) attaches to the FP-CBL for use as a workstation (Figure 2).

Capabilities and Features

- Can continuously process 150-200 pounds of laundry per hour.
- Programmable electronic controls provide fully automated operation of washers and dryers.
- Contains utility connections for fresh water, graywater, and electrical power.
- Space heater and roof-mounted laundry exhaust fan allow temperature control and ventilation, as needed.
- Washers utilize a water reuse system for recycling water.

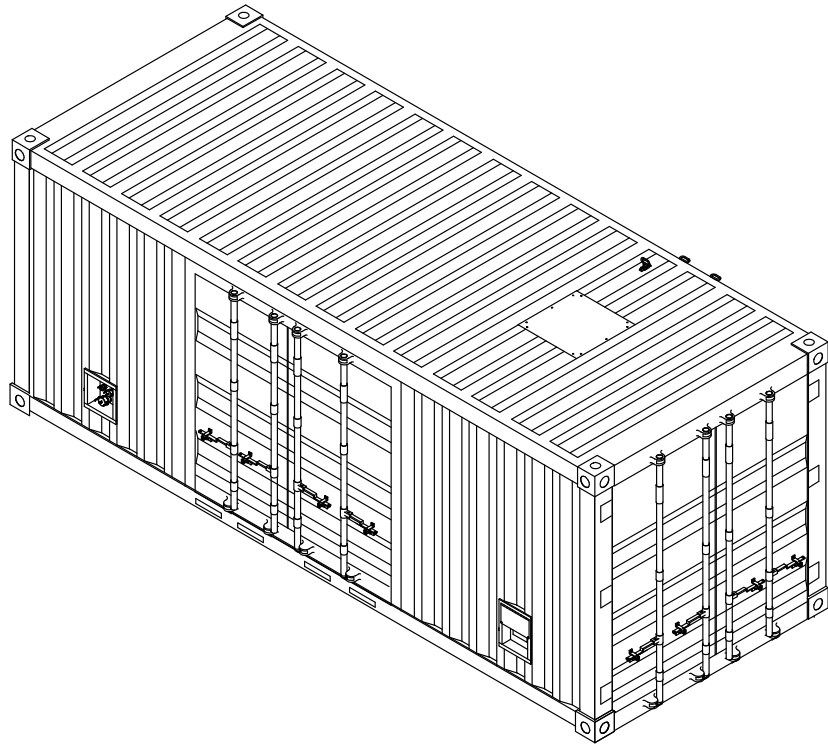


Figure 1. Force Provider Containerized Batch Laundry In Stowed Configuration.

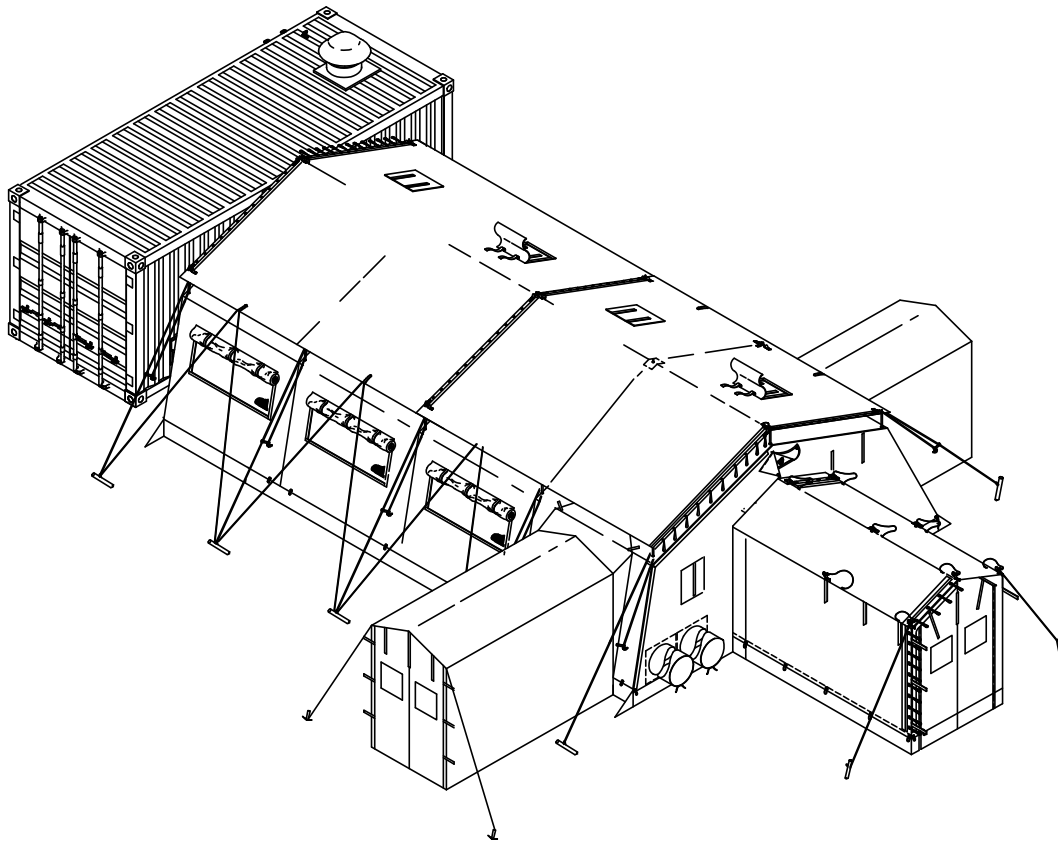


Figure 2. Force Provider Containerized Batch Laundry In Deployed Configuration.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

Force Provider Containerized Batch Laundry (FP-CBL)

The FP-CBL is built into a modified general cargo container (Figure 3, Item 3) with forklift pockets and ISO fittings for moving and lifting the container. A 15,000-pound forklift or minimum 15,000-pound capacity hoists and slings are required for lifting. Built-in, folding hand grips on the exterior sidewall of the container allow access to top of FP-CBL.

Washers

Two 50-pound capacity washers (Figure 3, Item 18) are fitted to the FP-CBL. Each is capable of processing 50 pounds of laundry at a time. Each washer has a programmable microprocessor controller, which regulates the operating cycles. The washers are equipped with a water reuse system that conserves fresh water use. The washers rest on frames with heavy duty casters that allow the washer to be rolled out for maintenance. The washers have also been fitted with braces to lock the washer's suspension during transit. The FP-CBL is fitted with isolation valves for each washer, allowing one washer to function while another is inoperable or being maintained in place.

Dryers

Two 75-pound capacity electric dryers (Figure 3, Item 10) are fitted to the FP-CBL. Each is capable of drying 75 pounds of laundry at a time. Each dryer is equipped with a programmable microprocessor controller, which regulates the dryer's operating cycles. The dryer exhaust discharges outside the FP-CBL through 8-inch ducts (Figure 3, Item 13). The FP-CBL dryer exhausts are placed on the sides of the container, adjacent to the double service door for the dryers.

Service Entry Panel

The FP-CBL employs a weather tight service entry wall panel (Figure 3, Item 19) for water utility connections for the FP-CBL. The panel has a 1-inch hot water connection from the M-80 water heater, a 1-1/2-inch connection from the 30 GPM water pump, and a 3-inch graywater discharge fitting for connection to the Sewage Ejection Pump (SEP) (Figure 3, Item 2).

Electrical Panels

The FP-CBL requires three 100A power inputs. The main electrical panel (Figure 3, Item 26) has one 100A power input feeding the main circuit breaker panel (Figure 3, Item 25). The main electric panel is also fitted with three 20A receptacles available for powering the Sewage Ejection Pump (SEP) and M80 Water Heater, as well as an optional 40A TEMPER electrical supply. The dryer electrical panel (Figure 3, Item 9) has two 100A power inputs, each feeding a separate circuit breaker panel.

Circuit Breaker Panels

Three 100A service panels are fitted for electrical distribution to FP-CBL components. The main circuit breaker panel (Figure 3, Item 25) powers and provides circuit protection to the washers, FP-CBL overhead lighting (Figure 3, Item 24), exhaust fan (Figure 3, Item 6), space heater (Figure 3, Item 23), the external 20A receptacles, and the external MS receptacle. The main circuit breaker panel is also fitted with a 115 VAC service receptacle.

Dryer Panels No. 1 (Figure 3, Item 12) and No. 2 (Figure 3, Item 11) power and provide circuit protection to the dryers. Both of these panels are fitted with a single 100A circuit breaker.

Washer Service Door

The FP-CBL is fitted with a double service door to provide access to the back of the washers (Figure 3, Item 21). This door also provides access to the main circuit breaker panel.

Dryer Service Door

The dryer double service door (Figure 3, Item 7) provides access to the back of the dryers and the dryer circuit breaker panels.

Main Entrance Doors

The FP-CBL main entrance doors (Figure 3, Item 4) serve as the operational access to the FP-CBL washer and dryer facilities.

Ramp

A ramp (Figure 3, Item 5) is provided to allow safe and efficient entry and exit from the operator compartment of the FP-CBL. The ramp is shipped separately in TRICON 2B.

Exhaust Fan

The exhaust fan (Figure 3, Item 6) provides ventilation inside FP-CBL and is controlled with a fan switch (Figure 3, Item 15).

Space Heater

The space heater (Figure 3, Item 23) is designed to provide sufficient heating inside the FP-CBL in order to keep the interior plumbing above freezing when not in use. Heating for operator comfort is provided by an external environmental control unit.

Lights

The FP-CBL is fitted with four fluorescent lights (Figure 3, Item 24), controlled with a single light switch (Figure 3, Item 16).

M-80 Water Heater

An M-80 water heater (Figure 3, Item 1) provides hot water for the FP-CBL washers. The M-80 is powered from the main electrical panel (Figure 3, Item 26).

Water Hoses and Miscellaneous Fittings

Hoses with quick disconnect couplings (QDC) transfer fresh water to the FP-CBL and conduct graywater to the SEP during FP-CBL operation.

TEMPER

A standard Type XIX TEMPER (Figure 3, Item 27) is fitted to the FP-CBL for use as a workstation for laundry operations. A modified TEMPER endwall (bootwall) (Figure 3, Item 8) forms a weather tight connection between the TEMPER and FP-CBL.

Waste Water Pump/Tank

The wastewater pump/tank (Figure 3, Item 20) provides a means to remove wastewater from the FP-CBL to the sewage ejection tanks. The tank stores discharged wastewater from the washer and the integral pump moves wastewater into sewage tanks.

Reuse Water Pump Tank

The reuse water pump tank (Figure 3, Item 22) provides a means to transfer the laundry rinse water from the washer to a centralized reuse holding tank.

Reuse Holding Tank

The water reuse holding tank (Figure 3, Item 17) stores the supply of reuse water for both washers.

Air Compressor

A portable air compressor (Figure 3, Item 14) is provided with the FP-CBL to purge all water from the internal plumbing in preparation for extended period of downtime or storage. The air compressor is stowed on the floor behind the dryers.

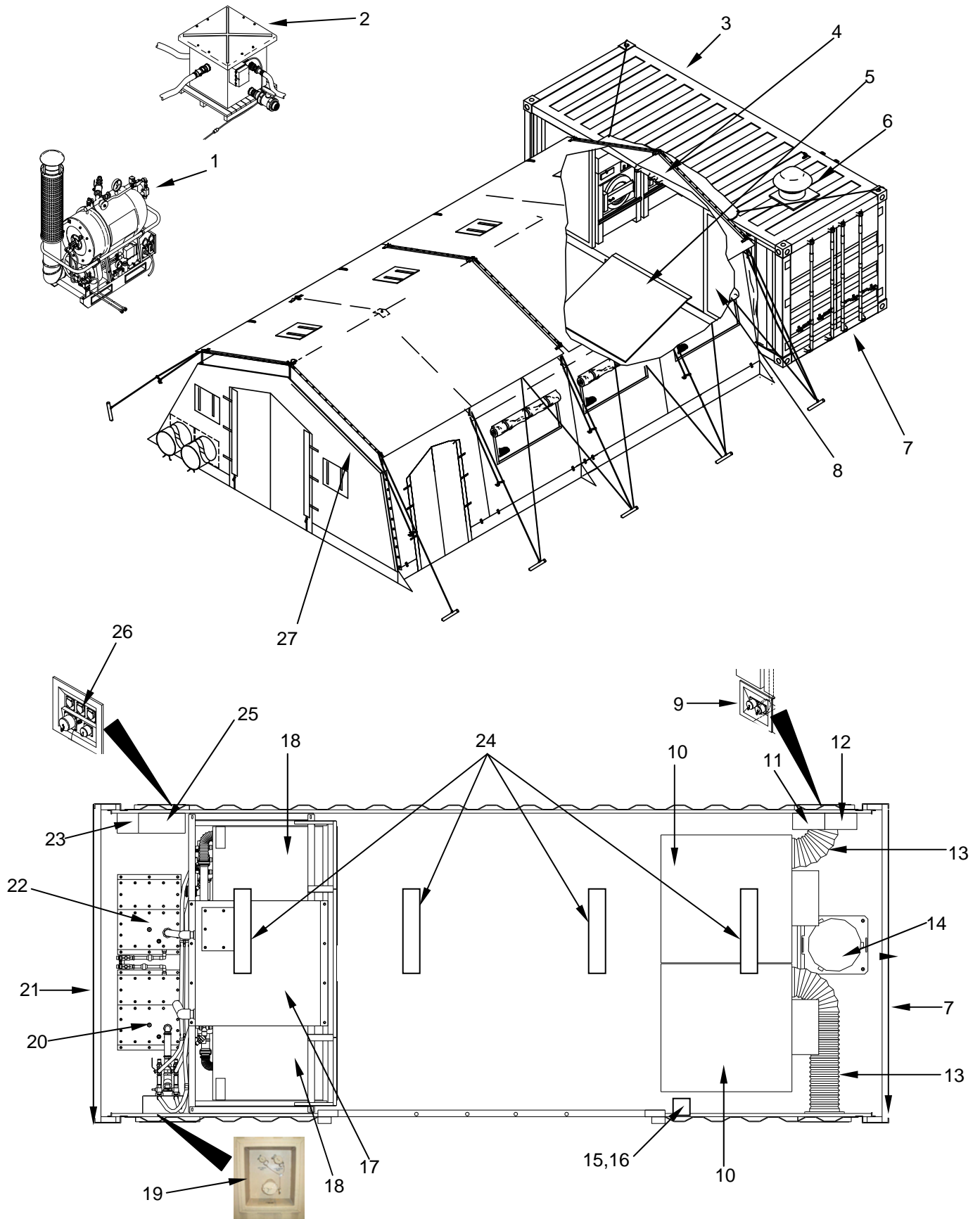


Figure 3. FP-CBL Major Components.

Table 1. FP-CBL Equipment Data.

External dimensions:		
Length	20 feet.....	(6.10 meters)
Width	8 feet.....	(2.44 meters)
Height	8 feet.....	(2.44 meters)
Internal dimensions:		
Length	19 feet, 4 inches	(5.80 meters)
Width	7 feet, 6 inches	(2.25 meters)
Height	7 feet, 3-3/8 inches	(2.18 meters)
Door dimensions:		
Main entrance door		
Height	6 feet, 11-5/8 inches	(2.12 meters)
Width.....	7 feet, 7 inches.....	(2.31 meters)
Double Service doors (Washer and Dryer Access)		
Height	6 feet, 11-5/8 inches	(2.12 meters)
Width.....	7 feet, 7 inches	(2.31 meters)
Weight:		
Unmodified General Cargo Container.....	5150 pounds.....	(2336 kilograms)
Modified as FP-CBL, packed for movement	12200 pounds.....	(4536 kilograms)
Required electrical input:		
Containerized Batch Laundry.....	300 Amp, 208 V, three phase AC	
Washer (each).....	15 Amp, 208 V, single phase AC	
Dryer (each)	100 Amp, 208 V, three phase AC	
Space Heater	20 Amp, 208 V, single phase AC	
M-80 Water Heater.....	20 Amp, 208 V, three phase AC	
Fan, exhaust	20 Amp, 120 V, single phase AC	
Lighting.....	20 Amp, 120 V, single phase AC	
Waste Pump.....	15 Amp, 120 V, single phase AC	
Reuse Transfer Pump.....	15 Amp, 120 V, single phase AC	
Service Receptacle	20 Amp, 120 V, single phase AC	
Required Fresh Water Flow Rate	30 gallons/minute	114 liters/minute
Environmental:		
Container interior operating temperature range ¹	32° to 120° Fahrenheit	0° to 49° Celsius
Maximum operating elevation	7000 feet.....	2114 meters

¹ When temperatures of 32°F or lower are anticipated, the interior space heater is used to maintain the temperature of the container interior within operating limits. The interior of the container should therefore never go below 32°F.

END OF WORK PACKAGE

OPERATOR AND FIELD MAINTENANCE**THEORY OF OPERATION**

GENERAL

The Force Provider Containerized Batch Laundry (FP-CBL) operates exclusively as a component of Force Provider, and is comprised of two washers, two dryers, an M-80 Water Heater, utility connection panels (fresh water, graywater, and electrical) and circuit breaker panels to distribute power and provide circuit protection. The system is a manned station designed to process 150-200 pounds of laundry per hour, including batches of uniforms and sleeping bags.

FP-CBL

The FP-CBL is housed in a modified 8-ft x 8-ft x 20-ft ISO cargo container (Figure 1, Item 1). Two 50-pound capacity automatic washers (Figure 1, Item 13) and two 75-pound capacity automatic electric dryers (Figure 1, Item 6) are housed within the FP-CBL container. Main access to the FP-CBL is through double entrance doors (Figure 1, Item 23), which are opened before attachment of the TEMPER via the modified endwall. Service entry doors (Figure 1, Item 3) allow access to the back of both the washers and dryers. A wall mounted space heater (Figure 1, Item 17) and a roof mounted exhaust fan (Figure 1, Item 2) allow for climate control as needed. The space heater is designed to provide for enough interior heating to prevent freezing of internal plumbing. An Environmental Control Unit (ECU) or Field Deployed Environmental Control System (FDECU) (Figure 1, Item 18) can be fitted to the tent to provide heating and air conditioning.

TEMPER

The 32-ft Type XI TEMPER (Figure 1, Item 5), is used as a work station for accepting, sorting, and distributing laundry. The TEMPER attaches to the FP-CBL by a modified endwall (Figure 1, Item 4).

FRESH WATER SYSTEM

The FP-CBL receives fresh water service from the Force Provider water system. Cold fresh water from the Force Provider Water Distribution System is fed both to the FP-CBL and to the M-80 water heater (Figure 1, Item 24) through 1-1/2-inch QD hoses. The M-80 provides hot fresh water to the FP-CBL through a 1-inch QD hose. Hot and cold fresh water enter the FP-CBL through QDC fittings on the water service panel (Figure 1, Item 14). The water is then piped through distribution tees to each washer.

GRAYWATER SYSTEM

The washers installed in the FP-CBL employ a water reuse system. Water from the last rinse cycle is collected and saved in the reuse tank (Figure 1, Item 21) and reuse transfer tank (Figure 1, Item 16) for use in subsequent wash cycles. Graywater from wash cycles is then discharged to the waste tank (Figure 1, Item 15) and pumped through PVC piping to the 3-inch QDC discharge fittings on water service panel (Figure 1, Item 14). A 3-inch QD hose connects the water service panel to the SEP (Figure 1, Item 22).

ELECTRICAL SYSTEM

The FP-CBL receives 208 VAC power from Force Provider through three 100A cables. One cable feeds the main power service panel (Figure 1, Item 19). Two cables feed the dryer power service panel (Figure 1, Item 7). The main power service panel distributes power internally to the washers, exhaust fan, and FP-CBL lighting through the main circuit breaker panel (Figure 1, Item 20). The main power service panel has outlet receptacles for powering external components. One 20A outlet is used for powering the M-80 water heater. A second 20A outlet is available to power the SEP, and the remaining 20A outlet is a spare. A 40A outlet is provided for powering the ECU or FDECU, if fitted. All outlet receptacles are controlled and protected by the main circuit breaker panel. The dryer power service panel distributes power from the two 100A cables to two separate circuit breaker panels (Figure 1, Item 9). The dryer circuit breaker panels each provide power to a single dryer.

VENTILATION SYSTEM

Dryer exhaust is vented directly to the outside through vents (Figure 1, Item 8 and Item 11) fitted to the sidewall of the container. The vents are connected to the dryers by flexible hose. Container ventilation is accomplished by the use of a roof mounted exhaust fan (Figure 1, Item 2).

AIR COMPRESSOR

A portable air compressor (Figure 1, Item 10) is fitted to the FP-CBL for purging water from the internal plumbing, preventing damage during cold storage conditions. The air compressor is stowed behind the dryers.

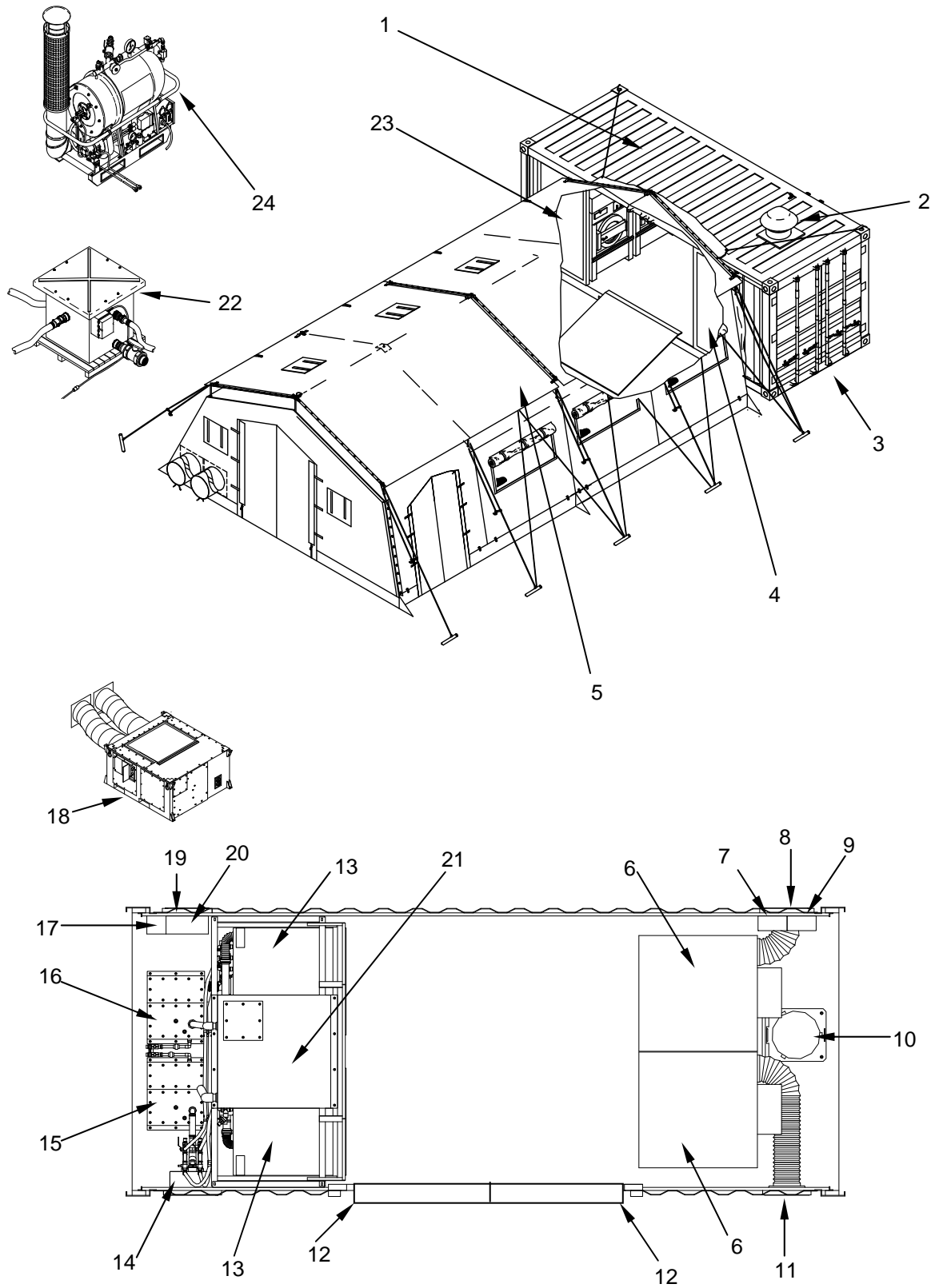


Figure 1. Force Provider Containerized Batch Laundry Floor Plan.

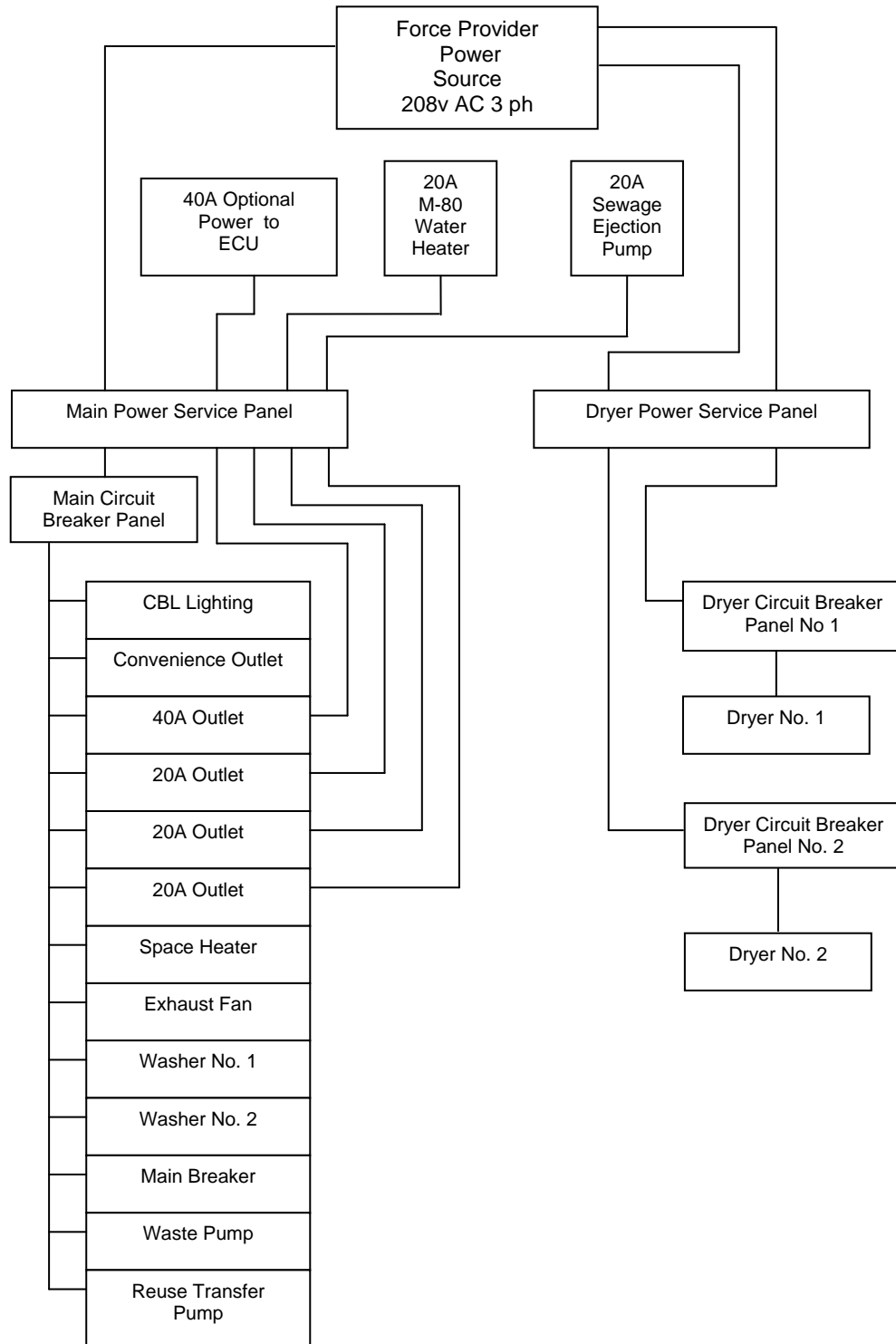


Figure 2. Force Provider Containerized Batch Laundry Power Distribution System.

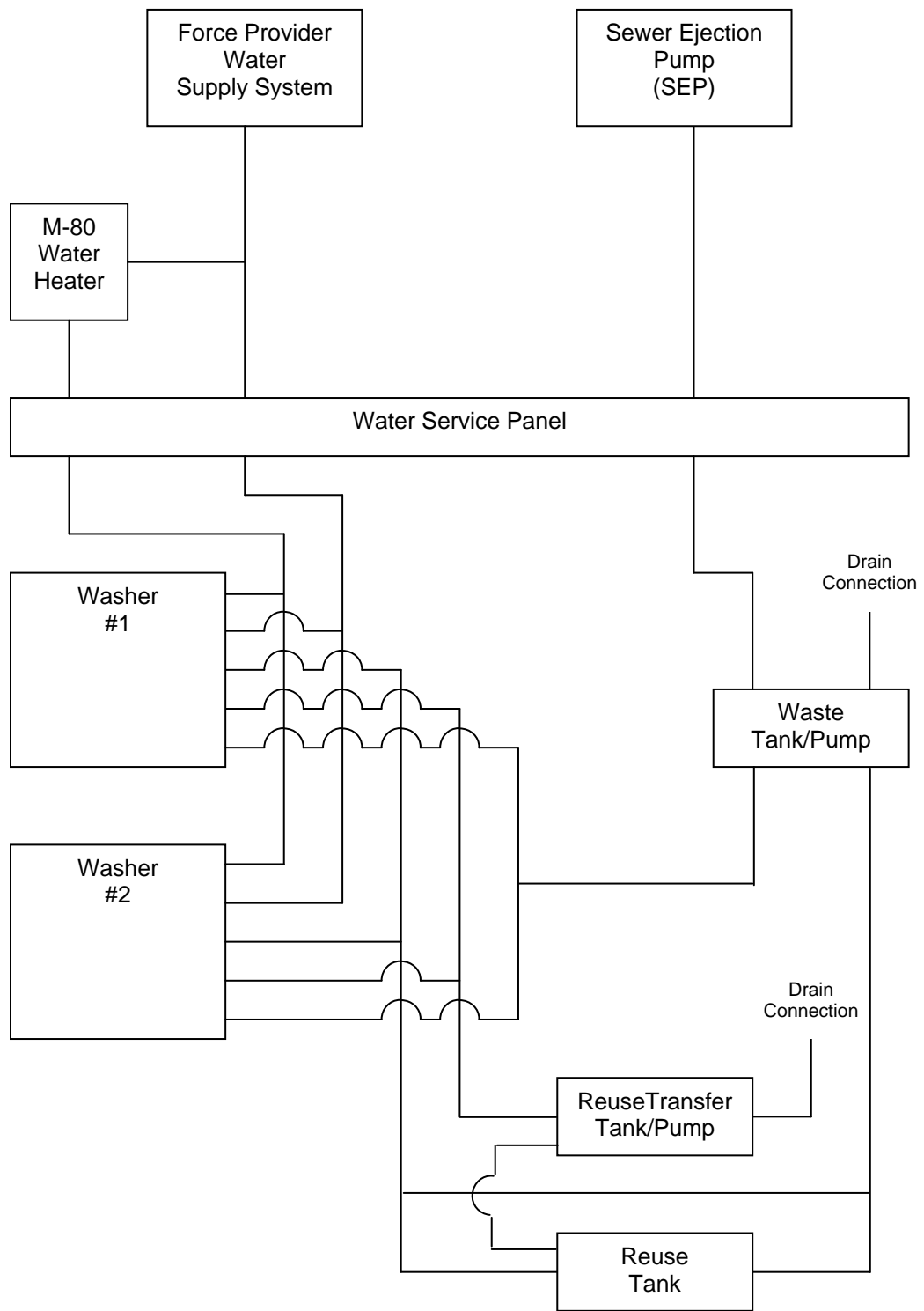


Figure 3. Force Provider Containerized Batch Laundry Water Distribution System.

END OF WORK PACKAGE

CHAPTER 2

OPERATOR PROCEDURES

FOR

FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY

(FP-CBL)

CREW MAINTENANCE

DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

Introduction

This work package provides the descriptions and location of the FP-CBL controls and indicators. Personnel operating and maintaining the FP-CBL should know the location and proper use of every control and indicator. The following illustration shows the locations of the controls and indicators on the FP-CBL as well as providing references for associated equipment.

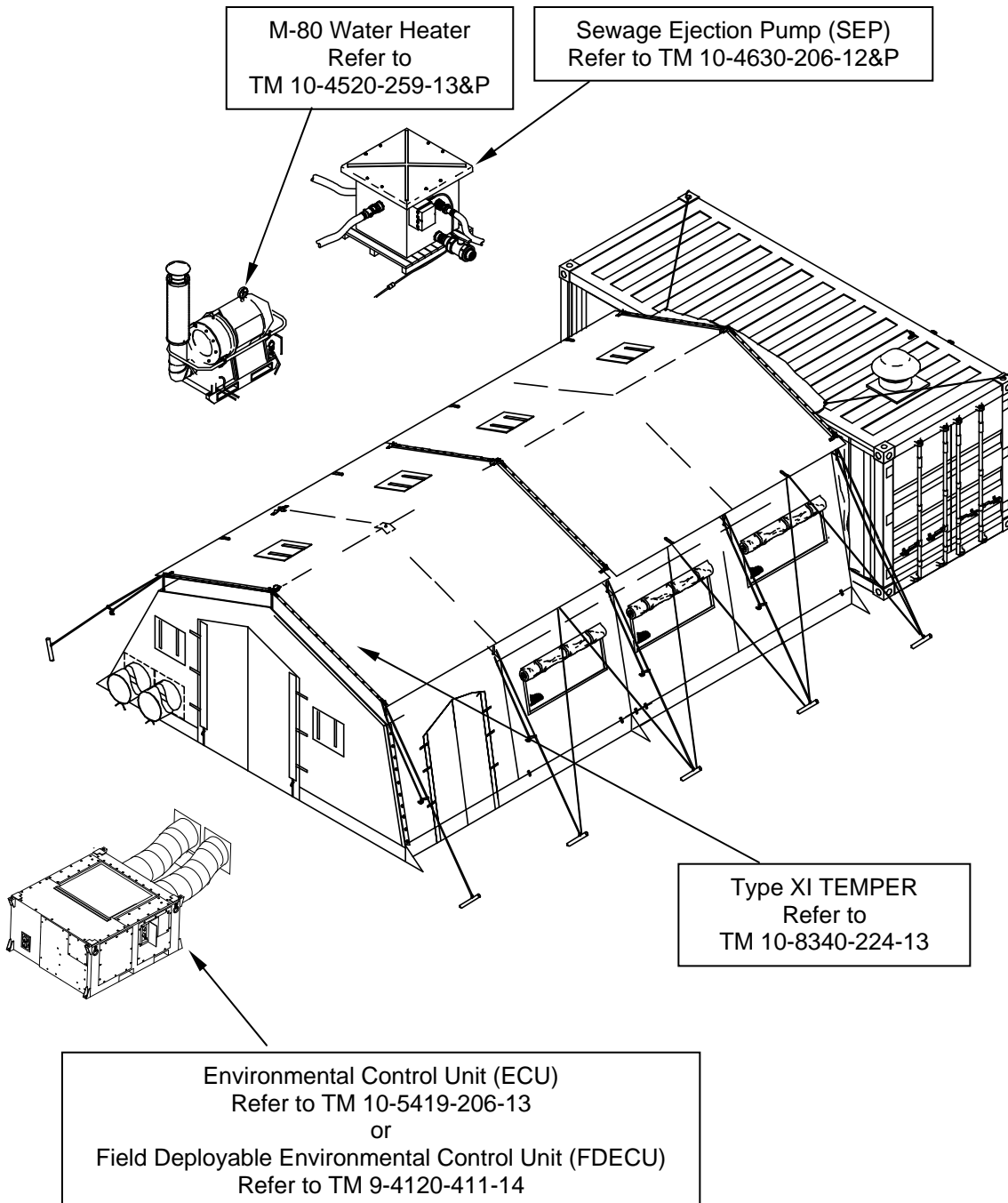


Figure 1. FP-CBL Ancillary Equipment Controls and Indicators.

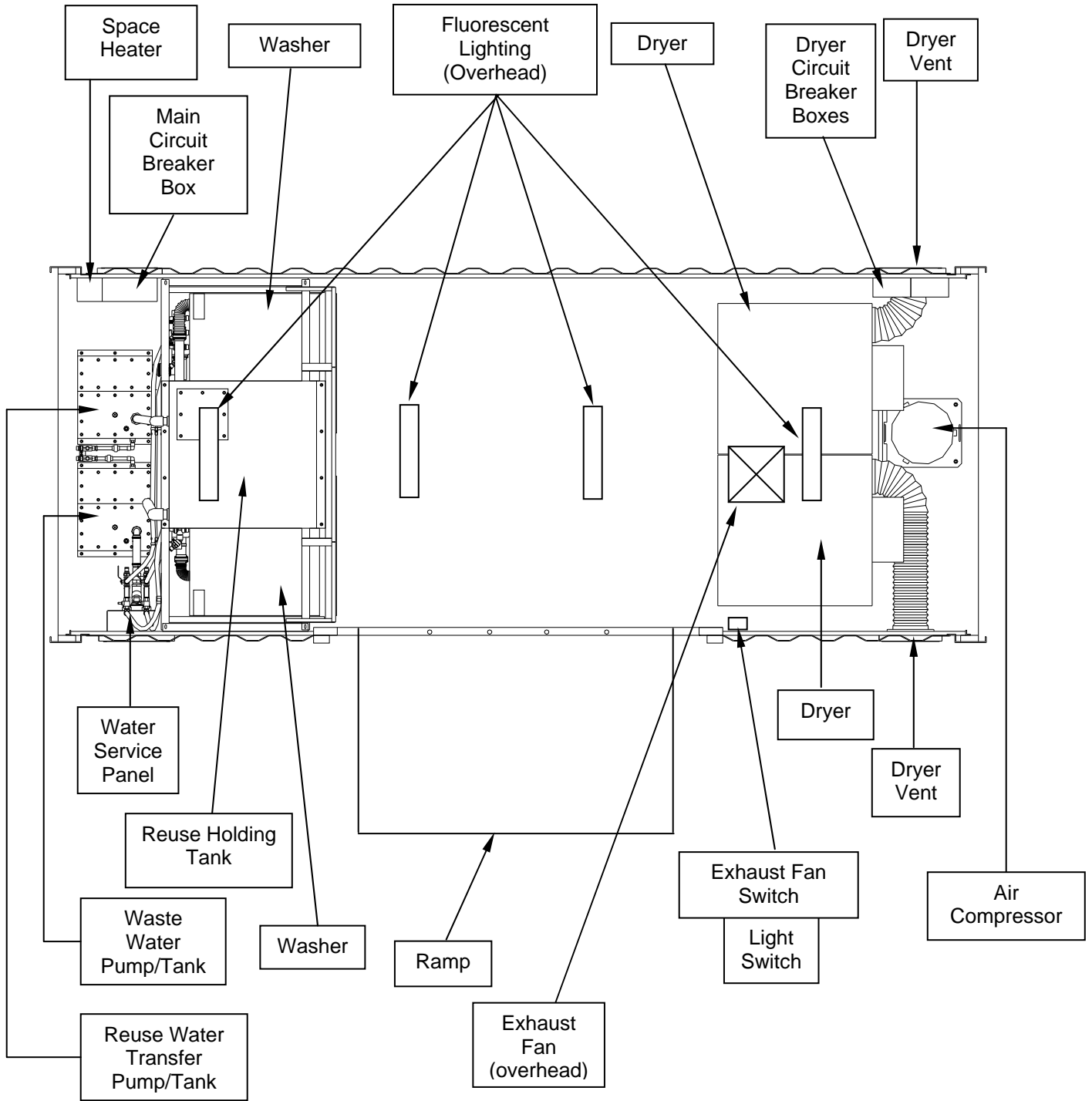


Figure 2. Force Provider Containerized Batch Laundry Floor Plan.

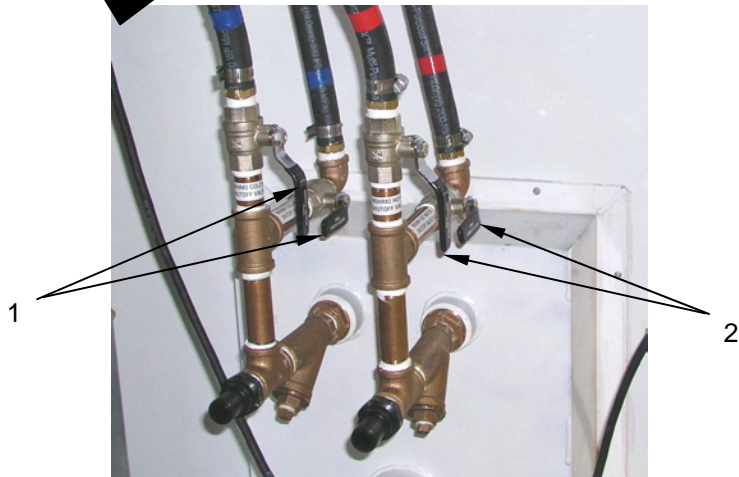
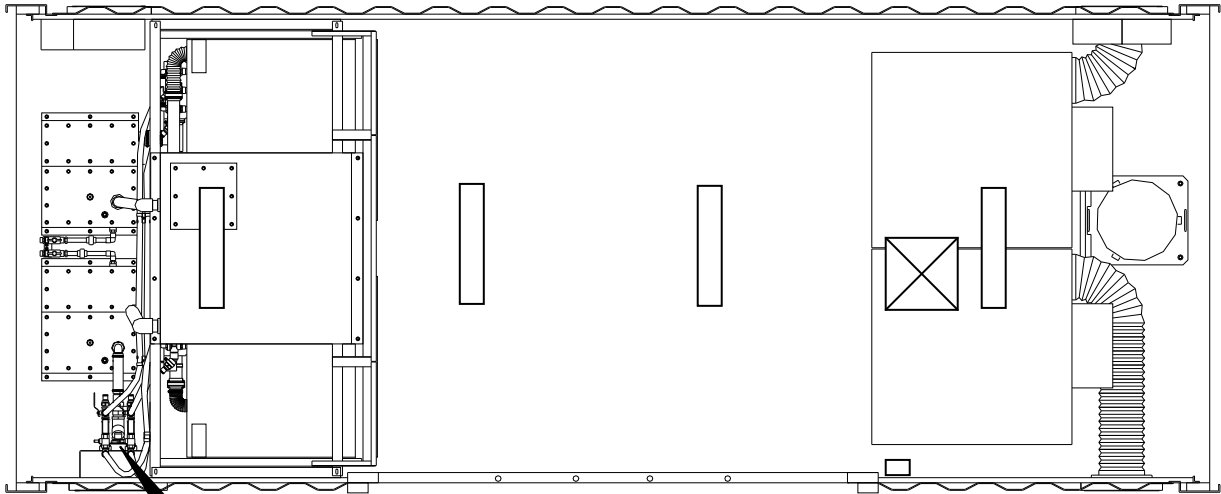


Figure 3. Water Service Panel.

Table 1. Water Service Panel.

Key	Item	Function
1	Cold Water Valve	Controls Cold Water To Washers
2	Hot Water Valve	Controls Hot Water To Washers

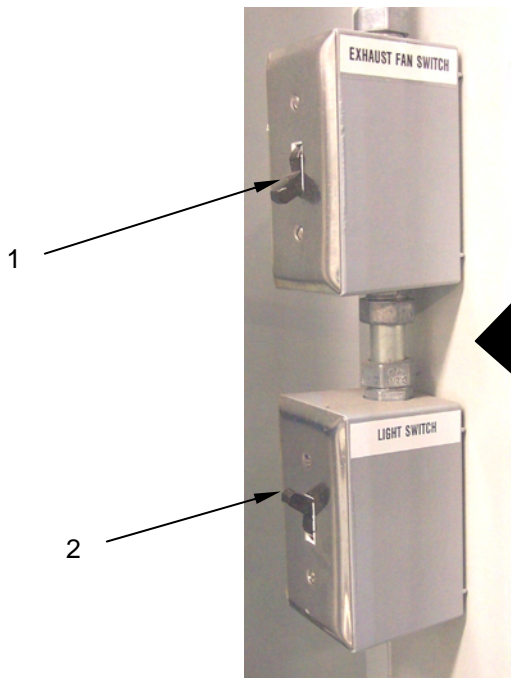
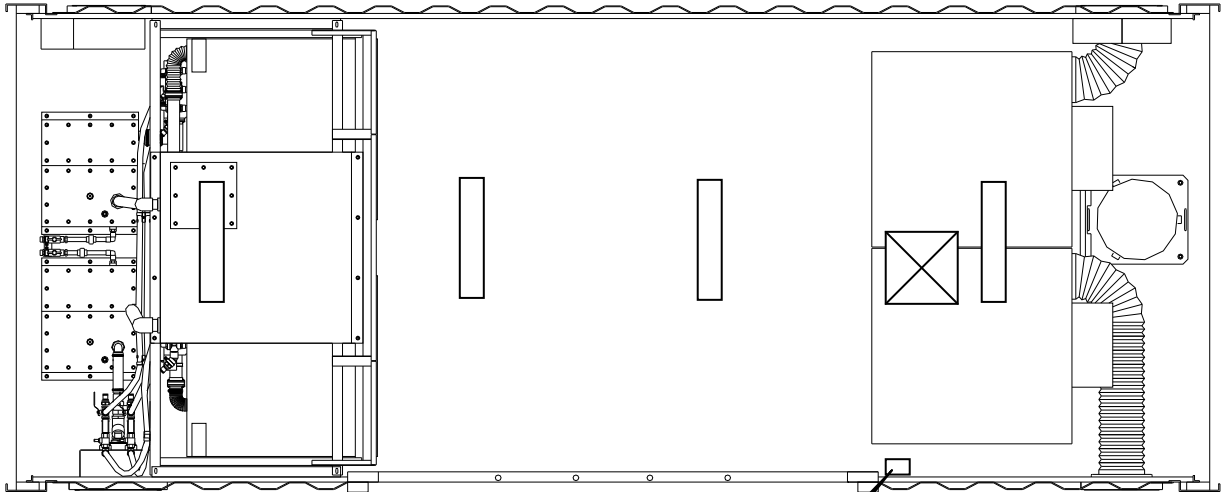


Figure 4. Fan and Light Switches.

Table 2. Fan and Light Switches.

Key	Item	Function
1	Fan Switch	Controls Exhaust Fan
2	Light Switch	Controls Interior Lighting

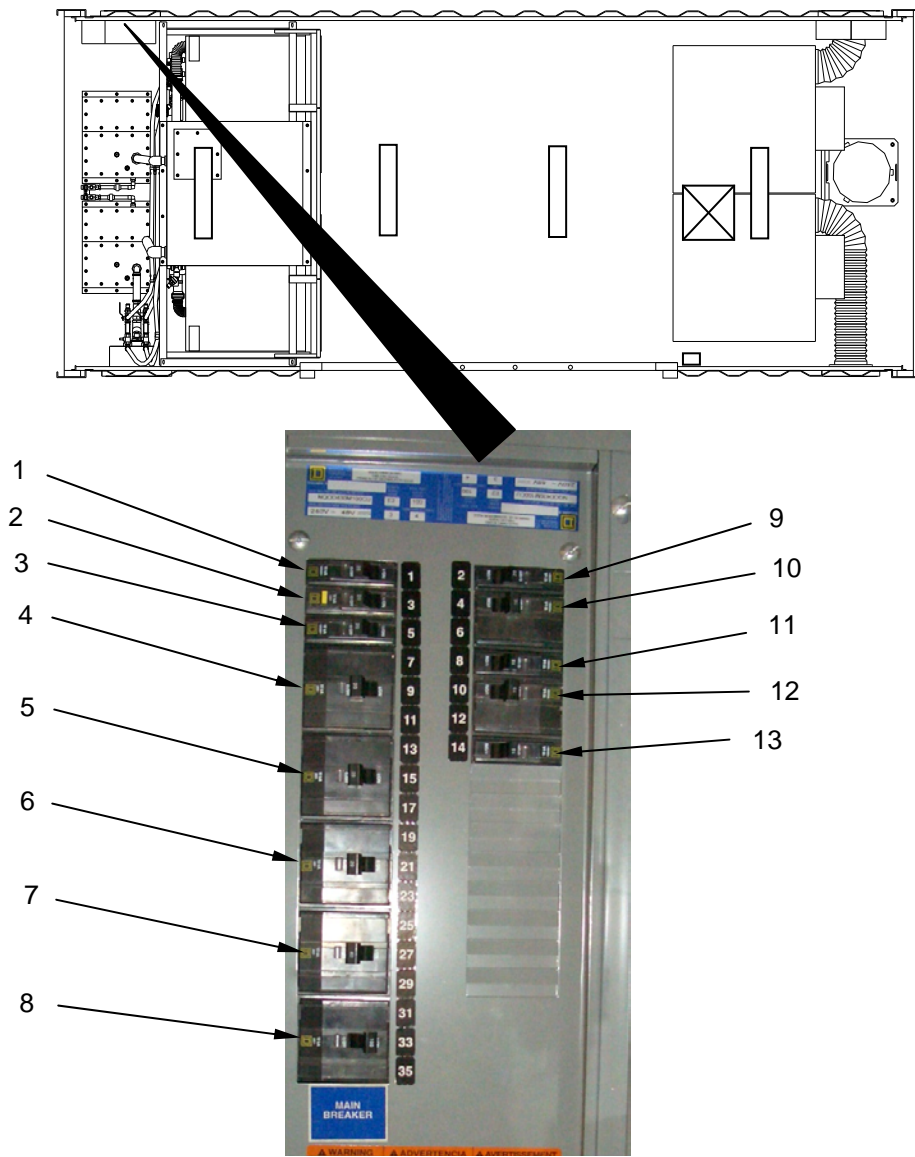


Figure 5. Main Circuit Breaker Panel.

Table 3. Circuit Breakers.

Key	Item	Function
1	Circuit Breaker 20 A	Interior Lighting
2	Circuit Breaker 20 A with GFCI	Service Receptacle
3	Circuit Breaker 20 A	Exhaust Fan
4	Circuit Breaker 20 A	208V/20A External Receptacle #3
5	Circuit Breaker 20 A	208V/20A External Receptacle #2
6	Circuit Breaker 20 A	208V/20A External Receptacle #1
7	Circuit Breaker 40 A	208V/40A External MS Connector
8	Circuit Breaker 100 A	Main Breaker
9	Circuit Breaker 20 A	Space Heater
10	Circuit Breaker 15 A	Washer No. 1 Receptacle
11	Circuit Breaker 15 A	Waste Pump Receptacle
12	Circuit Breaker 15 A	Washer No. 2 Receptacle
13	Circuit Breaker 15 A	Reuse Transfer Pump Receptacle

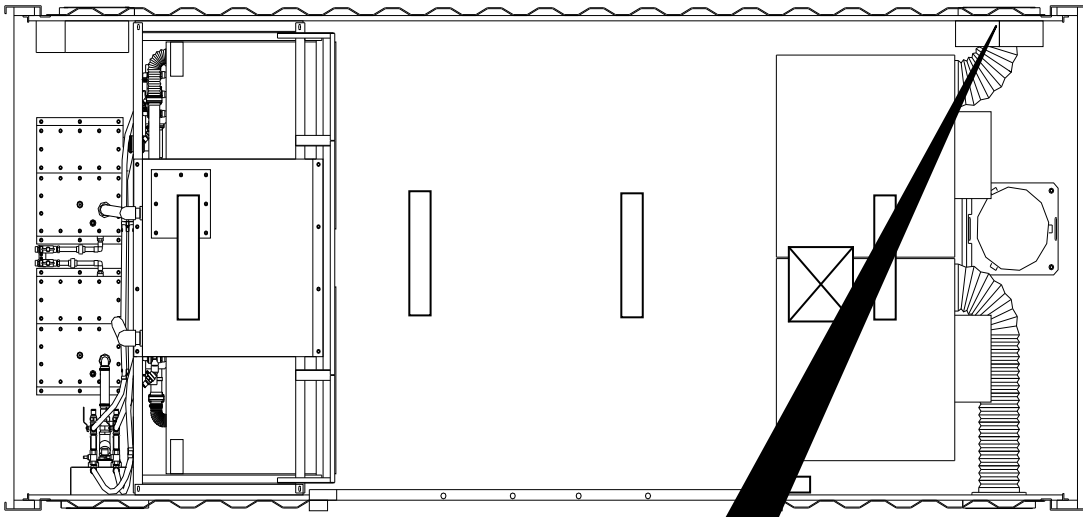
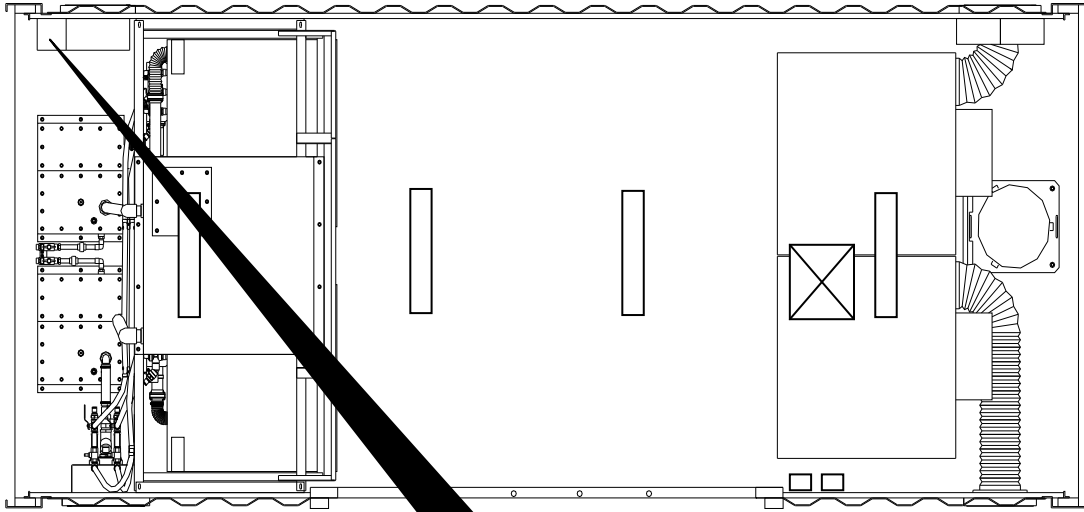


Figure 6. Dryer Circuit Breaker Panel.

Table 4. Dryer Circuit Breakers.

Key	Item	Function
1	Dryer No. 1	Controls Dryer No. 1
2	Dryer No. 2	Controls Dryer No. 2



1

Figure 7. Space Heater Controls.

Table 5. Space Heater.

Key	Item	Function
1	Thermostat	Controls Operation of Heater

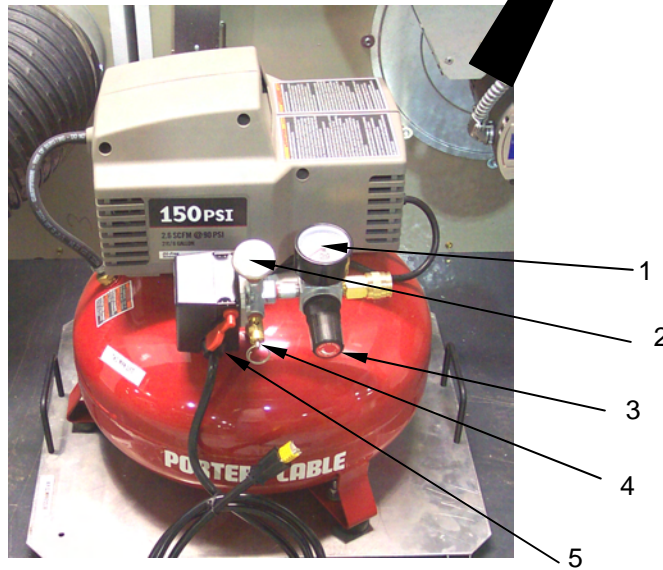
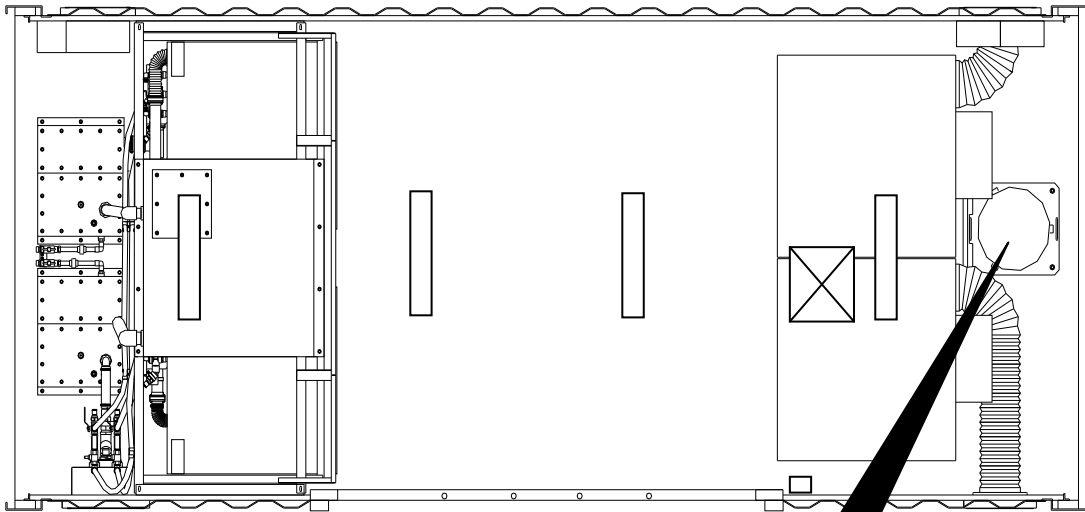


Figure 8. Portable Air Compressor.

Table 6. Portable Air Compressor.

Key	Item	Function
1	Pressure Gauge, Supply	Displays Supply Air Pressure to Air Hose
2	Pressure Gauge, Tank	Displays Tank Air Pressure
3	Pressure Regulator, Supply	Controls Supply Air Pressure to Air Hose
4	Relief Pressure	Manually Relieves Pressure from Tank
5	On/Off Switch	Enables/Disables Power to Air Compressor

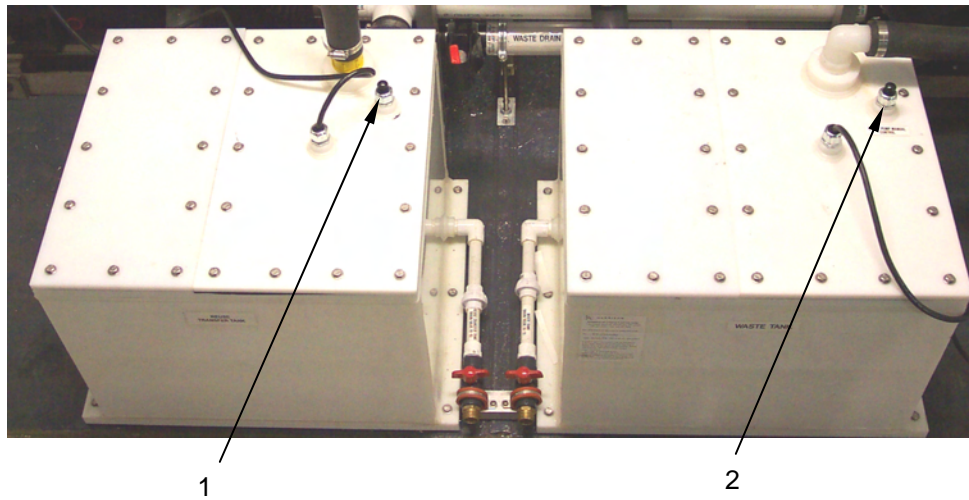
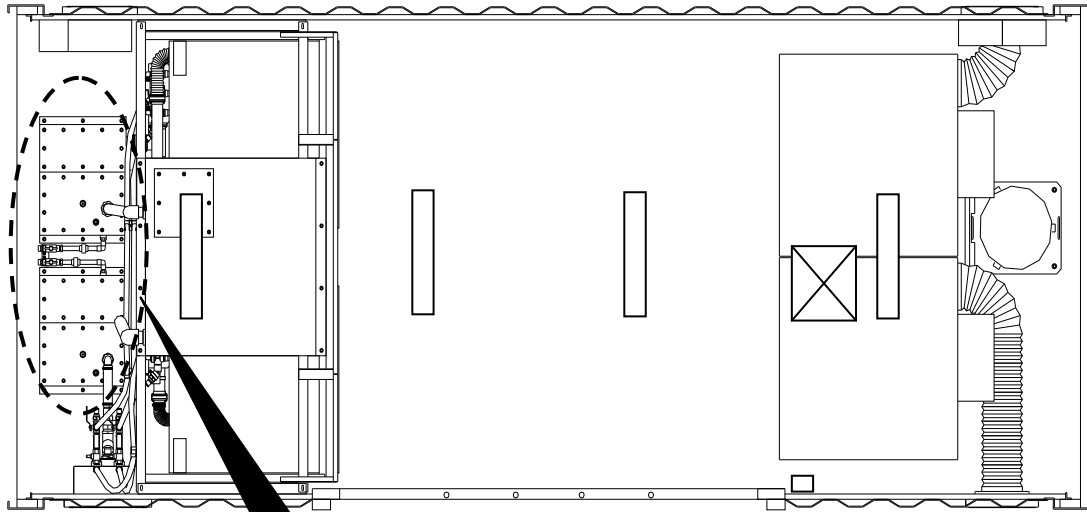


Figure 9. Reuse and Waste Tank Override Switches.

Table 7. Tank Override Switches.

Key	Item	Function
1	Reuse Transfer Tank Manual Override	Overrides Pump Automatic Float Switch to Manually Activate Pump
2	Waste Tank Manual Override	Overrides Pump Automatic Float Switch to Manually Activate Pump



Figure 10. Washer and Dryer Control Panels.

Table 8. Washer and Dryer Control Panels.

Key	Item	Function
1	Washer Control Panel	Controls Operation Of Washer
2	Dryer Control Panel	Controls Operation Of Dryer

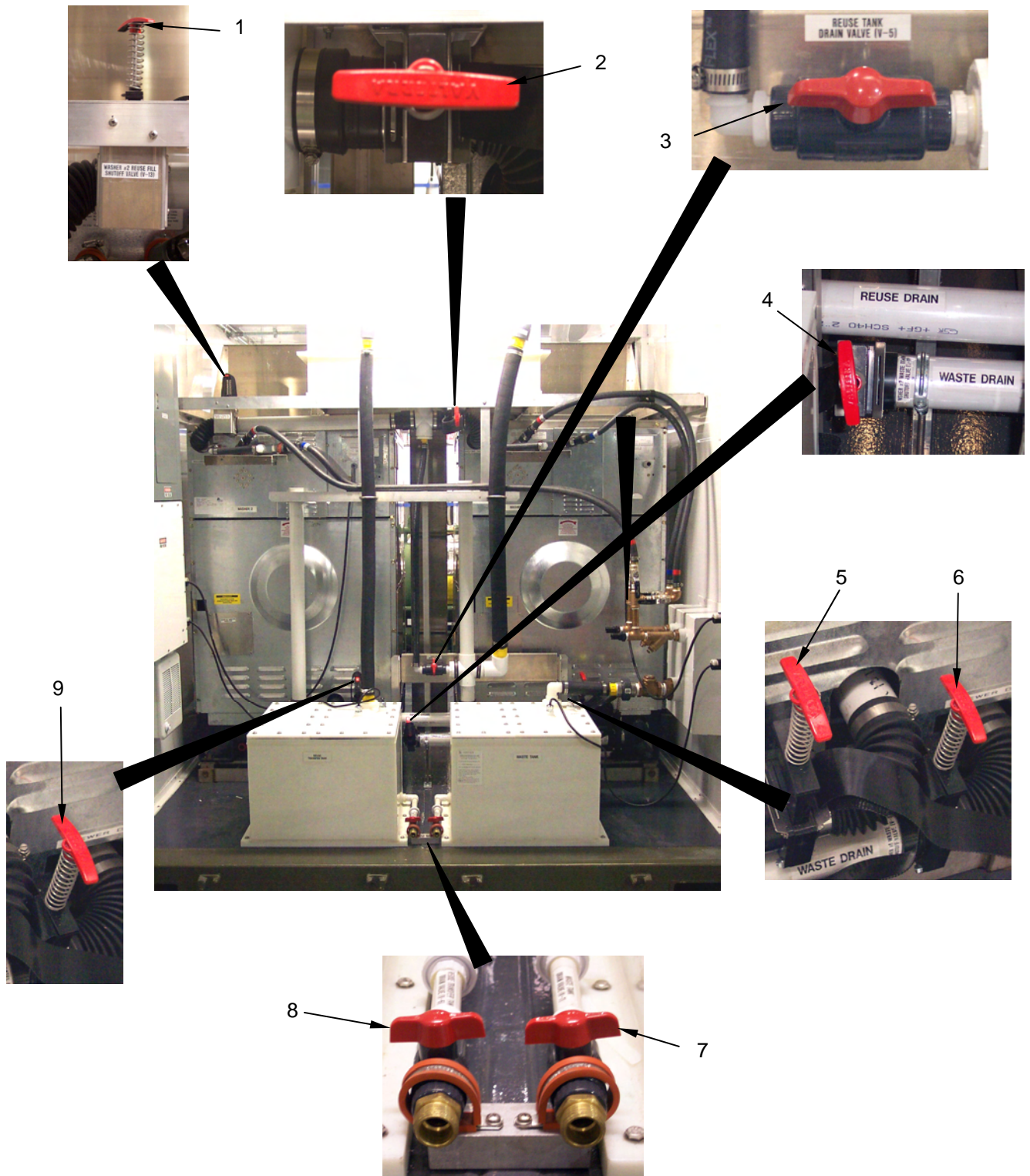


Figure 11. FP-CBL Control Valves.

Table 9. Control Valves.

Key	Item	Function
1	Washer #2 Reuse Fill Shutoff Valve	Drains Reuse Tank to Washer No. 2
2	Washer #1 Reuse Fill Shutoff Valve	Drains Reuse Tank to Washer No.1
3	Reuse Tank Drain Valve	Drains Reuse Tank
4	Washer #2 Waste Drain Shutoff Valve	Drains Washer No. 2 to Main Drain
5	Washer #1 Reuse Drain Shutoff Valve	Directs Washer No. 1 discharge to Transfer Tank
6	Washer #1 Waste Drain Shutoff Valve	Drains Washer No. 2 to Main Drain
7	Waste Tank Drain Valve	Drain Water from Waste Tank
8	Reuse Transfer Tank Drain Valve	Drain Water from Reuse Transfer Tank
9	Washer #2 Reuse Drain Shutoff Valve	Directs Washer No. 1 discharge to Transfer Tank

LABELS AND DATA PLATES

U.S. Army data plates, located on the washer double service doors, contain the following information:

Table 10. Decals and Instruction Plates.



Decal	Description and Location
 <p>APPROVED FOR TRANSPORT UNDER CUSTOMS SEAL</p> <p>USA / 402-AB / 02-01</p> <p>TYPE: SACI-1C-95 MANUFACTURER'S NUMBER: SAC 0113204</p> <p>SEA BOX, INC. E. RIVERTON, N. J. -USA 1-856-303-1101 WWW.SEABOX.COM</p> <p>TIMBER COMPONENT TREATMENT IM/BASILEUM SI-84/99</p> <p>CSC SAFETY APPROVAL</p> <p>USA / AB-402 / 02-01</p> <p>DATE MANUFACTURED: /2002 REINSPECTION IS DUE ON: /2007</p> <p>IDENTIFICATION No. SBIU 23000</p> <p>MAX. GROSS WEIGHT: 24,000 KGS / 52,910 LBS</p> <p>ALLOWABLE STACKING WEIGHT FOR 1.8G: 192,000 KGS / 423,280 LBS</p> <p>RACKING TEST LOAD VALUE: 15,240 KGS / 33,600 LBS</p> <p>APPLY REINSPECTION DECAL HERE</p>	<p>Placard located on container exterior doors at washer end.</p>
 <p>NOMENCLATURE: FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY</p> <p>PART NUMBER: 9-1-0845-1</p> <p>SERIAL NUMBER:</p> <p>CONTRACT NO:</p> <p>CAGE CODE: 81337</p> <p>NSN: 3510-01-425-8708</p> <p>DATE: MM/YYYY</p> <p>STA DEFENSE PRODUCTS DIV.</p>	<p>Placard located on container exterior doors at washer end.</p>

Table 10. Decals and Instruction Plates.

Decal	Description and Location
<p style="text-align: center;">CAUTION</p> <p style="text-align: center;">REMOVE SHIPPING BRACKET AND SNUBBER BEFORE OPERATING</p> <p style="text-align: center;">INSTALL SHIPPING BRACKET AND SNUBBER BEFORE SHIPPING</p>	<p>Placard located on lower front surface of washer.</p>
<p style="text-align: center;">CAUTION</p> <p style="text-align: center;">ROTATING PARTS REMOVE POWER BEFORE SERVICING</p>	<p>Caution label on washers and exhaust fans.</p>
<p style="text-align: center;">AIR COMPRESSOR</p>	<p>Placed on air compressor tank.</p>

Table 10. Decals and Instruction Plates.

Decal	Description and Location
<p style="text-align: center;">CIRCUIT BREAKER POSITIONS</p> <p>1 INTERNAL LIGHTS 2 SPACE HEATER 3 SERVICE RECEP. 4 WASHER#1 RECEP. 5 EXHAUST FAN 6 WASHER#1 RECEP. 7 208V/20A EXTERNAL RECEP. #3 8 WASTE PUMP RECEP. 9 208V/20A EXTERNAL RECEP. #3 10 WASHER #2 RECEP. 11 208V/20A EXTERNAL RECEP. #3 12 WASHER#2 RECEP. 13 208V/20A EXTERNAL RECEP. #2 14 REUSE TRANS PUMP RECP. 15 208V/20A EXTERNAL RECEP. #2 16 SPARE 17 208V/20A EXTERNAL RECEP. #2 18 SPARE 19 208V/20A EXTERNAL RECEP. #1 20 SPARE 21 208V/20A EXTERNAL RECEP. #1 22 SPARE 23 208V/20A EXTERNAL RECEP. #1 24 SPARE 25 208V/40A EXTERNAL MS CONN. 26 SPARE 27 208V/40A EXTERNAL MS CONN. 28 SPARE 29 208V/40A EXTERNAL MS CONN. 30 SPARE 31 MAIN 33 MAIN 35 MAIN</p>	<p>Located on circuit breaker panel door</p>
<p style="text-align: center;">DRYER 1</p>	<p>Located on Dryer No. 1 and dryer circuit breaker panel.</p>
<p style="text-align: center;">DRYER 2</p>	<p>Located on Dryer No. 2 and dryer circuit breaker panel.</p>
<p style="text-align: center;">EXHAUST FAN SWITCH</p>	<p>Located on fan switch at front entrance of FP-CBL</p>
<p style="text-align: center;">LIGHT SWITCH</p>	<p>Located on light switch at front entrance of FP-CBL</p>
<p style="text-align: center;">MAIN SYSTEM CIRCUIT BREAKER PANEL</p>	<p>Located on the Main System Circuit Breaker Panel, behind the washers.</p>
<p style="text-align: center;">SEWER DRAIN</p>	<p>Located on the Sewer Drain piping behind the washers.</p>

Table 10. Decals and Instruction Plates.

Decal	Description and Location
<p style="text-align: center;">OPERATING CYCLES</p> <p>CYCLE #03 - BDU'S CYCLE #04 - SLEEPING BAG CYCLE #05 - FORMULA VIII FROM FM 10-280 CYCLE #06 - WHITES CYCLE #07 - LIGHTLY SOILED GARMENTS CYCLE #08 - FORMULA III FROM FM 10-280 CYCLE #09 - EXTRACT ONLY CYCLE #13 - BDU'S WITH WATER REUSE CYCLE #14 - SLEEPING BAGS WITH WATER REUSE CYCLE #17 - LIGHTLY SOILED GARMENTS WITH WATER REUSE CYCLE #30 - REUSE TANK FLUSH CYCLE #31 - REUSE TANK DRAIN ASSIST CYCLE #34 - WINTERIZE WASHER (COLD WATER LINES) CYCLE #35 - WINTERIZE WASHER (HOT WATER LINES)</p>	<p>Summary of operating cycles placards located over the washers, in front of the water reuse system tanks.</p>
<p style="text-align: center;">REUSE DRAIN</p>	<p>Located on the Reuse water plumbing.</p>
<p style="text-align: center;">WASTE DRAIN</p>	<p>Located on the Waste Drain water plumbing.</p>
<p style="text-align: center;">REUSE TANK OVERFLOW</p>	<p>Located on the Reuse Tank Overflow, located behind the washers.</p>
<p style="text-align: center;">REUSE TRANSFER TANK</p>	<p>Located on the Reuse Transfer Tank.</p>
<p style="text-align: center;">REUSE TRANSFER TANK DRAIN VALVE (V-6)</p>	<p>Located on the Reuse Transfer Tank Drain Valve behind reuse transfer tank.</p>
<p style="text-align: center;">REUSE TRANSFER PUMP POWER RECEPTACLE</p>	<p>Located adjacent to the Reuse Transfer Pump Power Receptacle, behind the washers.</p>
<p style="text-align: center;">SERVICE RECEPTACLE</p>	<p>Located adjacent to service receptacles throughout the FP-CBL.</p>

Table 10. Decals and Instruction Plates.

Decal	Description and Location
TRAY 1	Located over washer soap dispenser tray 1
TRAY 2	Located over washer soap dispenser tray 2
TRAY 3	Located over washer soap dispenser tray 3
TRAY 4	Located over washer soap dispenser tray 4
TWO MAN LIFT	Located on air compressor
WSHR#1 WASTE DRAIN SHUTOFF VALVE (V-8)	Located lower rear corner washer 1, behind the washers.
WSHR#2 WASTE DRAIN SHUTOFF VALVE (V-11)	Located between washers 1 and 2, behind the washers.
WSHR#1 REUSE DRAIN SHUTOFF VALVE (V-9)	Located lower rear corner behind washer 1.
WSHR#2 REUSE DRAIN SHUTOFF VALVE (V-12)	Located lower rear corner washer 2.

Table 10. Decals and Instruction Plates.

Decal	Description and Location
WASHER#1 HOT WTR SHUTOFF VALVE (V-2)	Located on water panel behind the washers.
WASHER#1 COLD WTR SHUTOFF VALVE (V-1)	Located on water panel behind the washers.
WASHER#2 HOT WTR SHUTOFF VALVE (V-4)	Located on water panel behind the washers.
WASHER#2 COLD WTR SHUTOFF VALVE (V-3)	Located on water panel behind the washers.
WASTE TANK DRAIN VALVE (V-7)	Located on the Drain Tank behind the washers.
WASHER#1 REUSE FILL SHUTOFF VALVE (V-10)	Located under Reuse Tank, behind the washers.
WASHER#2 REUSE FILL SHUTOFF VALVE (V-13)	Located top left cover, behind the washer #2.
WASHER#1 COLD WATER CONNECTION	Located adjacent to the Washer No. 1 Cold Water Connection QD fitting, behind the washers.
WASHER#1 HOT WATER CONNECTION	Located adjacent to the Washer No. 1 Hot Water Connection QD fitting, behind the washers.
WASHER#1 LINE REACTOR	Located inside the power connection panel, behind the washers (not visible externally).
WASHER#1 POWER RECEPTACLE	Located behind Washer No. 1 on right side, behind the washers.
WASHER 1	Located on Washer No. 1, in the center operating area.
WASHER#2 COLD WATER CONNECTION	Located adjacent to the Washer No. 2 Cold Water Connection QD fitting, behind the washers.

Table 10. Decals and Instruction Plates.

Decal	Description and Location
WASHER#2 HOT WATER CONNECTION	Located adjacent to the Washer No. 2 Hot Water Connection QD fitting, behind the washers.
WASHER#2 LINE REACTOR	Located inside the power connection panel, behind the washers (not visible externally).
WASHER#2 POWER RECEPTACLE	Located adjacent to the Washer No. 2 Power receptacle, behind the washers on the left side.
WASHER 2	Located on Washer No. 2, in the center operating area.
WASHER BELT INSPECTION ACCESS PLATE	Located on washer belt inspection access plate on rear of washer
EMPTY LIFT ONLY	Located on container frame between fork lift pockets.
WASTE DRAIN	Located on Waste Drain piping behind the washers.
WASTE PUMP MANUAL CONTROL	Located on the Waste Tank behind washers.
WASTE PUMP MAIN POWER RECEPTACLE	Located adjacent to the Waste Pump Power Receptacle, behind the washers.
WASTE TANK	Located on the Waste Tank.

END OF WORK PACKAGE

CREW MAINTENANCE**OPERATION UNDER USUAL CONDITIONS
ASSEMBLY AND PREPARATION FOR OPERATION****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)
Unspecified lifting equipment, 15000-lb maximum capacity (forklift, hoist) (WP 0099, Item 1)

Materials/Parts

None required.

Personnel Required

Laundry and Shower Specialist 92S (6)
Interior Electrician 21R (1) or
Prime Power Production Specialist 21P (1) or
Quartermaster and Chemical Equipment Repairer 63J (1) or
Qualified Civil Electricians (1)

References

TM 10-5419-206-13
TM 55-8115-204-23&P
TM 10-4520-259-13&P

GENERAL

The FP-CBL is an integral part of the Force Provider Laundry Subsystem. Procedures in this WP pertain to the assembly and preparation for use of the FP-CBL only. Information about initial positioning of the FP-CBL ISO Container, as well as assembly and preparation for use of the Force Provider Laundry Subsystem, including FP-CBL utility connections, are contained in WP 0024 of TM 10-5419-206-13.

POSITIONING FP-CBL

Position the FP-CBL ISO Container as shown (Figure 1) and indicated by survey stakes 'F' and 'G'. (Refer to WP 0022 of TM 10-5419-206-13)

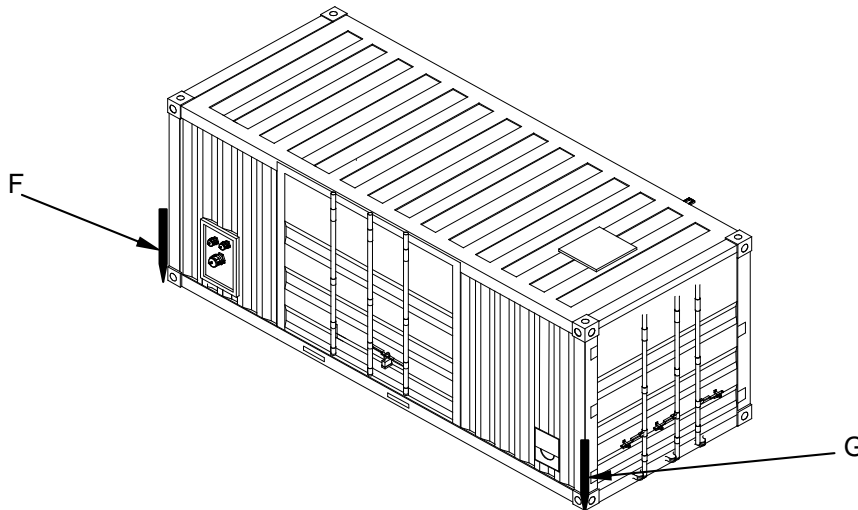


Figure 1. Positioning the FP-CBL.

END OF TASK

LIFT AND MOVE FP-CBL

Refer to TM 55-8115-204-23&P Unit and Direct Support Maintenance Manual (including RPSTL) for General Cargo Container as necessary for specific lifting and moving instructions.

**WARNING**

The FP-CBL weighs approximately 12,200 lb (5,534 kg) loaded. Extreme care should be used at all times when lifting it. Proper lifting equipment and observation of safety precautions is required to safely move and stack FP-CBL. Under No Circumstances should anyone stand under the FP-CBL when it is being lifted or moved. Serious injury or death to personnel may result.

Lifting**NOTE**

Movement of FP-CBL requires a minimum of a 7.5-ton (15,000 lb) forklift.

1. Use built-in forklift pockets (Figure 2) to move and lift FP-CBL.

CAUTION

FP-CBL must be level for proper operation of the equipment and to prevent damage to equipment.

2. Place FP-CBL container in staked location.
3. Level FP-CBL by shimming tightly with wood scraps, stones, or bricks tapped into place with hammer.

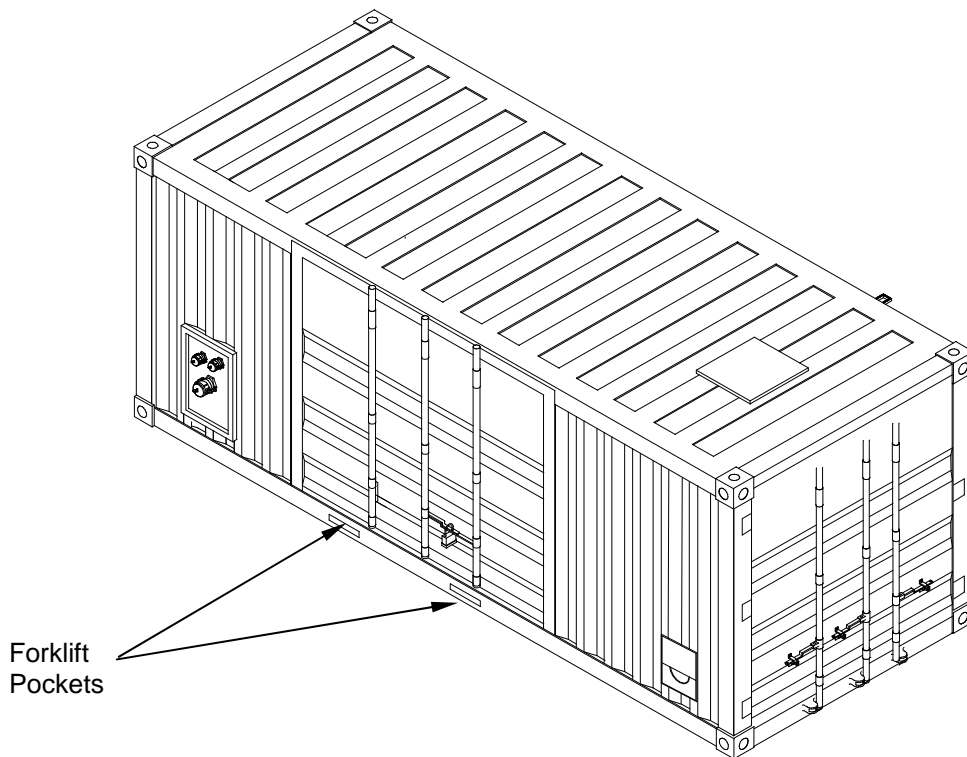


Figure 2. Lifting the FP-CBL.

END OF TASK

0005-2

ASSEMBLY AND PREPARATION FOR USE OF CBL**Deploy Double Entrance Doors**

1. Unlatch latching mechanism (Figure 3, Item 3) of right-hand door (Figure 3, Item 2) and open right-hand door.
2. Unlatch latching mechanism (Figure 3, Item 4) of left-hand door (Figure 3, Item 1) and open left-hand door.
3. Hook open doors (Figure 3, Item 2) and (Figure 3, Item 1) with restraining chains (if fitted).

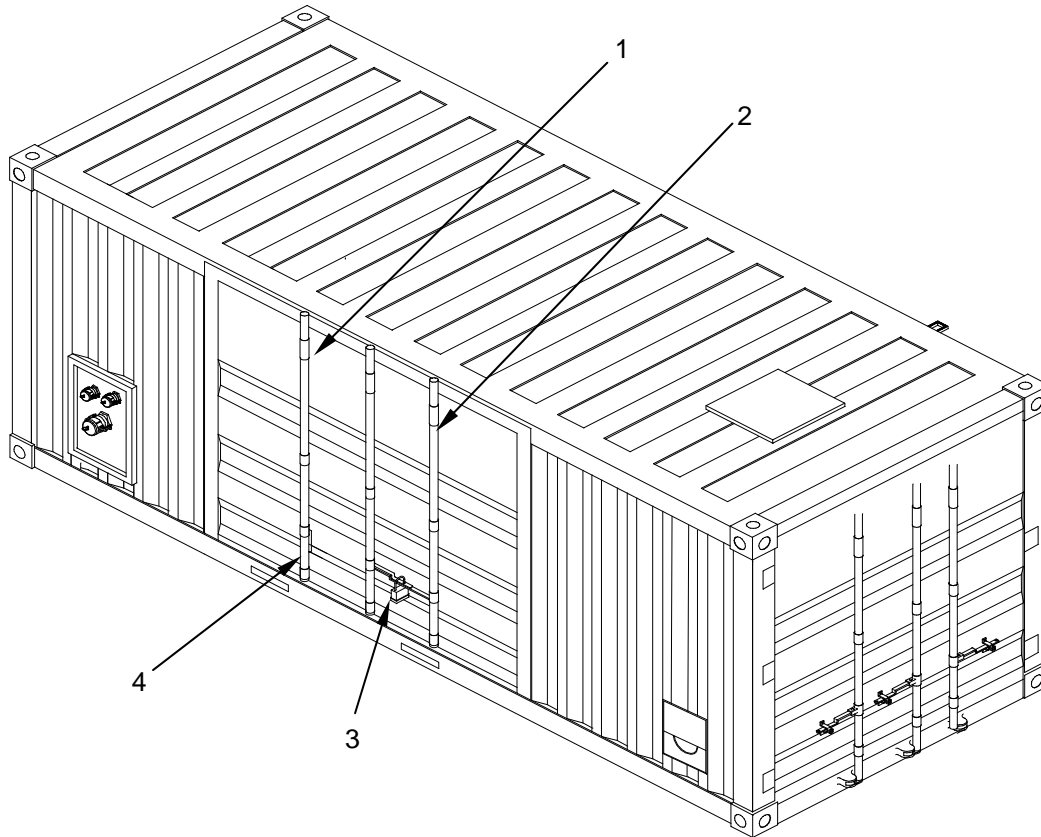


Figure 3. Unpacking Double Entrance Doors.

END OF TASK

Deploy Double Service Doors

1. Unlatch latching mechanisms (Figure 4, Item 2) on both sets of double service doors (Figure 4, Item 1), and open double service doors.
2. Close service doors after setup is complete.

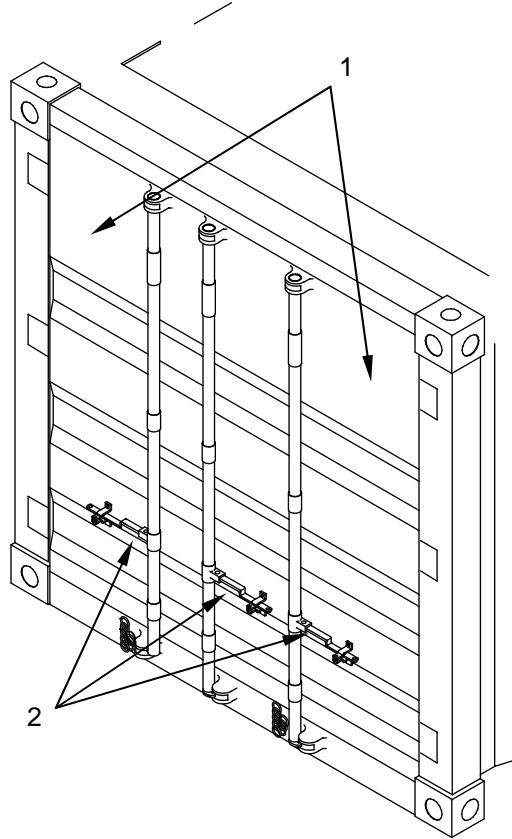


Figure 4. Deploying Double Service Doors.

END OF TASK

Retrieve and Install Ramp

1. Remove FP-CBL Ramp (Figure 5, Item 1) from TRICON 2B (Laundry Kit).
2. Place ramp in place at entrance to double entrance doors by inserting the posts (Figure 5, Item 3) on the underside of the metal ramp (Figure 5, Item 1) into holes (Figure 5, Item 2).

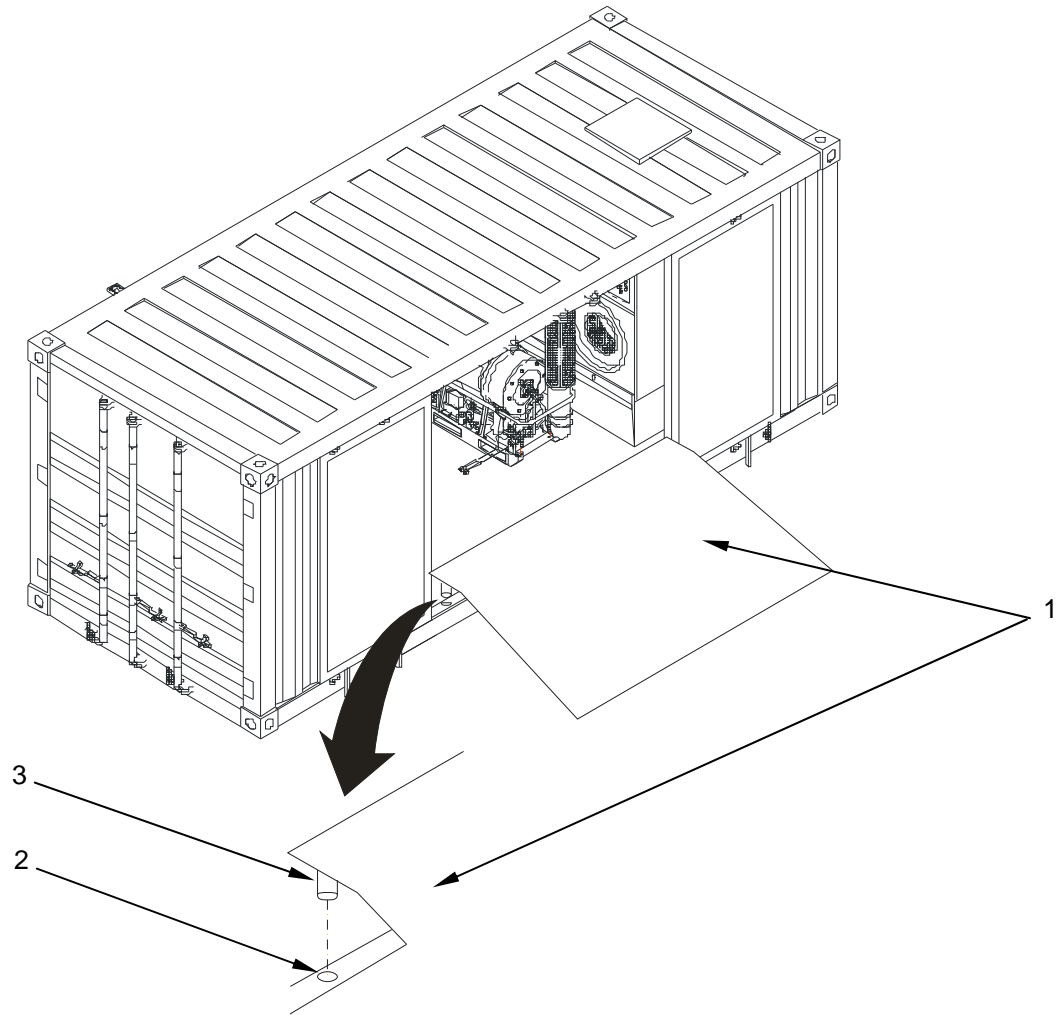


Figure 5. Installing Ramp.

END OF TASK

REMOVE FP-CBL CONTENTS**WARNING**

The FP-CBL components are heavy, awkward and difficult to maneuver. To prevent injury, six persons are required to remove and install these components.

Remove M-80 Water Heater

1. Remove bolts (Figure 6, Item 1) and brackets (Figure 6, Item 2) fastening M-80 water heater (Figure 6, Item 3) to floor and place in a secure location.
2. Remove strapping from the M-80 heater, and remove exhaust stack and place in a secure location.
3. Position six people around the M-80 water heater, lift the water heater and move down the ramp.
4. Locate and position M-80 water heater within five feet of potable water tee connection point indicated by staking point 'I' (Refer to WP 0022 and 0025 of TM 10-5419-206-13).
5. Remove bungee cord from stack and set up M-80 water heater per TM 10-4520-259-13&P.

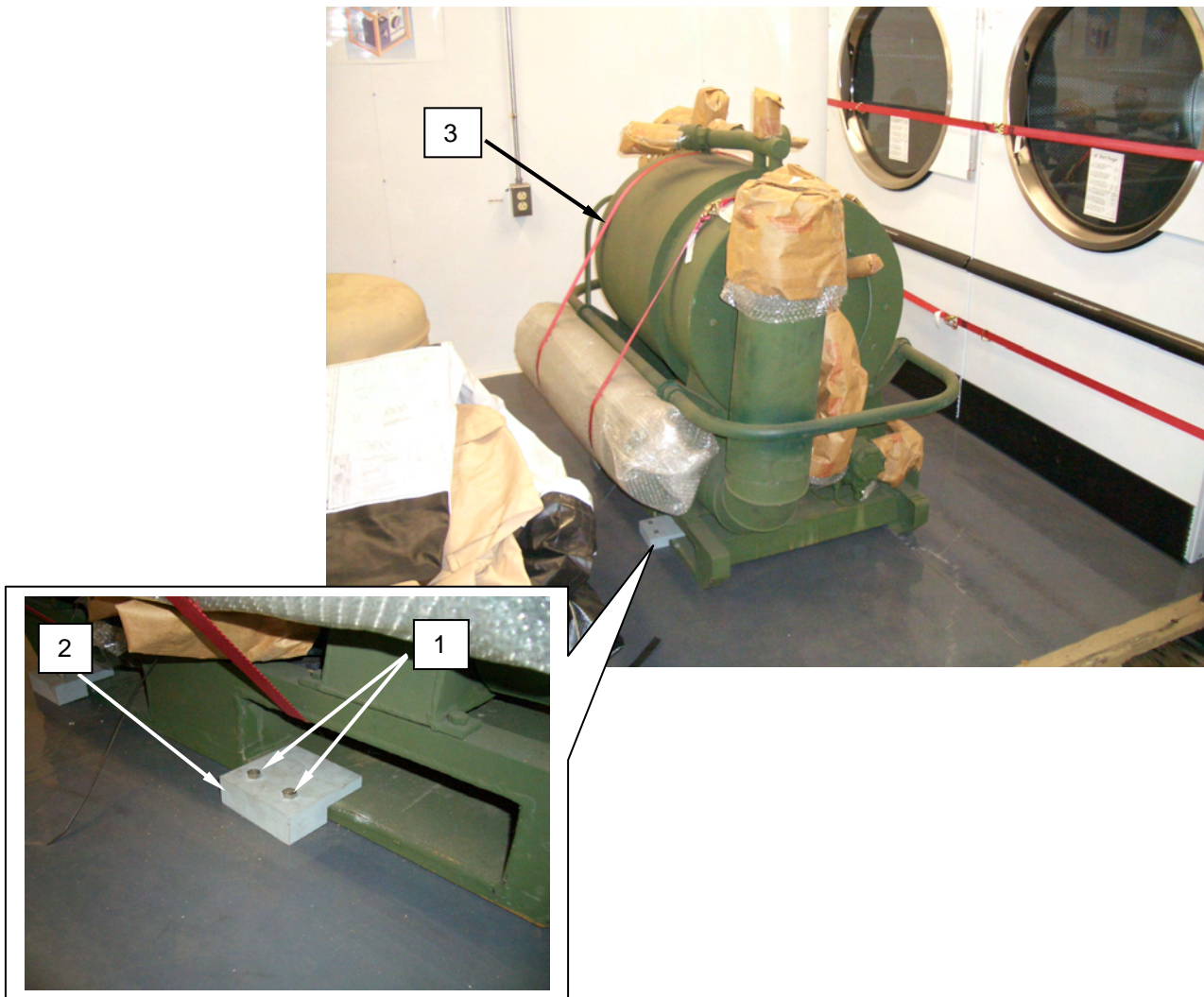


Figure 6. Removing the M-80 Water Heater.

END OF TASK

Remove Fan Assembly

1. Remove cold water tee assembly (Figure 7, Item 7), power cable with tee (Figure 7, Item 2), water heater hose (Figure 7, Item 8), hot water inlet hose (Figure 7, Item 3), cold water inlet hose (Figure 7, Item 6) and waste hose (Figure 7, Item 4) from around the fan assembly (Figure 7, Item 1). Place items outside FP-CBL.
2. Remove and retain the bolts (Figure 7, Item 5) (refer to WP 0010) securing the exhaust fan assembly to the floor of the FP-CBL.
3. Position two people around the fan assembly (Figure 7, Item 1); lift and move down the ramp.

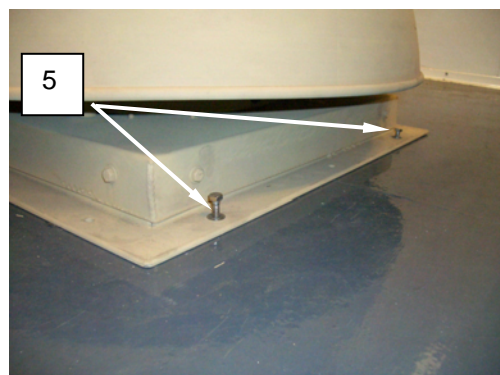


Figure 7. Removing the Fan Assembly.

END OF TASK

Remove Strapping

Remove the three straps (Figure 8, Item 1) around dryers. Retain straps for re-use.

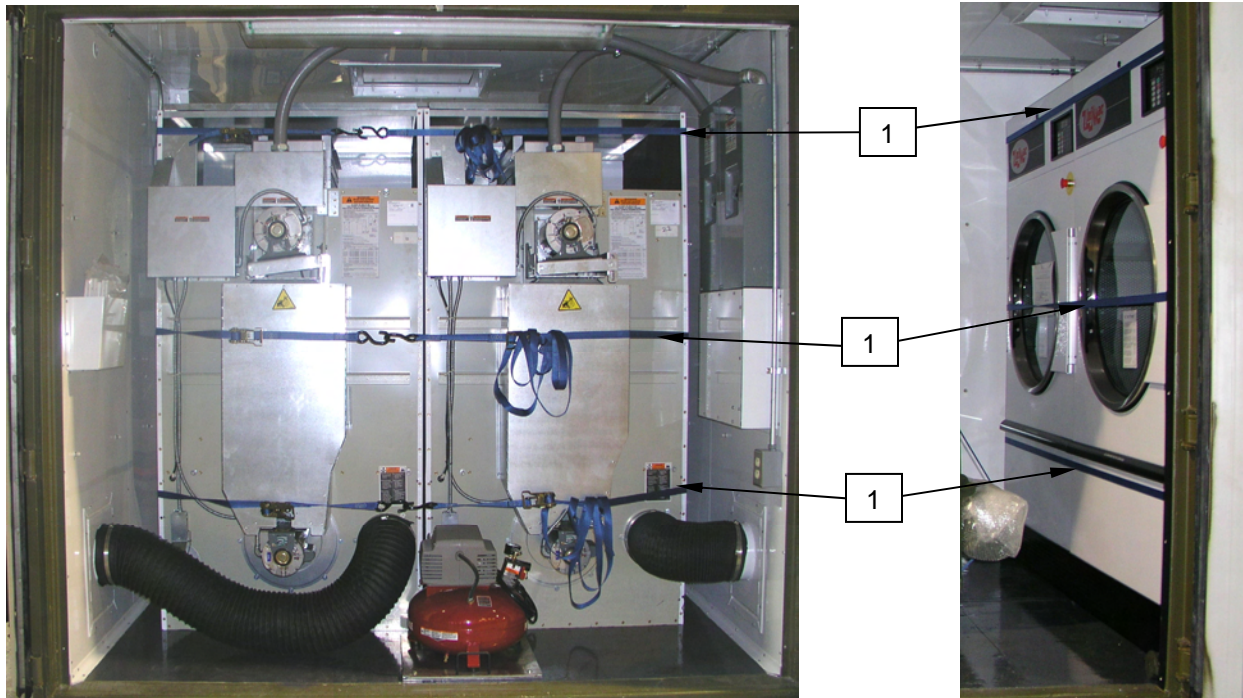


Figure 8. Removing Strapping from Dryers.

END OF TASK

Remove Drain Hoses

Remove drain hoses (Figure 9, Item 1) from Washer # 1.

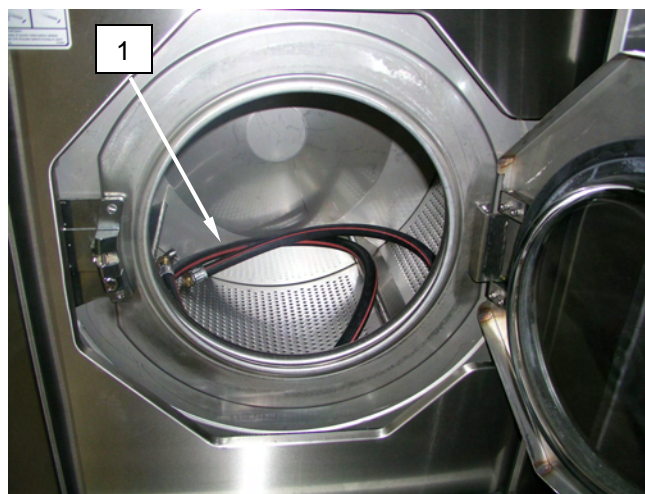


Figure 9. Removing Drain Hose from Washer #1.

END OF TASK

Remove Fuel Drum Adapter

Locate and identify the fuel drum adapter (Figure 10, Item 1) located on the frame of the M-80 Water Heater. Keep adapter in a clean place until ready for use with the M-80 Water Heater.

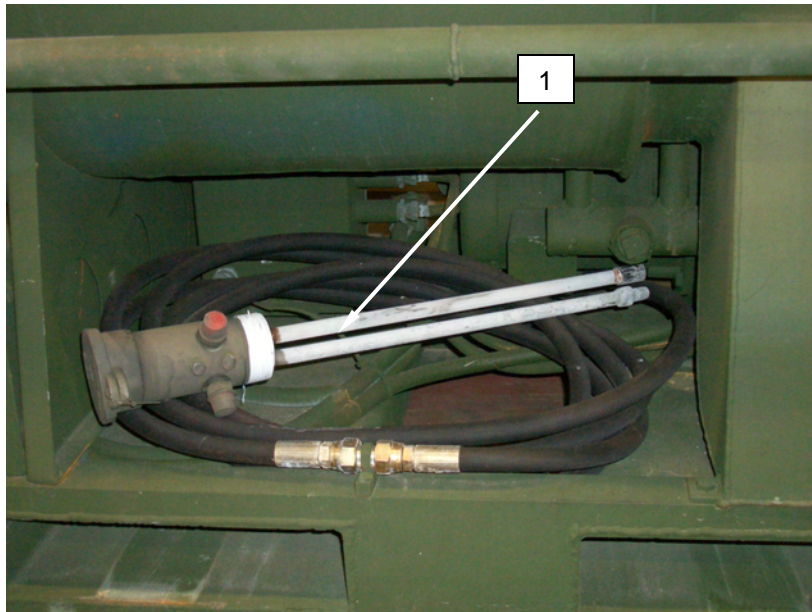


Figure 10. Removing Fuel Drum Adapter from Frame of M-80.

END OF TASK

Remove Laundry Boot Wall

1. Open Dryer # 2 and remove laundry boot wall (Figure 11, Item 1).



Figure 11. Removing Laundry Boot Wall from Dryers.

END OF TASK

FP-CBL Inventory

Inventory the FP-CBL components listed below in the indicated containers.

Table 1. FP-CBL (2C) Inventory Listing.

Item	Qty	P/N	Check
Located in FP-CBL Container (ISO 2C)			
Technical Manual, Containerized Batch Laundry	1	TM 10-3510-225-13&P	
Hose Assembly, Air Compressor	1	34241387	
Anchor, Water Heater Tie-Down	4	342423117	
Tee Assembly, Cold Water, 1 1/2" Fx1 1/2" Fx1 1/2" M	1	9-1-0158	
Exhaust Fan Assembly	1	9-1-0552	
Power Cable Assembly	1	9-1-0584	
Boot Wall, TEMPER Laundry	1	9-1-0586	
Hose Assembly, Hot Water Heater Inlet, M x F , 1 1/2" Dia., 5Ft L	1	9-1-0781-33	
Hose Assembly, Hot Water, F x F , 1" Dia., 25Ft L	1	9-1-0781-85	
Hose Assembly, Cold Water, F x F , 1 1/2" Dia., 20Ft L	1	9-1-0781-94	
Hose Assembly, Waste Water, F x F , 3" Dia., 10Ft. L	1	9-1-0782-94	
Key Sets, Washer and Dryer	1	N/A	
Containerized Batch Laundry (2C), Packaging Instructions	1	9-1-0087	
Strap, Ratchet, 15' w/Hook, 1" wide	8	126-724	
Washer, Plain Flat, CRES, 1/4" (nom)	4	MS15795-810	
Washer, Plain Flat, CRES, 5/16" (nom)	8	MS15795-812	
Screw, Cap, Hex Head, CRES, 1/4-20 x 3/4" lg	4	MS35307-306	
Screw, Cap, Hex Head, CRES, 5/16-18 x 3" lg	8	MS35307-344	
Washer, Lock, Internal Tooth, CRES, 1/4"	4	MS35333-74	
Washer, Lock, Internal Tooth, CRES, 5/16"	8	MS35333-75	
Hose Assembly, Drain, 3/4", Commercial	1	N/A	
Technical Manual, Commercial Washer Operation	1	N/A	
Technical Manual, Commercial Washer Installation	1	N/A	
Technical Manual, Commercial Dryer Operation	1	N/A	
Technical Manual, Commercial Dryer Installation	1	N/A	
DD Form 1750 Pack List	1	DD1750	
M-80 Water Heater Pack Out			
Cap, Flue	1	6-1-8264	
Assembly, Fuel Hose	1	MS 28741-8-1440	
Adapter, Fuel Drum	1	6-1-8285	
Technical Manual, M-80 Water Heater	1	TM 10-4510-206-14	

Table 2. FP-CBL Laundry Tent Kit, (2A) Inventory Listing.

Item	Qty	P/N	Check
Located in Laundry Tent Kit TRICON (2A)			
Tent, Extbl, Modular, Personnel (TEMPER) Type XIX, 32 Ft.	1	MIL-T-44271	
Pin, Tent, Steel, 18"	1	5-4-196	
Technical Manual, TEMPER Tent	1	TM 10-8340-224-23P	
TEMPER Electrical Distribution Box, Type III, 120V	1	1-6-6041	
Light Set, Fluorescent	2	BR2005	
Stand, Distribution Box, TEMPER	1	1-6-6005	
TEMPER Convenience Outlet Assembly, 3 Drop	2	9-1-0624	
Electrical Feeder System, PDISE M100	1	TA13229E6351	
Cable Assembly, Power, 60A, 100 Ft. L	1	M29184/3-02	
Tank, Fabric, Collapsible, Water, 3K Gal.	1	MIL-T-53048	
Mallet, Wood, 6" Face X 8" L Head, TY 9	1	LLL-M-71	
Sledge Hammer, 12 lbs.	1	A-A-1293	
Shovel, Round Point, D Handle, TY 4, CL A	1	GGG-S-326	
Broom, Upright, TY 2	1	H-B-0051	
Fire Extinguisher, ABC, Dry Chemical, 10 lbs., TY 1	1	A-A-393	
Mesh Bags, Laundry, 1 DZ	20	JJ-N-180	
Pin, Laundry, 5", Qty-100	3	A-A-52127	
Trunk, Locker	13	A-A-59490	
Nozzle, Garden Hose	1	5100-243	
Table, Folding, 6 Ft., Aluminum	4	9-1-0191	
Chair, Folding, Steel, TY 1	5	AA-C-291	
Bucket, Mop, Steel, Oval, 16 Qt., w/ Casters	1	A-A-262	
Wringer, Mop, Size-Sm., Type-Gear & Rack	1	A-A-261	
Mop, Head, TY 1	1	T-M-561	
Mop Handle, TY 1	1	NN-H-101	
Floor Mat, Altered Item	2	9-1-0189	
Hose Assembly, Nonmetallic, Garden, TY 2	1	L-H-520	
Laundry Tent Kit (2A), Packaging Instructions	1	9-1-0085	
Shelf, Shipping and Storage	2	1041A	
Beam, Shoring	5	1059	
Lumber, 2" X 6" X 75 3/4"	3	N/A	
Pin, Tent, Wood, 24"	30	5-4-1	
Container, Tent Pin, TEMPER	2	5-4-8487	
Box, Tent Pin	2	9-1-0076	
DD Form 1750 Pack List	1	DD1750	

Table 3. FP-CBL Laundry Tent Kit, (2B) Inventory Listing.

Item	Qty	P/N	Check
Located in Laundry Kit TRICON (2B)			
Technical Manual, Force Provider System	1	TM 10-5419-206-13	
Technical Manual, Force Provider System	1	TM 10-5419-206-23&P	
Power Cable Assembly, Tee, 20A	2	6-1-8222	
Truck, Hand Box, laundry, Plastic, 12 Bushel	2	A-A-50025-4	
Can, Ash and Garbage, 32 Gal., Steel	3	A-A-1069	
Special Purpose Web, Tie Down	4	FDC5770-5	
Power Cable, Class L to Commercial 20A	1	9-1-0182	
Door, Double Bump Through, Class A	2	5-4-4081	
Cable, Pigtail, 100A, 4ft Length	3	13227E7020	
Cable, Assembly, Service, 100A, 50ft Length	6	13227E7024	
Cable, Assembly, Service, 60A, 100ft Length	1	M29184/3-02	
Ramp, Containerized Batch Laundry	1	42392027	
Drum, Shipping and Storage, Steel, 55-Gal, TY 1	1	PPP-D-729	
Sewage Ejection Pump, Waste Water Evacuation	1	9-1-0527	
Cover, Can, Ash and Garbage	3	A-A-1069	
Lumber, 2" X 6" X 75 3/4"	3	N/A	
Shelf, Shipping and Storage	2	1041A	
Beam, Shoring	5	1059	
DD Form 1750 Pack List	1	DD1750	

FP-CBL System Support Package (SSP)

A FP-CBL SSP containing the spare and repair parts listed below is shipped in TRICON 11C, System Support Kit (Part B), as part of the FP Site Preparation and Maintenance Kit. The SSP will be inventoried and maintained by the FP Administration Subsystem maintenance section for use on FP-CBL equipment.

Table 4. FP-CBL System Support Package (SSP) Inventory Listing.

Item	Qty	P/N
Washer/Dryer System Support Package (Located in TRICON 11C)		
V-Belt, Basket/Motor	2	9001569
Valve, Main Sewer Drain	1	F380619
Valve, Fill, Cold/Hot Water, 2 Way, 220V	1	9001377
Inlet Valve, Supply, 3 Way, 240V 50/60Hz	1	F0381737-00
Door Handle	1	9001481
Door Handle Stop	1	9001467
V-Belt, Drive	1	M412981
V-Belt, Cylinder	2	M412090
Fuse, 1.25A	2	M414103
Fuse, 3.5 A	2	M414232
Fuse, 250V, 2A	2	M413118
Lint Screen	2	44063601
Valve, Reuse Fill/Drain, 2",NC,18A, J-LIP, 220V	1	F380632
Restrictor, Supply Inlet Flow, 3.5L/Min	1	F380119
Rod, Ground	1	A-A-558804

END OF TASK

Install Exhaust Fan**NOTE**

Fan must be installed from the roof of the container. Access the roof by climbing the folding hand grips on the side of the container.

1. Using the folding hand grips (Figure 12, Item 1) located on the outside of the container, have two personnel gain access to the top of the container.
2. From the top of the container, remove the fasteners (Figure 12, Item 8) securing panel (Figure 12, Item 2) to top of FP-CBL and remove the panel. Pass the panel to a person positioned on the ground. Store panel inside container on side of dryer.

**WARNING**

The exhaust fan is heavy, awkward, and difficult to maneuver. To prevent injury, four persons are required to install and remove it – two on top of the container and two on the ground.

3. Using two personnel on the ground, lift the exhaust fan (Figure 12, Item 7) to the two personnel on the top of container.
4. Drop power cord (Figure 12, Item 4) into opening on top of FP-CBL.
5. Install exhaust fan (Figure 12, Item 7) in mount (Figure 12, Item 6), aligning fasteners (Figure 12, Item 8) with captive hardware (Figure 12, Item 5). Install fasteners (Figure 12, Item 8) and tighten securely.
6. Plug power cord (Figure 12, Item 4) into fan wall receptacle (Figure 12, Item 3).



Figure 12. Installing the Exhaust Fan.

END OF TASK

LAY OUT AND CONNECT WASHING SYSTEM COMPONENTS



WARNING

To prevent damage to laundry system hoses and cables, observe the following: When crossing hoses and cables, waste water is always placed below potable water, and potable water is always placed below electrical cables. Failure to observe this rule may result in death or serious injury by electrocution, or transmission of disease by potable water contamination.

Components must be positioned where indicated by staking (Refer to WP 0022 of TM 10-5419-206-13). Lay out utilities in the order described in this work package.

ASSEMBLY AND PREPARATION FOR USE OF LAUNDRY WASTE WATER

Lay out and connect FP-CBL waste water hose as described below.

CAUTION

Whenever a waste water hose must cross the path of an electrical cable, the waste water hose must be positioned beneath electrical cable, and if possible be separated by a section of culvert. Damage to electrical equipment may result from improper positioning of hose and cables.

1. Lay out hose assembly, QDISC, Cam-Lock 3-inch x 10-foot, F x F (Figure 13, Item 1) from the waste water connection (Figure 13, Item 2) on FP-CBL water panel (Figure 13, Item 3) to survey stake 'H' (Waste water connection point) (Figure 13, Item 4).
2. Connect end of hose (Figure 13, Item 1) to waste water connection (Figure 13, Item 2). Leave dust plug coupling attached to hose end at survey stake (Figure 13, Item 4).

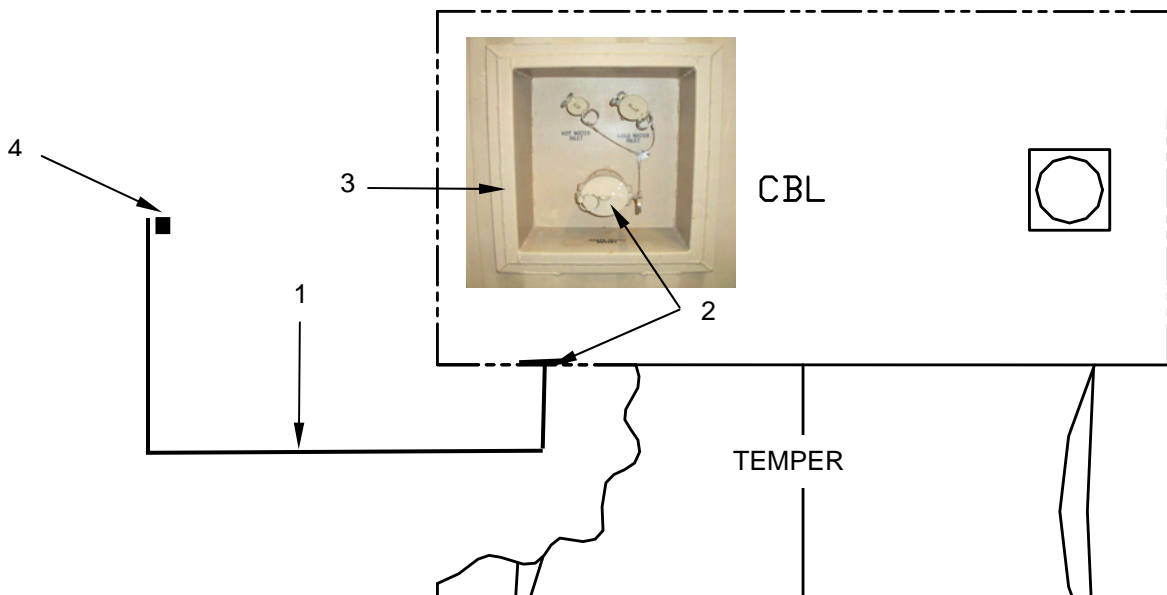


Figure 13. FP-CBL Waste Water Hose Connection.

END OF TASK

FUEL DRUMS

1. Obtain 55-Gallon fuel drum (Figure 14, Item 5) for M-80 operation from fuel storage and distribution subsystem personnel.
2. Retrieve the fuel drum adapter stowed with the M-80 Water Heater. Install the adapter on the 55-Gallon fuel drum as described in TM 10-4520-259-13&P.

END OF TASK**ASSEMBLY AND PREPARATION FOR USE OF LAUNDRY POTABLE WATER****WARNING**

To prevent water contamination and resulting sickness or death, always route potable water hoses over graywater hoses. Do not connect any water hoses to sources until water has been certified potable by medical personnel. An appliance contaminated with polluted water could result in sickness or death to personnel.

CAUTION

To prevent damage to electrical components, always route potable water hoses underneath electrical cables. Failure to observe this caution may result in damage to electrical components.

Potable Water Hoses

1. Position 1½-inch F x 1½-inch M x 1½-inch F QDISC Tee assembly (Figure 14, Item 2) at potable water staking point 'I' (Figure 14, Item 3).
2. Lay out 1½-inch x 20-foot cold water supply hose (Figure 14, Item 9) from Tee assembly (Figure 14, Item 2) to FP-CBL cold-water connection (Figure 14, Item 13) on water panel (Figure 14, Item 12).
3. Connect ends of hose (Figure 14, Item 9) to Tee assembly (Figure 14, Item 2) and cold water connection (Figure 14, Item 13).
4. Lay out 1½-inch x 5 foot cold water supply hose (Figure 14, Item 4) from Tee assembly (Figure 14, Item 2) to the M-80 inlet (Figure 14, Item 6).
5. Connect ends of cold water supply hose (Figure 14, Item 4) to Tee assembly (Figure 14, Item 2) and M-80 inlet (Figure 14, Item 6).
6. Lay out 1-inch x 25 foot hot water supply hose (Figure 14, Item 11) from M-80 outlet (Figure 14, Item 8) to FP-CBL hot water connection (Figure 14, Item 10) on water panel (Figure 14, Item 12).
7. Connect ends of hot water supply hose (Figure 14, Item 11) to M-80 outlet (Figure 14, Item 8) and hot water connection (Figure 14, Item 10).
8. Potable Water Subsystem personnel will connect Force Provider potable water mainline hose (Figure 14, Item 1) to Tee assembly (Figure 14, Item 2).

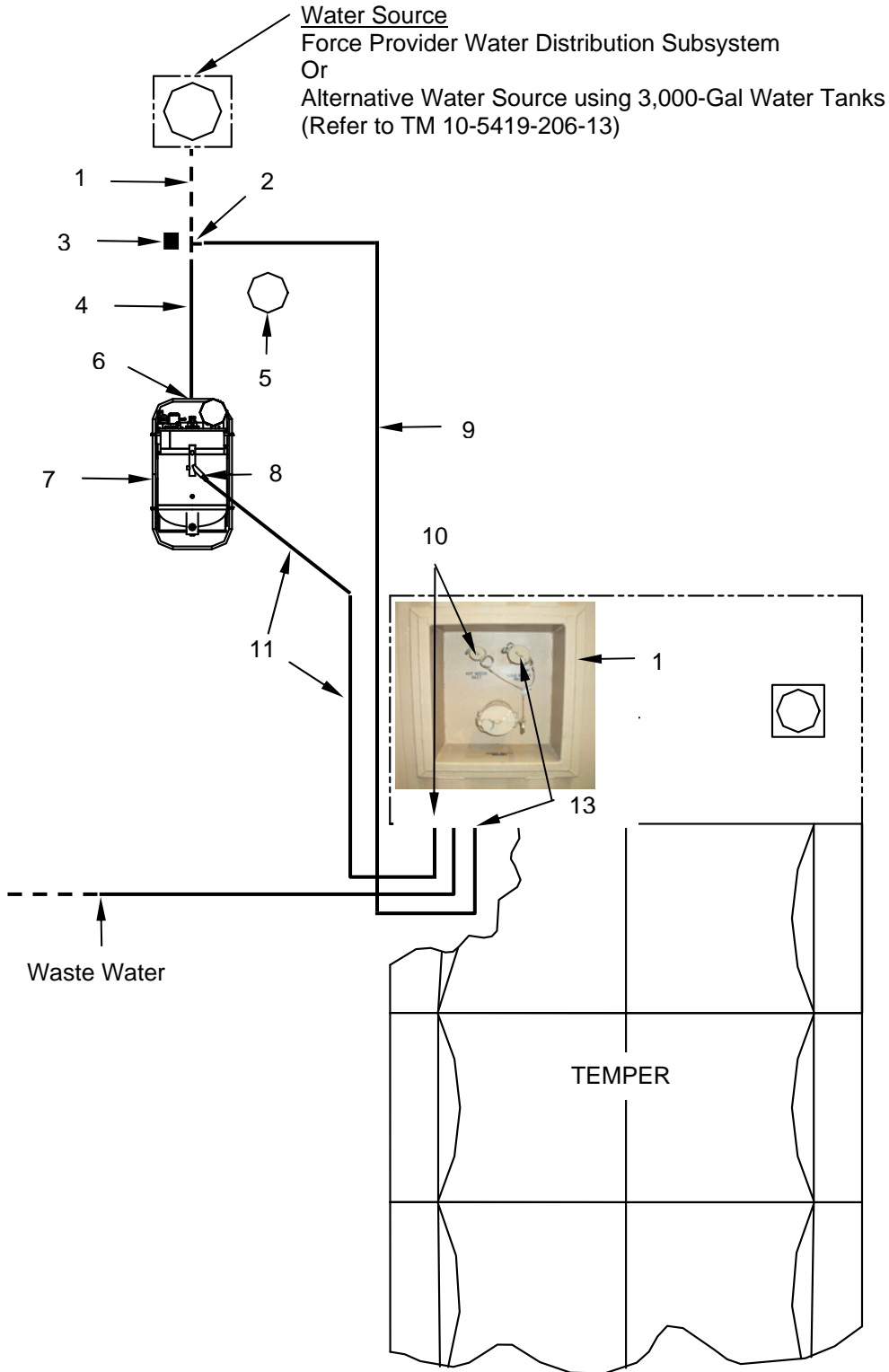


Figure 14. FP-CBL Potable Water System.

END OF TASK

ASSEMBLY AND PREPARATION FOR USE OF CBL POWER DISTRIBUTION EQUIPMENT

Two different sources supply the CBL with power. The dryers are powered through the dryer power input panel connected directly to a power source. The washers are powered through the washer power input panel connected to a PDISE-M100. Refer to TM 10-5419-206-13 as necessary.

Grounding the FP-CBL



WARNING

FP-CBL must be electrically grounded. Failure to ground FP-CBL may result in serious injury or death to personnel due to electrical malfunction.



WARNING

Leather gloves and eye protection must be worn when installing grounding rod. Failure to do so could result in serious injury to eyes and hands.

CAUTION

Ensure all circuit breakers on each circuit breaker panel (one is located behind washers and two are located behind dryers) are set to OFF to prevent any shorting of equipment when power is initially established.

NOTE

The FP-CBL can be grounded using the grounding connection point located at either power entry panel (washer or dryer); whichever is more convenient given site conditions.

1. Obtain grounding rod kit with cable and cable clamp (Figure 15, Item 2) from TRICON 11C, System Support Kit, Part B, located with the Force Provider Administration Subsystem.
2. Install the grounding rod (Figure 15, Item 2) in the ground at a distance less than five feet from the selected power entry panel (Figure 15, Item 1) in accordance with the guidelines detailed in MIL-HDBK-419 entitled "Grounding, Bonding, And Shielding For Electronic Equipments And Facilities".
3. Once the grounding rod is properly installed, remove nut (Figure 15, Item 3) and flat washer (Figure 15, Item 4) from stud (Figure 15, Item 5) on selected power entry panel (Figure 15, Item 1).
4. Connect ground cable connector (Figure 15, Item 6) to stud (Figure 15, Item 5).
5. Install flat washer (Figure 15, Item 4) and nut (Figure 15, Item 3) on stud. Tighten nut securely.

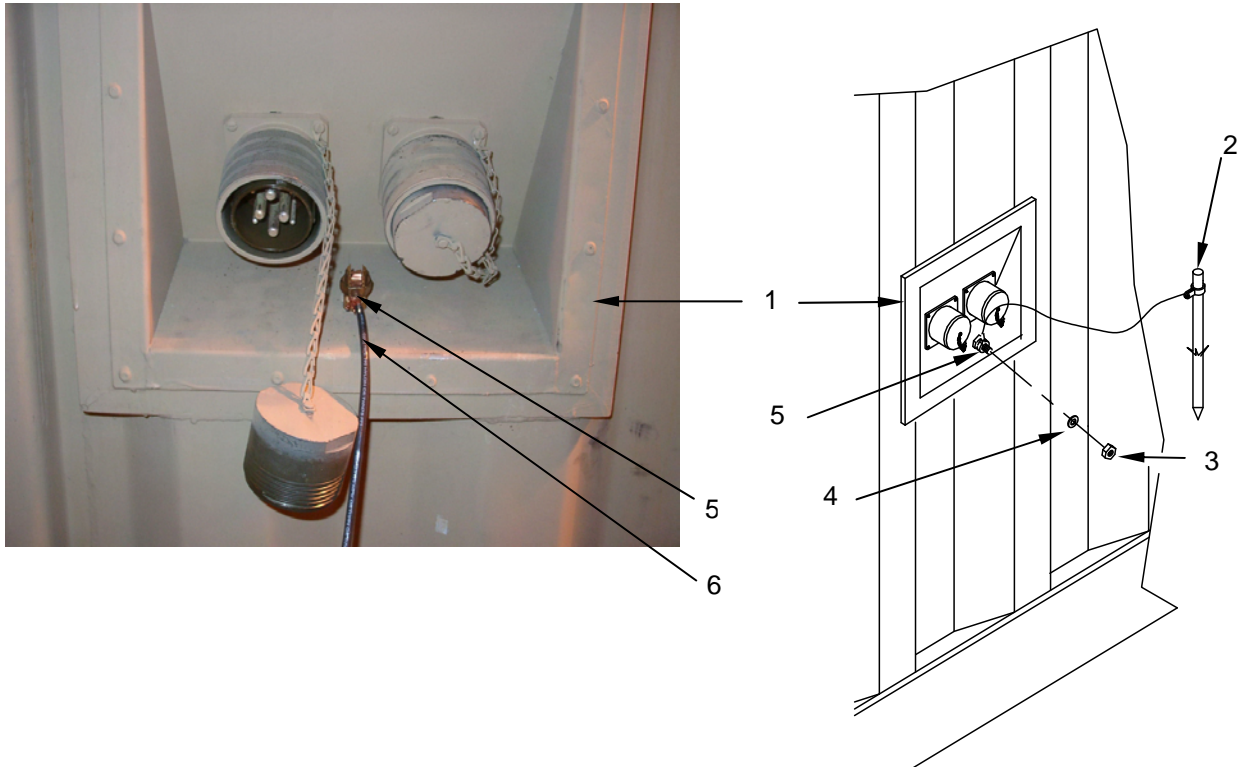


Figure 15. FP-CBL Ground Connection.

END OF TASK

Lay Out Power Cables



WARNING

Only MOS 21R, 21P, 63J, or qualified civilian electricians may perform this procedure. Power source must be shut down and secured before assembling any cables. Failure to do so may result in serious injury or death by electrocution.

1. Set FP-CBL circuit breakers in the electrical panels located behind the washers and dryers to OFF.

CAUTION

Keep cables away from vehicle traffic. Damage to cables may result.

NOTE

When assembling power equipment, follow instructions for laying out cables from power source out to point of use, then connecting cables from point-of-use back to power source. Male ends of cables always go toward source, while female ends of cables go toward point-of-use.

NOTE

Three 100-foot/60-A cables, six 50-foot/100-A cables, and three, 4-foot/100-A pigtail cables are furnished to connect CBL equipment to the power source. In most cases, not all of these cables or pigtails will be necessary to make power source connections. Use only the cables/pigtails required to make the connections. Leave unused cables packed and stored in TRICON.

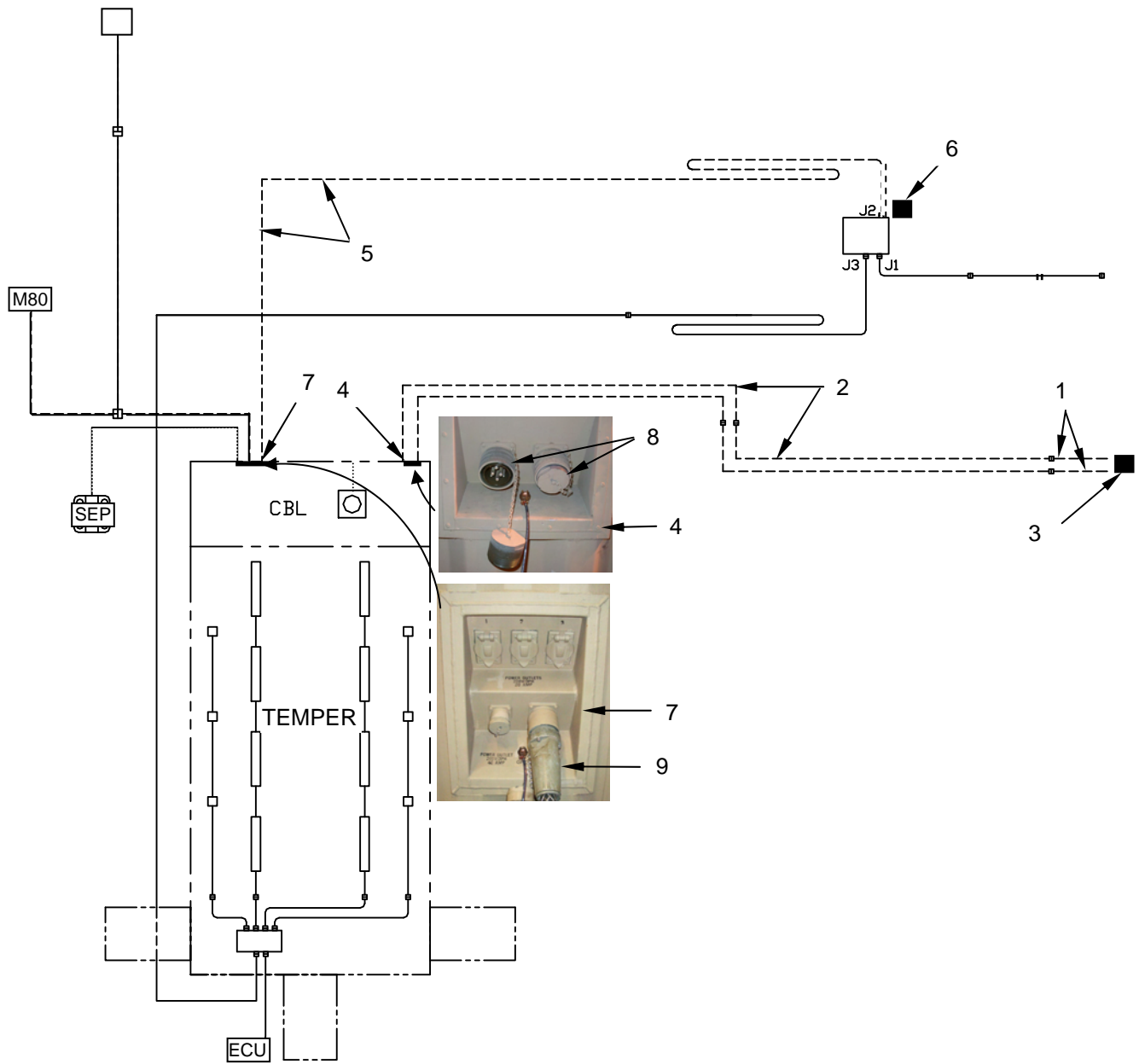
2. Lay out two 4-foot/100-A pigtails (Figure 16, Item 1) and four (in series of two) 50-foot/100-A service cables (Figure 16, Item 2) from the designated power source (Figure 16, Item 3) to the dryer power input panel (Figure 16, Item 4).
3. Lay out two 50-foot/100-A service cables (Figure 16, Item 5) from the power source control point (J) designated by staking (Figure 16, Item 6) to the washer input/output panel (Figure 16, Item 7).

END OF TASK

Cable Connections

1. Connect the 50-foot/100-A service cables (Figure 16, Item 2) firmly into the 100-A receptacles (Figure 16, Item 8) on the dryer input panel (Figure 16, Item 4) and secure with lock rings. Connect dust caps.
2. As applicable (if more than one cable is used), connect the 50-foot/100-A service cables (Figure 16, Item 2) together. Connect dust caps together.
3. Place the 4-foot/100-A pigtail (Figure 16, Item 1) near the end of the 50-foot/100-A service cable (Figure 16, Item 2). Do not connect at this time. Connect dust caps together.
4. Connect the 50-ft/100-A service cable (Figure 16, Item 5) firmly into 100-A receptacle (Figure 16, Item 9) on washer input/output panel (Figure 16, Item 7). Secure with lock rings. Connect dust caps.
5. Connect the 50-foot/100-A service cables (Figure 16, Item 5) together. Connect dust caps together.

The FP-CBL will be connected to its proper power sources as part of the assembly and preparation for use of the Force Provider Laundry Subsystem. Refer to TM 10-5419-206-13 as necessary.



- Cables laid out as part of CBL setup (TM 10-3510-225-13&P)
- Cables laid out as part of Force Provider laundry subsystem setup
- Cable required only if SEP is used (Part of Force Provider laundry setup)

Figure 16. Laying Out and Connecting Power Cables.

END OF TASK

Check Power Connection and Main Breaker Status

After the remaining Force Provider laundry subsystem power equipment has been set up, but before power is applied, proceed as follows:



WARNING

Remember that the FP-CBL can be a wet environment. Always use caution when operating electrical controls and equipment. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Open the door to the main breaker panel and make certain that the main breaker (Figure 17, Item 1) is switched to the OFF position. All other breakers should remain in the OFF position at this time.
2. Verify that the 50-foot 100 Amp service cables to both power input panels have been properly connected and are secure.
3. Verify that grounding rod and cable have been installed at one of the power inlet panels.
4. After power has been applied to the Force Provider laundry subsystem, (Refer to TM 10-5419-206-13 as necessary) open the FP-CBL main breaker panel and switch the main breaker (Figure 17, Item 1) to the ON position.
5. Plug in power cords to washers, waste water transfer pump, and reuse transfer pumps.
6. Switch component breakers to ON to operate the FP-CBL.

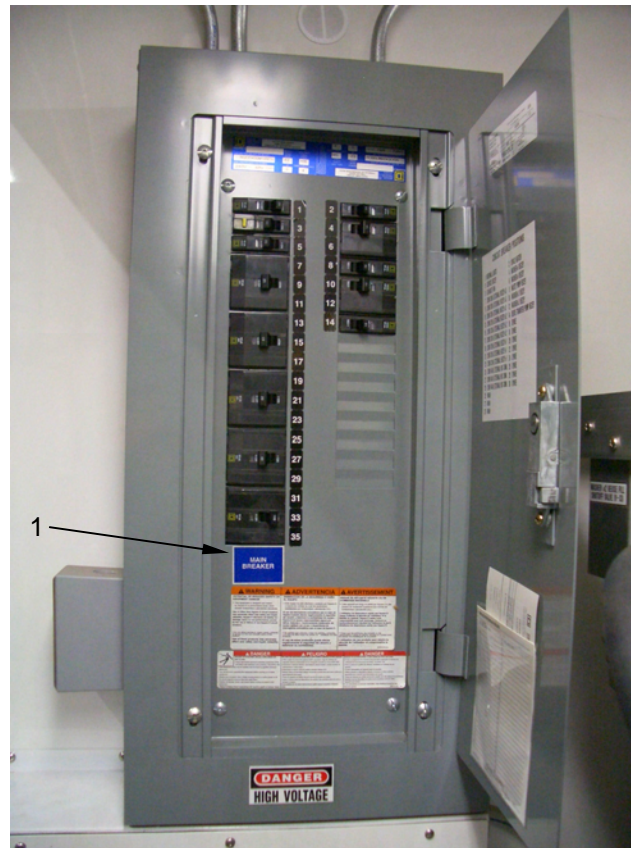


Figure 17. Final Check of Power Connections and Main Breaker Status.

END OF TASK

PREPARE WASHER AND WASHING SYSTEM FOR USE**Remove Washer Shipping Brackets and Snubbers****CAUTION**

Do not attempt to operate the FP-CBL without removing the shipping brackets and snubbers. Severe vibration may occur, resulting in equipment damage.

1. Remove shipping brackets (Figure 18, Item 1) by loosening retaining bolts (Figure 18, Item 2) and removing bolts from brackets.
2. Slide shipping brackets out from under washing machines.

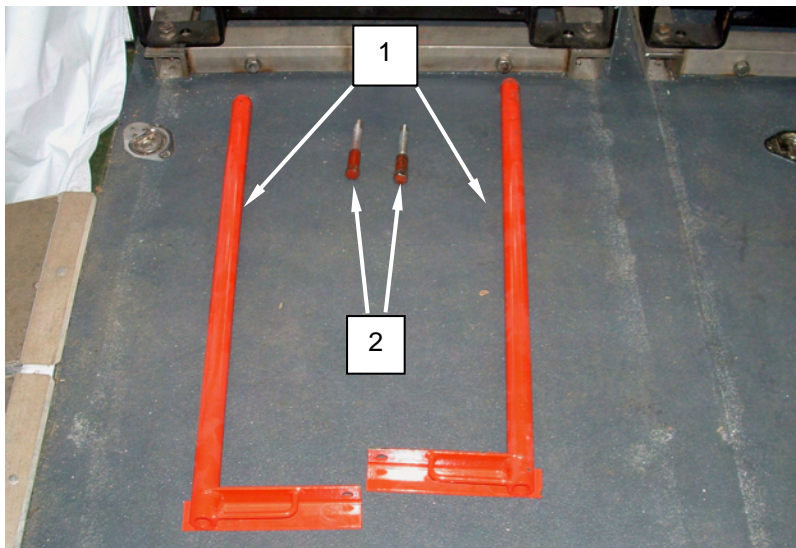
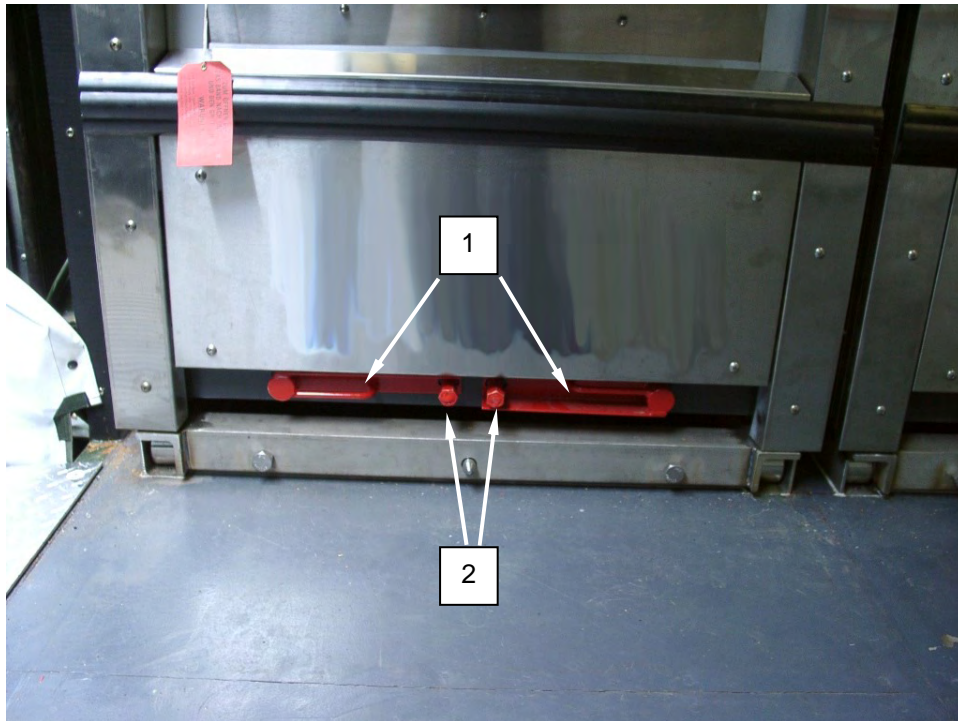


Figure 18. Remove Washer Shipping Brackets.

PREPARE WASHER AND WASHING SYSTEM FOR USE - CONTINUED

3. Remove snubber (Figure 19, Item 1) from snubber bracket (Figure 19, Item 2) by lifting snubber straight up out of bracket.
4. Ensure snubber is attached to washer frame with retaining lanyard and place snubber on floor beneath washer.

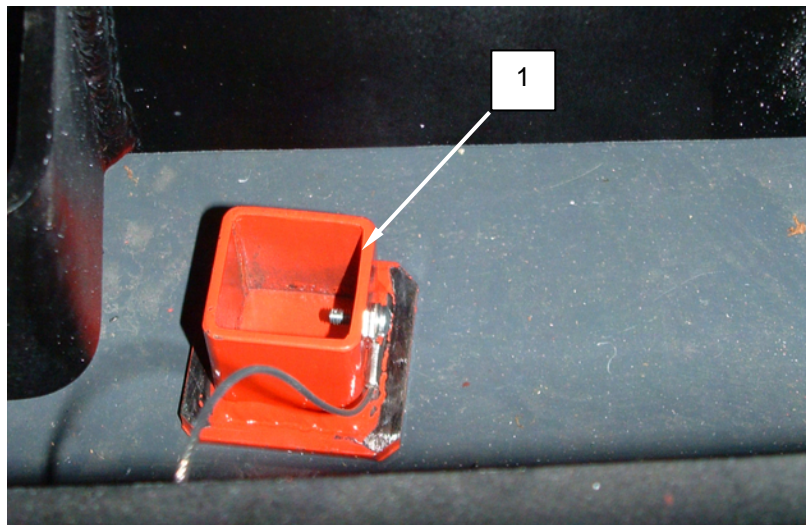
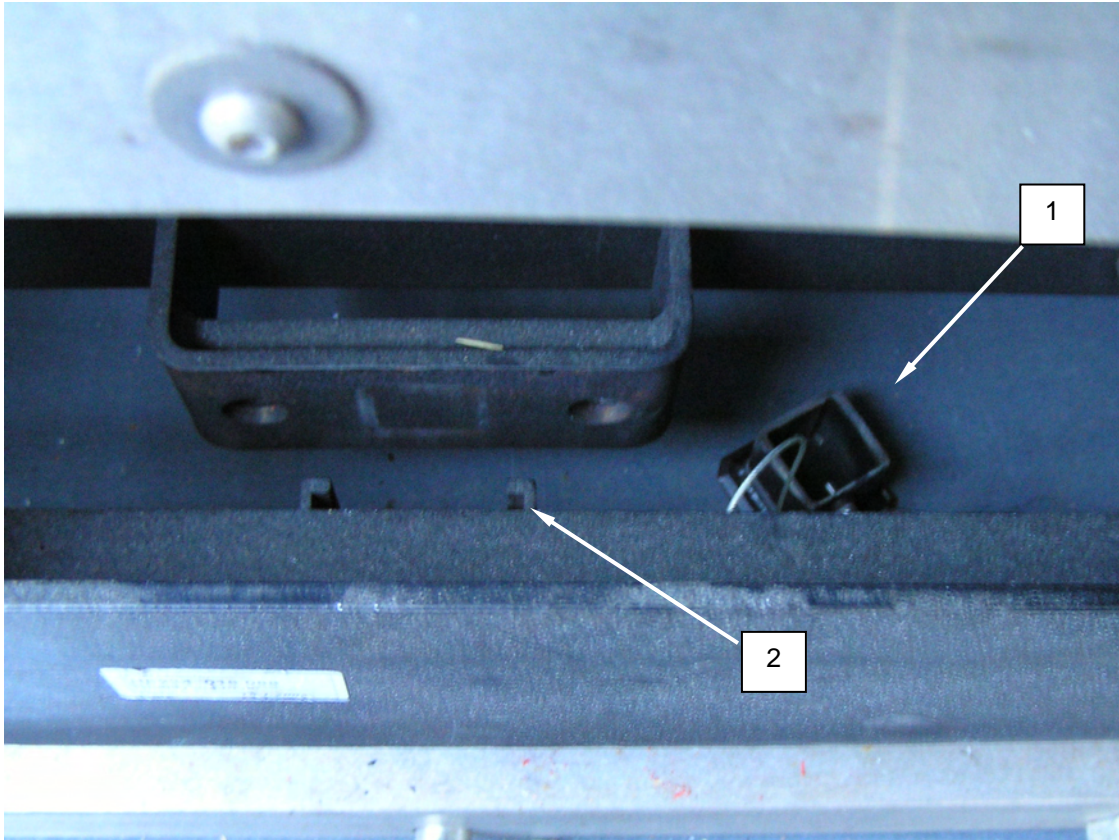


Figure 19. Removing Snubbers.

PREPARE WASHER AND WASHING SYSTEM FOR USE - CONTINUED**Leveling Washers**

1. Check the spacing between the washer frame (Figure 20, Item 1) and the washer drum (Figure 20, Item 2) in the front of the washer. Spacing should be evenly distributed approximately 1 in. around entire face of washer drum and frame. If spacing is correct, no further preparation is required.

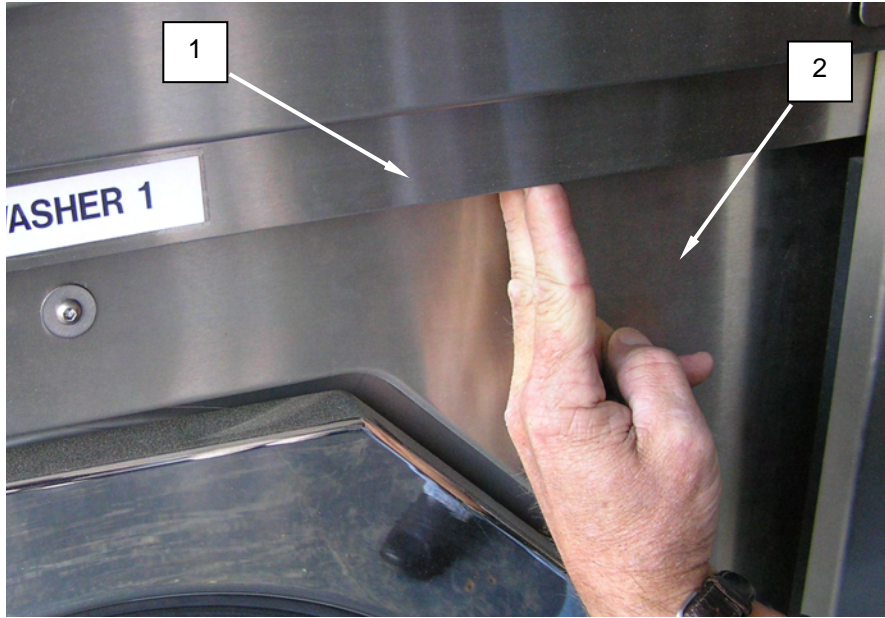


Figure 20. Leveling the Washer.

2. If the washer requires leveling, remove the washer IAW WP 0055.
3. Remove access panels on both sides of washer, exposing leveling springs (Figure 21, Item 1).

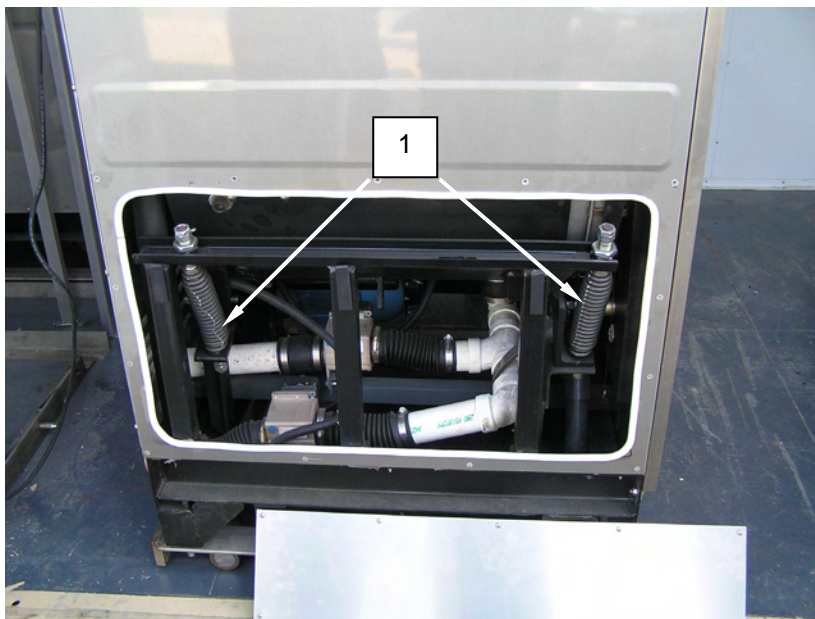


Figure 21. Washer Access Panel.

PREPARE WASHER AND WASHING SYSTEM FOR USE – CONTINUED

4. Adjust springs by tightening or loosening top (Figure 22, Item 1) and bottom (Figure 22, Item 3) nuts to equalize the number of threads showing between the large lower adjusting nut (Figure 22, Item 2) and the two adjusting nuts on top of the spring (Figure 22, Item 1).
5. Once all four springs show the same number of threads the washer should be level. Recheck spacing between washer drum and washer frame to ensure washer has been properly leveled.

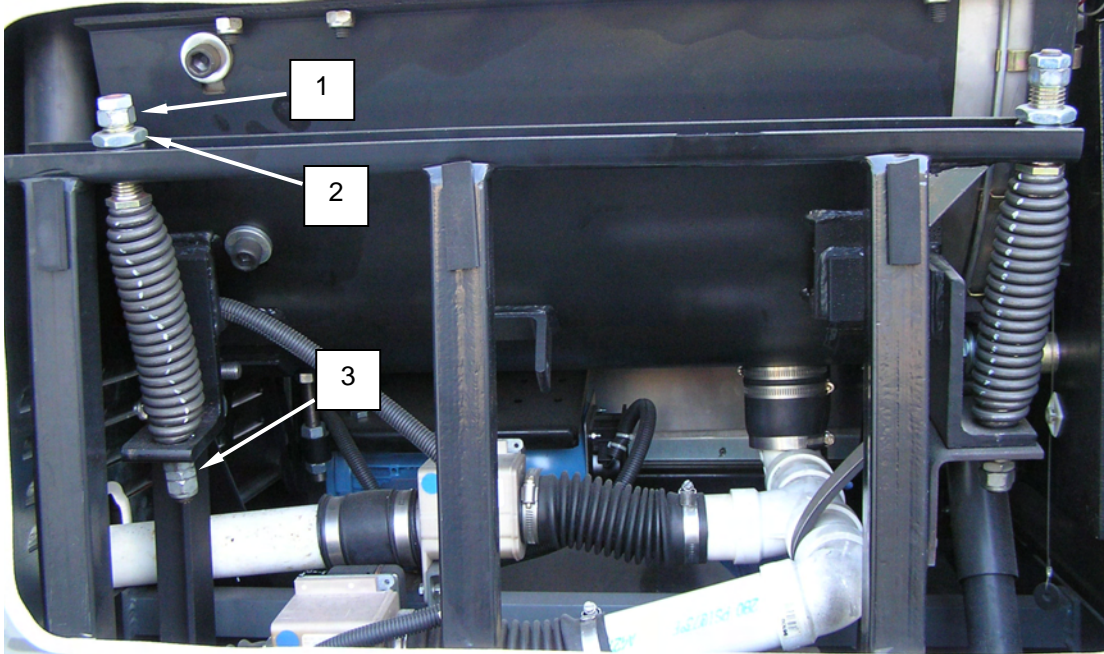


Figure 22. Adjusting Washer Leveling Springs.

6. Replace panels on both sides of washer and replace washer IAW WP 0055.

END OF TASK

INSTALL TEMPER TENT AND MODIFIED END SECTION (BOOTWALL) ASSEMBLY

Install the TEMPER Tent and Modified End Section (Bootwall) Assembly IAW WP 0006.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**OPERATION UNDER USUAL CONDITIONS
INSTALLING TEMPER TENT AND MODIFIED END SECTION (BOOTWALL)****INITIAL SETUP:****Tools and Special Tools**

None required.

Materials/Parts

None required.

Personnel Required

Laundry and Shower Specialist 92S (6)
 Interior Electrician 21R (1) or
 Prime Power Production Specialist 21P (1) or
 Quartermaster and Chemical Equipment Repairer
 63J (1) or Qualified Civil Electricians (1)

References

TM 10-8340-224-13

A 32-foot, Type XIX TEMPER with modified endwall (bootwall) attaches to the FP-CBL for use as a workstation. The TEMPER frame and outer skin as well as the interior TEMPER components such as lighting and electrical system should be set up IAW TEMPER TM 10-8340-224-13. The modified endwall (bootwall) is installed IAW procedures detailed in this section.

When erecting the TEMPER, orient the shelter relative to the FP-CBL so that it is in line with the double entrance doors. The TEMPER entrance should be facing away from the FP-CBL double entrance doors. Erect the shelter approximately 6 feet from the entrance to the FP-CBL. Once the shelter has been erected, it will be moved into position at the entrance to the FP-CBL before securing the modified endwall to the FP-CBL.

PREPARE LAUNDRY TEMPER WITH MODIFIED END SECTION FOR USE

The following procedures provide detailed instructions for erecting TEMPER window sections, TEMPER door sections, end section, modified end section, and vestibule for use with the Force Provider Containerized Batch Laundry (FP-CBL). For TEMPER repair procedures or more detailed information on the TEMPER, refer to TM 10-8340-224-13.

The FP-CBL employs a 32 foot, Type XIX TEMPER assembly with modified endwall liners and floors (Figure 1). The modified endwall (bootwall) is attached to the container. The 32 foot, Type XIX TEMPER assembly is made up of four 8-ft sections. The modified endwall (bootwall) is packed inside the dryer drum of the FP-CBL (2C) container and all other TEMPER components are packed inside the Laundry Tent Kit (2A). Three vestibule assemblies are also included.

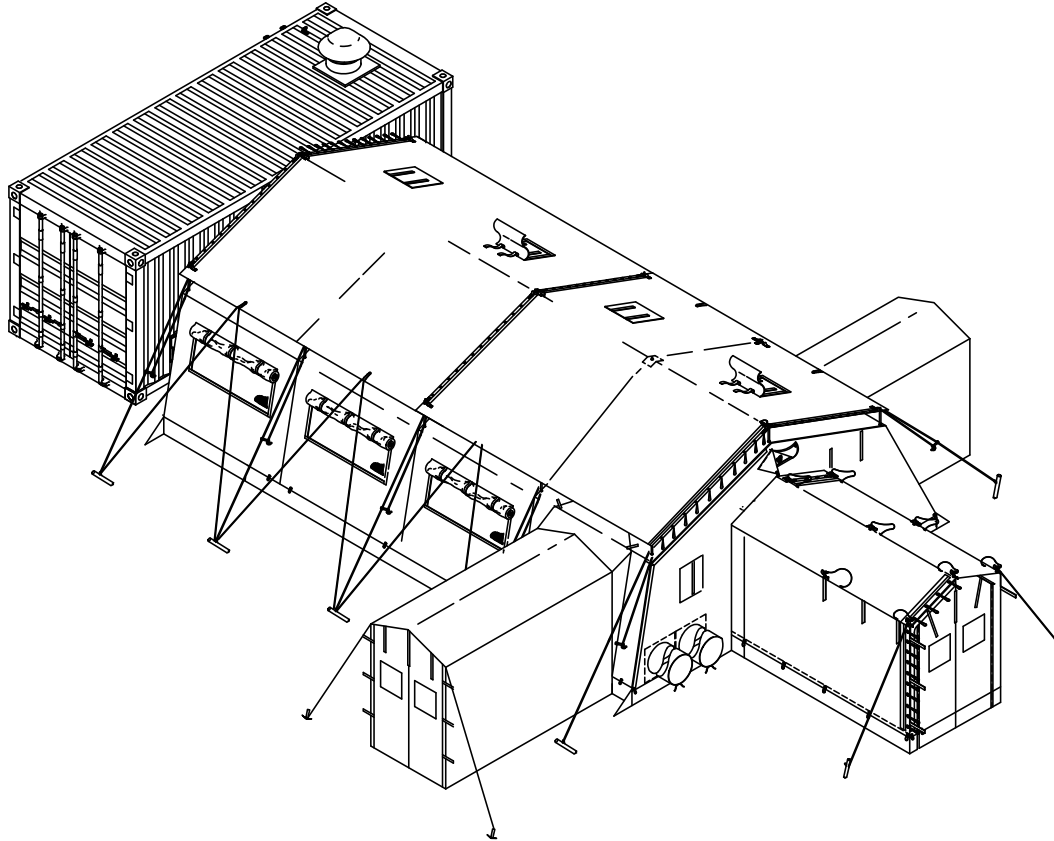


Figure 1. FP-CBL TEMPER with Modified End Section.

TEMPER Electrical Component Layout

Electrical components of the 32-foot TEMPER include one power distribution box (Figure 2, Item 2) and eight fluorescent lights (Figure 2, Item 1). Convenience outlets (Figure 2, Item 3) are also provided.

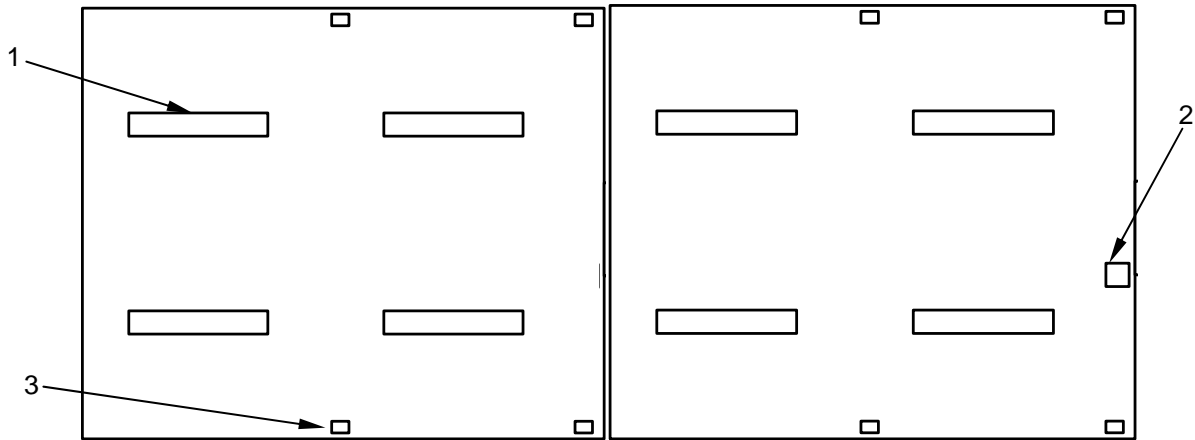


Figure 2. FP-CBL TEMPER Electrical Layout.

TEMPER Frame Assembly



WARNING

The assembled TEMPER section is heavy. At least four persons are required to move an 8-foot TEMPER section into position. Ensure sufficient personnel are available before attempting to lift the tent. Lift with your legs and not with your back to prevent serious back injuries. Personnel in the 5th percentile size group may require a step aide during this procedure. Failure comply may result in injury to personnel.



WARNING

Frame assembly hinges can pinch, crush, or cut hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves. An expedient way to keep clear of potential danger areas is to keep your hands "outside the triangle" at all times.

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.

NOTE

For clarity, subsequent illustrations may show only one or both 8-foot TEMPER sections as necessary.

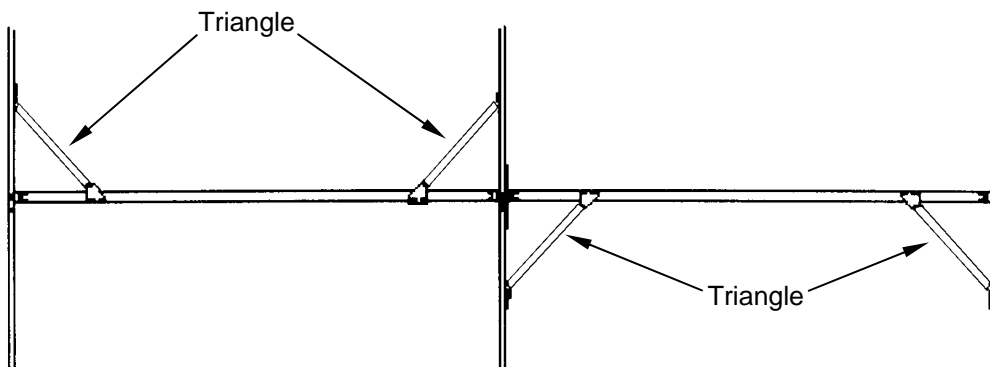


Figure 3. Frame Assembly Danger Points.

Arch Assembly



WARNING

Frame assembly hinges can pinch, crush, or cut hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves. An expedient way to keep clear of potential danger areas is to keep your hands "outside the triangle" at all times.

CAUTION

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

1. Remove roof arch assembly (Figure 4, Item 2) and side arch assemblies (Figure 4, Item 3) from frame sections cover assembly bundle.
2. Ensure all quick release pins (Figure 4, Item 5) are disengaged.

CAUTION

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

3. Use the tent pin alignment tool to align holes in roof arch assembly (Figure 4, Item 2) with holes in ridge gusset plate (Figure 4, Item 4). Insert quick release pin (Figure 4, Item 5).
4. Move side arch assembly (Figure 4, Item 3) away from roof arch assembly (Figure 4, Item 2).
5. Connect roof arch assembly (Figure 4, Item 2) and side arch assemblies (Figure 4, Item 3) to form arch assembly (Figure 4, Item 1).
6. Lay arch assembly (Figure 4, Item 1) flat on the ground.

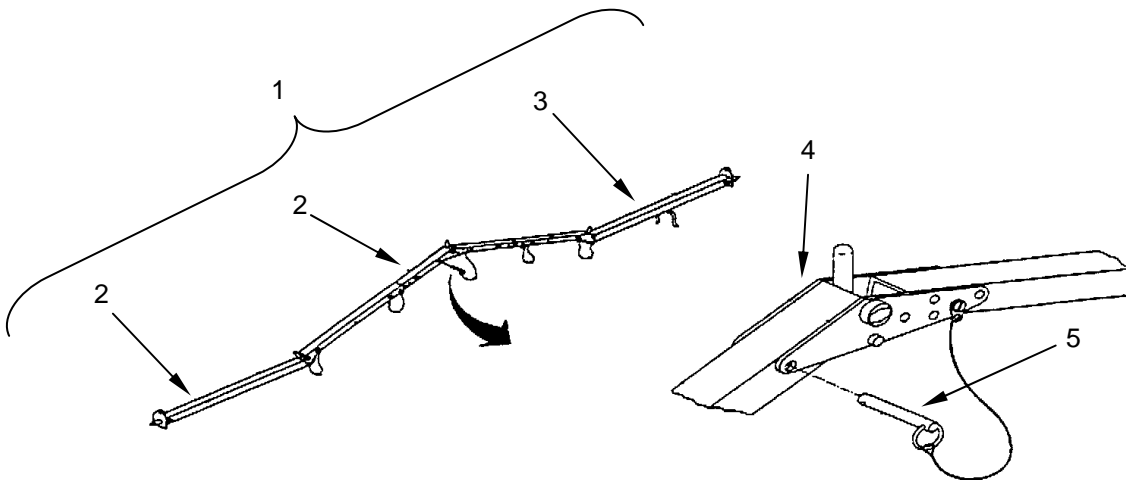


Figure 4. Arch Assembly.

Header Assembly

NOTE

The header assembly will be pinned to the arch assembly between the ridge and eave. The header has beveled edges. During assembly, the shorter side faces up.

1. Identify the header assembly (Figure 5, Item 1).
2. Slide the header assembly end plates (Figure 5, Item 2) over arch assembly (Figure 5, Item 3).
3. Align arch assembly (Figure 5, Item 3) and header assembly end plate holes (Figure 5, Item 4) and insert quick release pin (Figure 5, Item 5).
4. Lay assembly on the ground. Repeat procedures for each arch assembly.

NOTE

The FP-CBL will require six arch and header assemblies to complete the 32-foot TEMPER assembly.

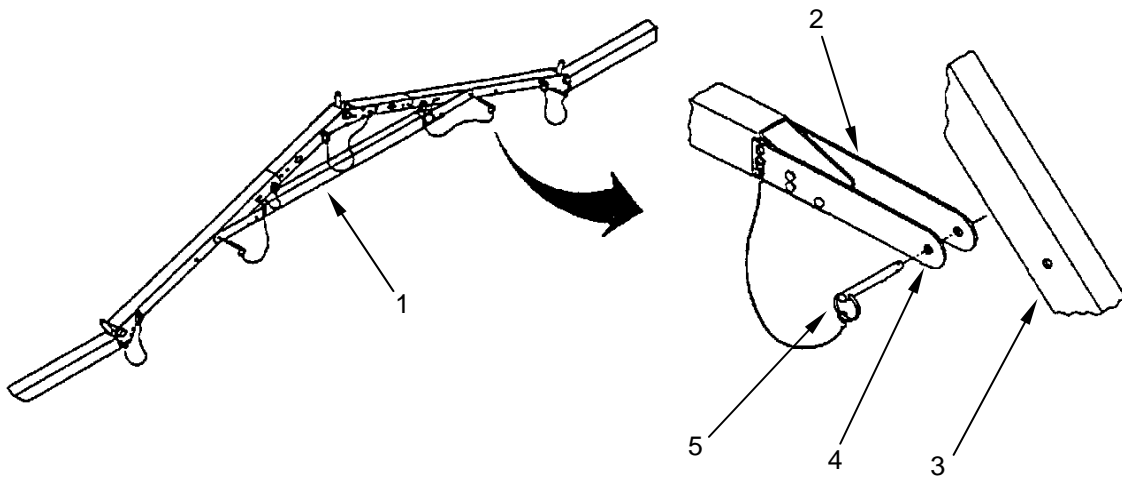


Figure 5. Header Assembly.

Purlin Assembly

NOTE

Purlins connect the arch assemblies together. An 8-foot section of the frame will be completed with five purlins. Purlins consist of a pipe section with two diagonal braces attached. Twenty purlins will be required to set up the 32-foot TEMPER assembly for the FP-CBL.

1. Identify five purlins (Figure 6, Item 1) for installation at ridge (Figure 6, Item 3), eaves (Figure 6, Item 4), and bases (Figure 6, Item 5).
2. Starting at the end arch, hold two arch assemblies (Figure 6, Item 2) upright and parallel, 8 feet apart, in kneeling position.

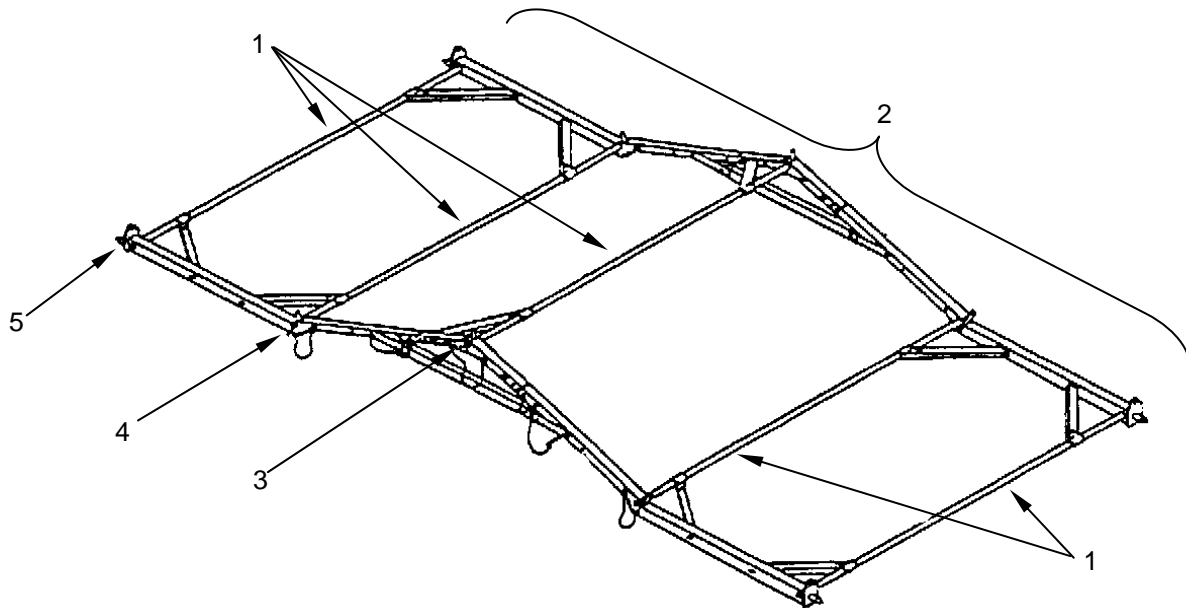


Figure 6. Purlin Assembly.

3. Install round purlin (Figure 7, Item 4) at ridge (Figure 7, Item 1).
4. Identify end fitting (Figure 7, Item 3) on each end of purlin (Figure 7, Item 4).
5. Fit end fitting (Figure 7, Item 3) in each arch assembly boss (Figure 7, Item 2) simultaneously.
6. Rotate purlin (Figure 7, Item 4) 90 degrees so that end fittings (Figure 7, Item 3) lock into boss (Figure 7, Item 2) at each arch assembly (Figure 7, Item 5).

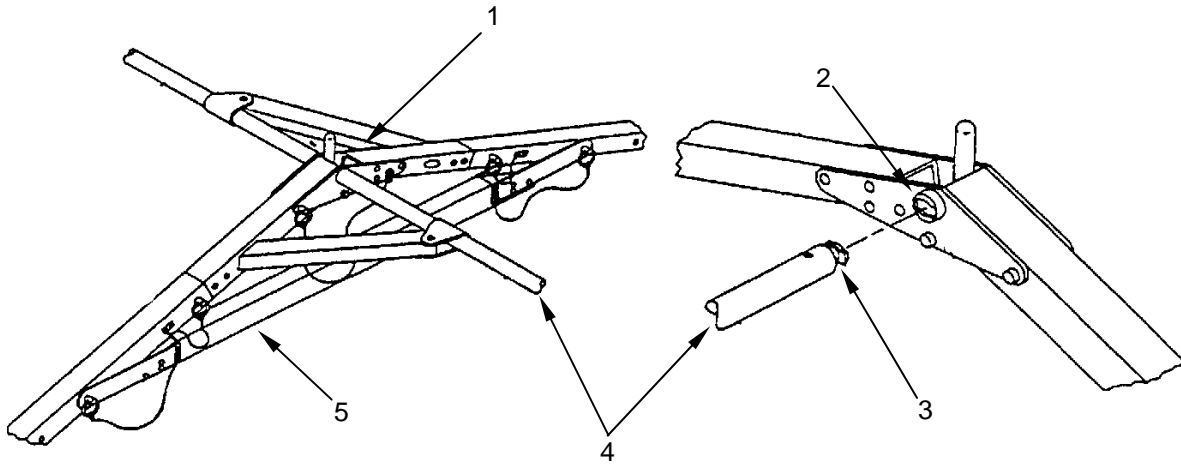
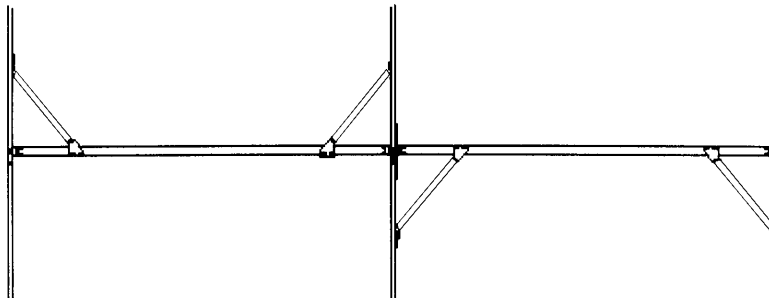


Figure 7. Purlin Assembly Detail.

NOTE

When installing additional purlin assemblies to complete sections, stagger the placement of the diagonal braces as shown below.



(top view)

Figure 8. Purlin Assembly Diagonal Brace Placement.

7. Unfasten retaining strap (Figure 9, Item 2) and rotate a purlin diagonal brace (Figure 9, Item 3) toward arch assembly (Figure 9, Item 1).

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.

8. Holding brace shackle (Figure 9, Item 4), align and place brace stud (Figure 9, Item 5) in arch assembly slot (Figure 9, Item 6) located two feet from ridge.
9. Rotate brace shackle (Figure 9, Item 4) 90 degrees to lock brace stud (Figure 9, Item 5) in place.

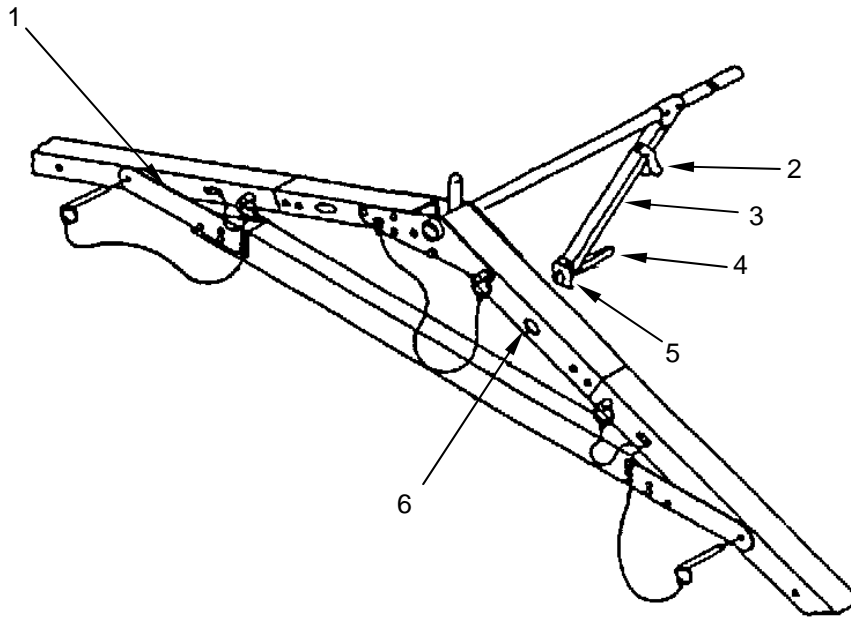


Figure 9. Purlin Assembly Diagonal Brace Detail.

**WARNING**

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

10. Lock purlin diagonal brace (Figure 10, Item 3) by pressing brace shackle (Figure 10, Item 1) down towards arch assembly (Figure 10, Item 2) until it is secure.
11. Install remaining purlin diagonal brace (Figure 10, Item 3) repeating steps 7 through 10 above.

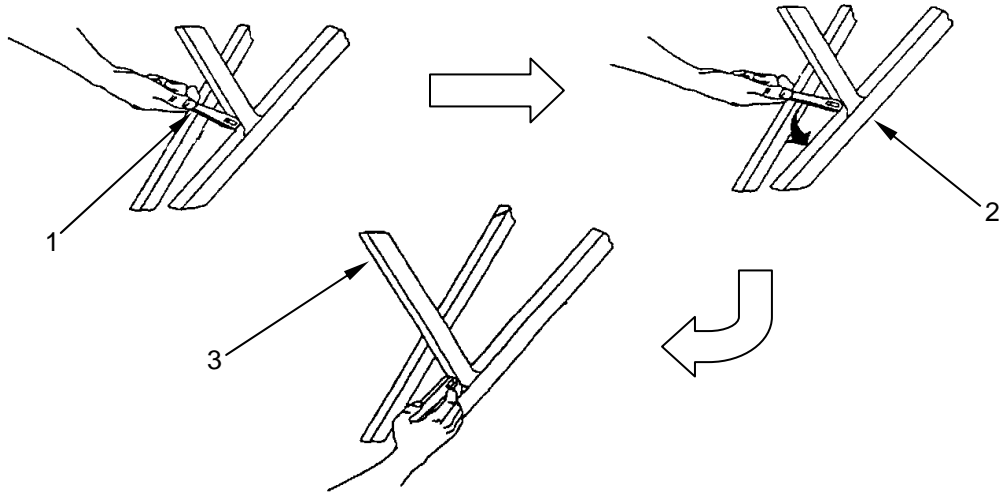


Figure 10. Purlin Assembly Diagonal Brace Detail.

12. Install purlin (Figure 11, Item 1) at each eave (Figure 11, Item 3) repeating steps above. Begin at “ 4. Identify end fitting...”
13. Install purlin (Figure 11, Item 1) at each base (Figure 11, Item 2) repeating steps above. Begin at “ 4. Identify end fitting...”
14. Add second 8-foot TEMPER frame sections by installing additional purlin assemblies, repeating steps 1 through 13. When completed, the frame section is now in a kneeling position.

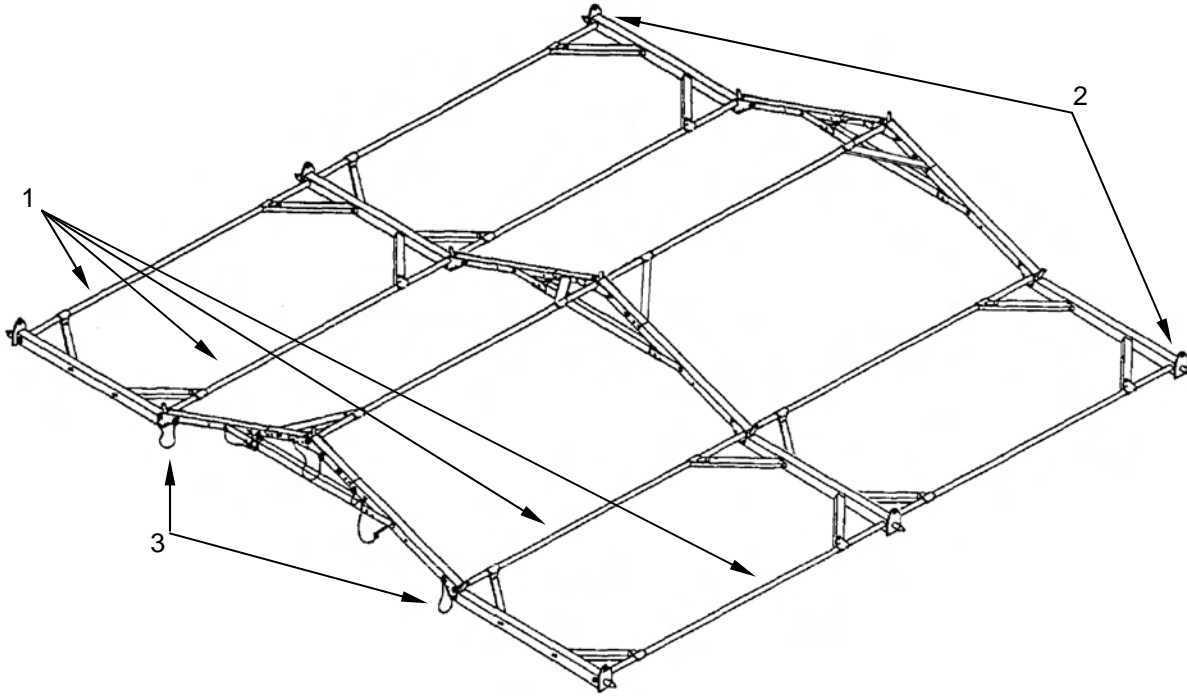


Figure 11. Purlin Assembly.

Installing the Light Supports

1. Identify light support strap assembly (Figure 12, Item 1) in light set case. Wrap each running end of light support strap assembly once around header (Figure 12, Item 3) at header/arch joint so the double D-ring (Figure 12, Item 2) faces the tent roof.
2. Secure end of light support strap assembly (Figure 12, Item 1) through double D-ring (Figure 12, Item 2) assembly on standing end of strap. Tighten webbing until taut.

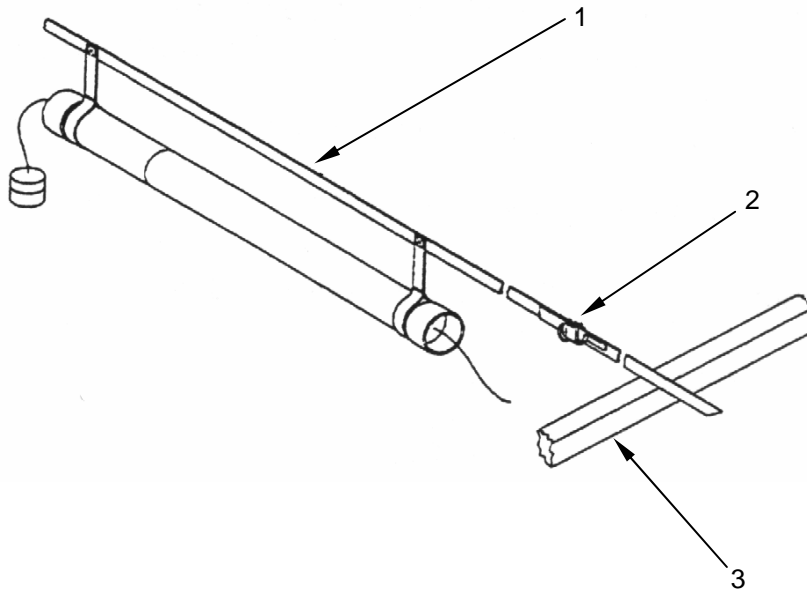


Figure 12. Install the Light Supports.

Placement of Window and Door Sections

1. Identify the window section (Figure 13, Item 1).

NOTE

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

2. Place window section (Figure 13, Item 2) next to extendable frame.
3. Identify large, spindle grommets (Figure 13, Item 1) at the center of each side of the window section (Figure 13, Item 2).

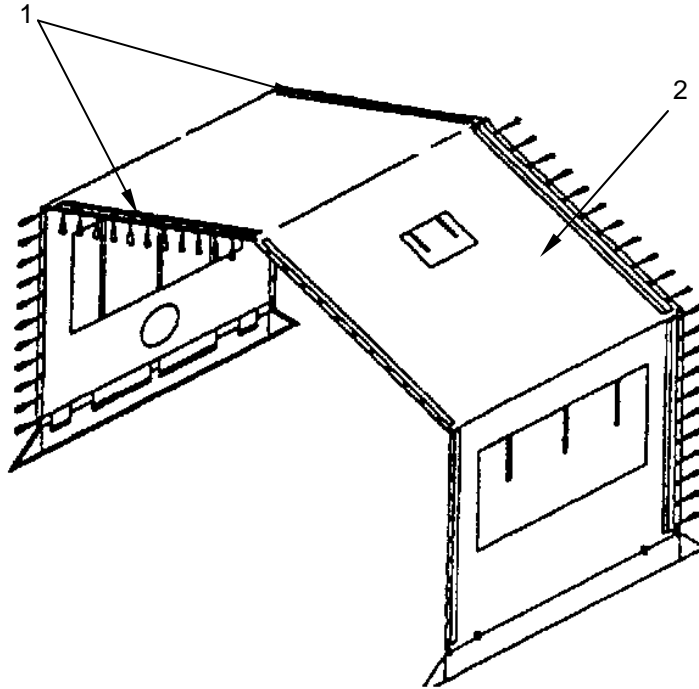


Figure 13. Identify Door and Window Section Components.

4. Place the large spindle grommets over ridge spindles (Figure 14, Item 1).

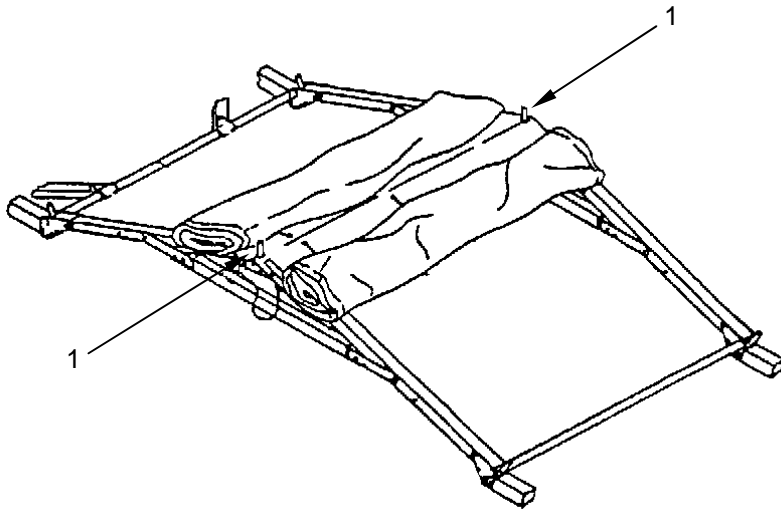


Figure 14. Place the Large Spindle Grommets Over Ridge Spindles.

5. Unroll tent fabric until fabric reaches eave spindles (Figure 15, Item 1). Place grommets over each of the four eave spindles.

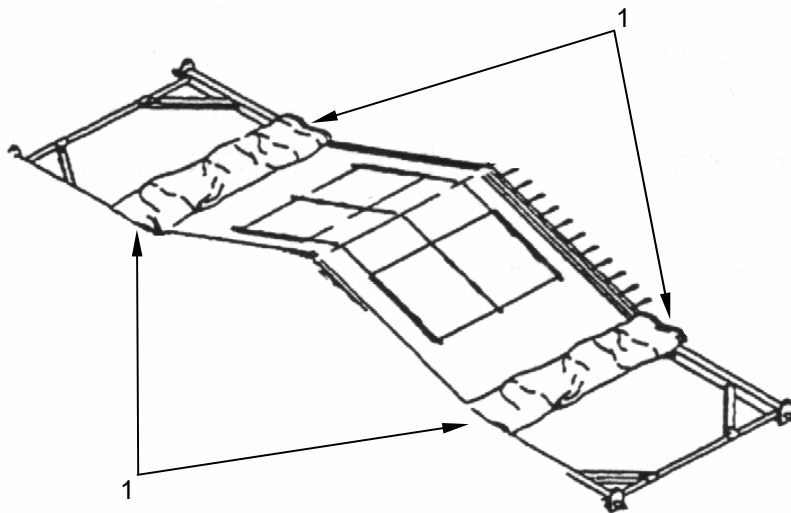


Figure 15. Unroll Tent Fabric.

Placement of Modified End Section (ISO Bootwall)

1. Identify modified end section (bootwall) (Figure 16, Item 2). Modified end section (bootwall) should be stenciled "ISO Bootwall".
2. Identify large spindle grommet (Figure 16, Item 1) at peak of modified end section (bootwall).

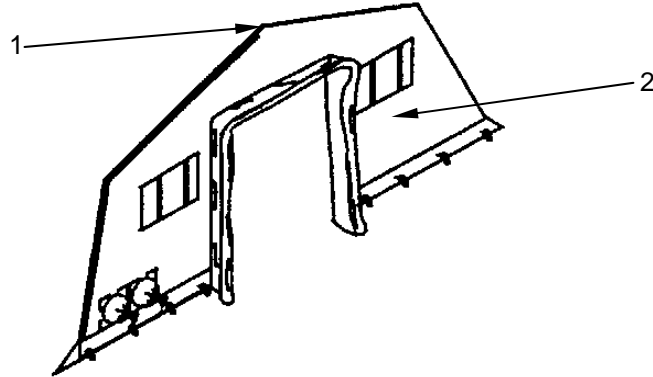


Figure 16. Identify Modified End Section (ISO Bootwall) Components.

NOTE

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

3. Place large spindle grommet located at peak of modified end section over ridge spindle (Figure 17, Item 1) facing the container.

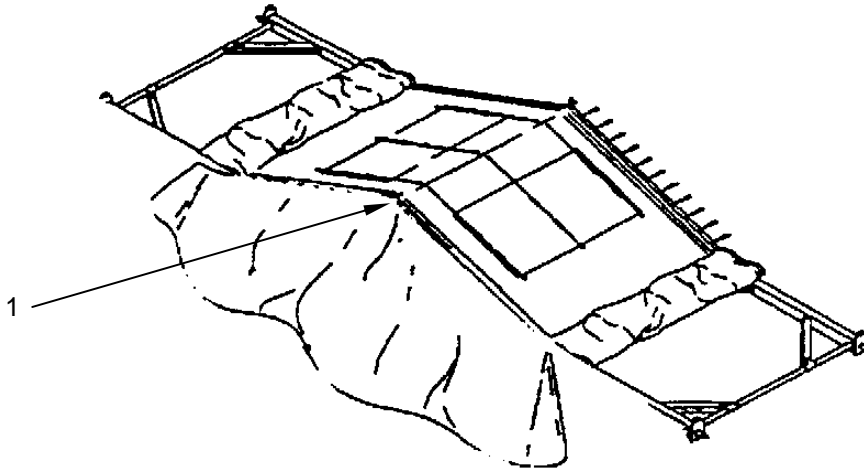


Figure 17. Placement of Modified End Section (ISO Bootwall).

Placement of End Section

1. Identify end section (Figure 18, Item 1). Regular end section has zip doors (Figure 18, Item 2) rather than the bootwall attachment on the modified end section.

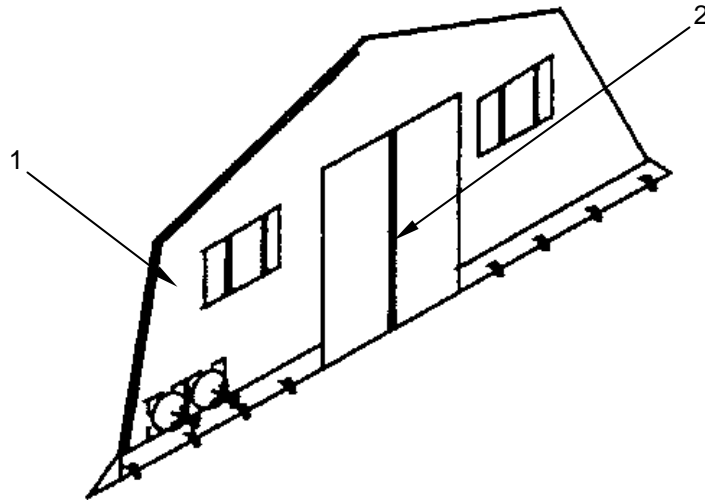


Figure 18. Identify End Section Components.

2. Place large spindle grommet located at peak of end section over ridge spindle (Figure 19, Item 1) opposite container.

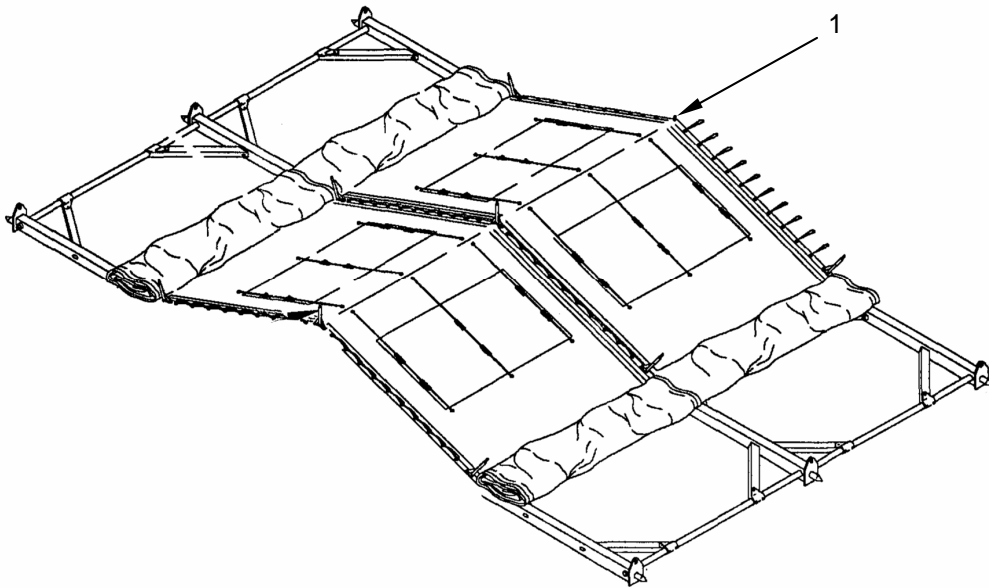


Figure 19. Place Large Spindle Grommet.

NOTE

Ridge extenders and eave extenders are very similar in appearance. Ridge extenders have one attached hitch pin, and will sit upright when placed on the apex of the arch.

3. Identify the three ridge extenders (Figure 20, Item 1).
4. Place the ridge extenders (Figure 20, Item 1) over the ridge spindles (Figure 20, Item 3) opposite the container.
5. Align holes in ridge spindles (Figure 20, Item 3) and ridge extenders (Figure 20, Item 1).
6. Install the attached hitch pins (Figure 20, Item 2) through holes in ridge extenders (Figure 20, Item 1) and spindles (Figure 20, Item 3), ensuring both components are secure.

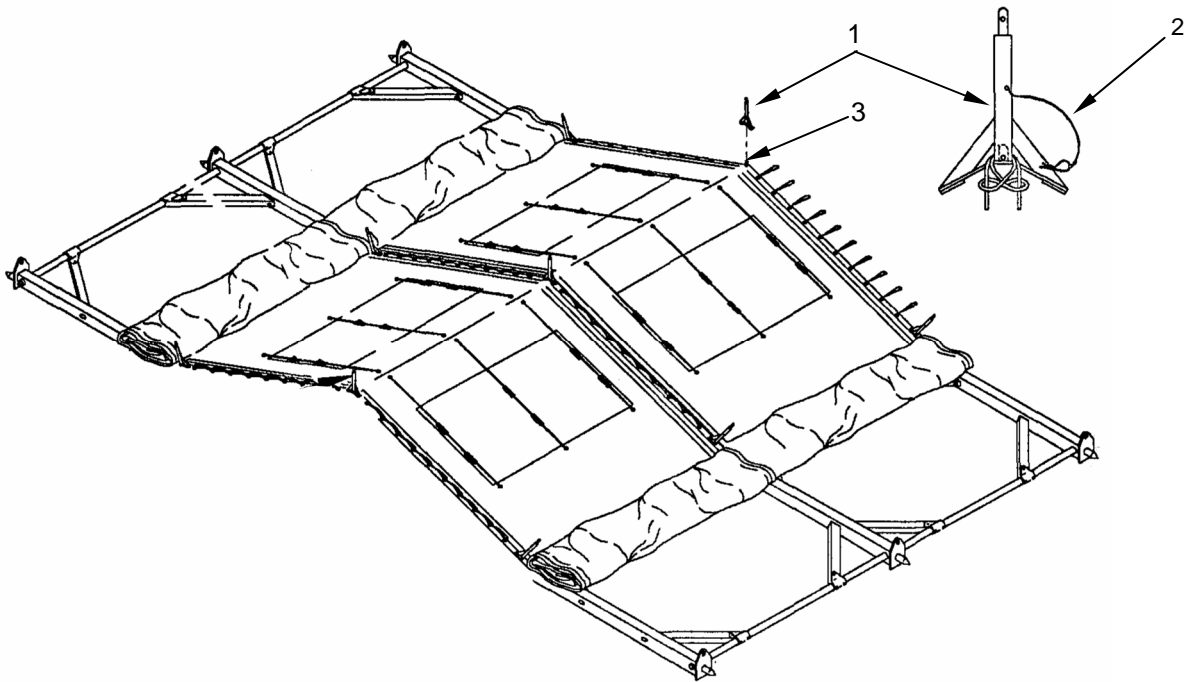


Figure 20. Placement of End Section.

Placement of Tent Fly

1. Identify tent fly (Figure 21, Item 1) and lay out beside window or door section.
2. Identify the large, ridge extender spindle grommet (Figure 21, Item 2).
3. Roll up both sides of fly (Figure 21, Item 1) to large, ridge extender spindle grommet.
4. With a minimum of one individual placed at each large ridge extender spindle grommet (2), lift and move fly (Figure 21, Item 1) to frame section ridge purlin.
5. Place the large, ridge extender spindle grommets (Figure 21, Item 2) on the ridge extender spindles (Figure 21, Item 4)
6. Place the fly hitch clip pins (Figure 21, Item 3) through the holes in the ridge extender spindles (Figure 21, Item 4) which protrude through the large ridge extender spindle grommets (Figure 21, Item 2).

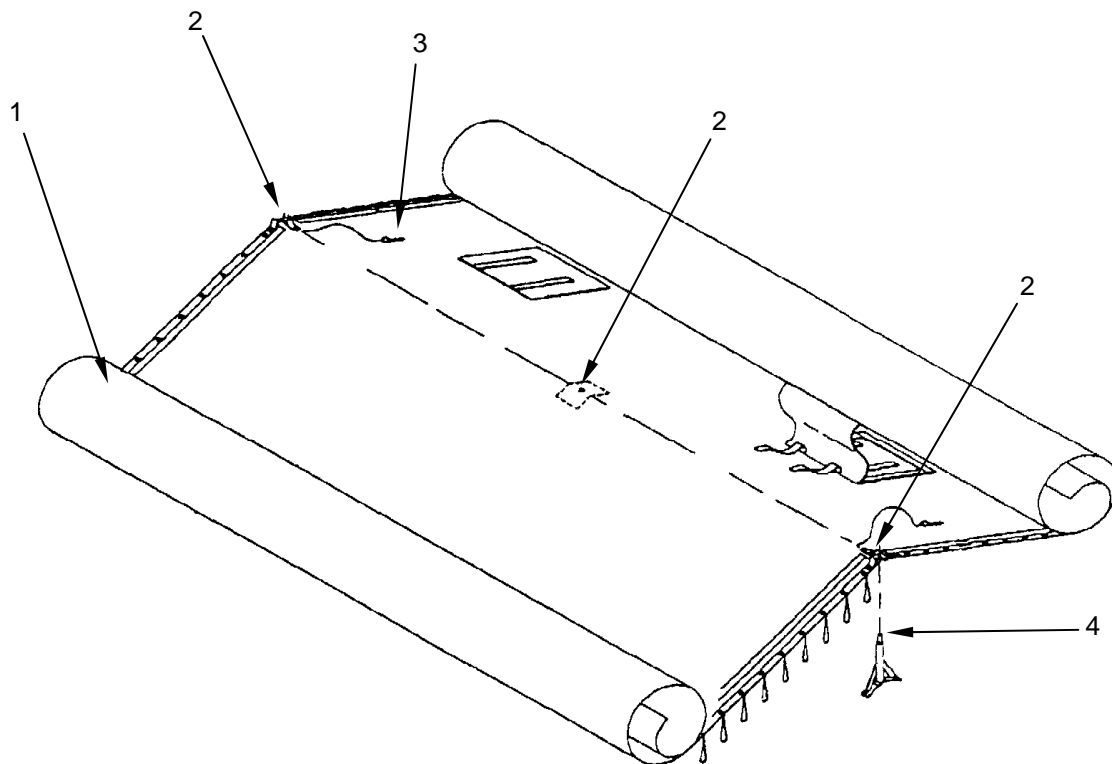


Figure 21. Placement of Tent Fly.

Becket Lacing Window/Door and End Sections

At this point, lacing together of window, end sections, and tent fly 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.

1. Place becket side (Figure 22, Item 1) eave grommet over eave spindles (Figure 22, Item 2).

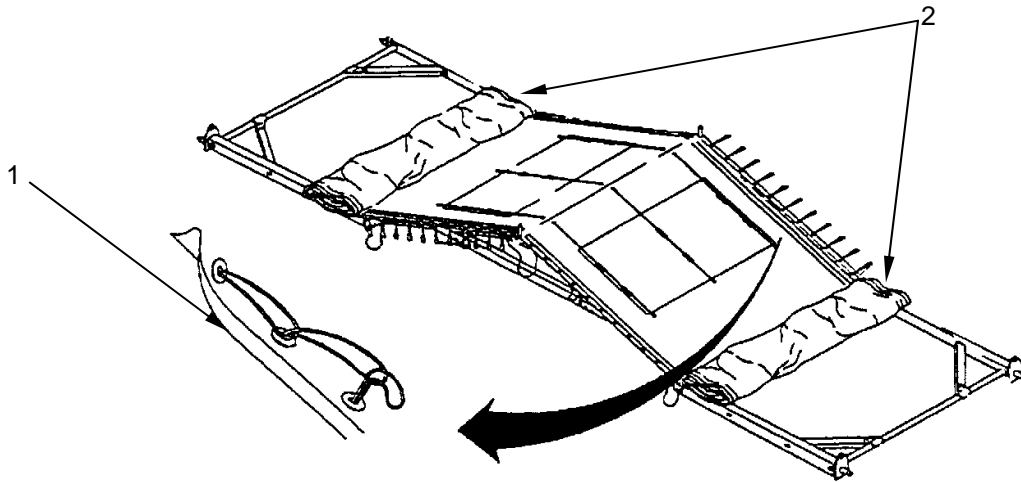


Figure 22. Place Becket Side Eave Grommet Over Eave Spindles.

2. Identify first becket lace (Figure 23, Item 2) and becket grommet (Figure 23, Item 1) near the ridge.
3. Insert the first becket lace (Figure 23, Item 2) through first becket grommet (Figure 23, Item 1) and second becket lace (Figure 23, Item 3) through second becket grommet (Figure 23, Item 6).
4. Insert second becket lace (Figure 23, Item 3) through the loop of first becket lace (Figure 23, Item 2).
5. Pull second becket lace (Figure 23, Item 3) tight away from ridge.
6. Insert third becket lace (Figure 23, Item 4) through grommet (Figure 23, Item 5) and through loop of second becket lace (Figure 23, Item 3).
7. Pull third becket lace (Figure 23, Item 4) tight away from the ridge.

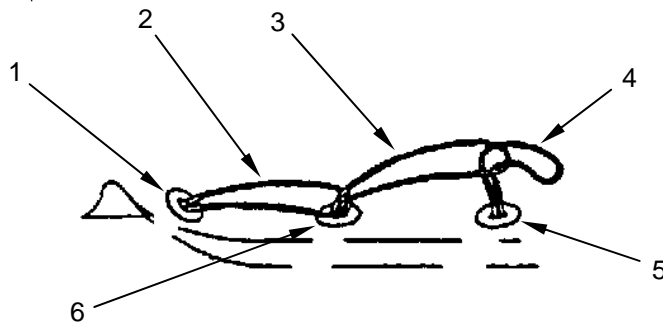


Figure 23. Begin Becket Lacing.

- Continue lacing and close hook and pile weather flap (Figure 24, Item 1) until reaching the last becket lace (Figure 24, Item 2).

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 (Figure 24, Item 2) at eave, insert next-to-last becket face (Figure 24, Item 3) through loop of last becket lace.
- Pull the next-to-last becket lace (Figure 24, Item 3) back towards the ridge and tie off with half-hitch knot.
- Complete lacing all window/door and end sections up to eave.

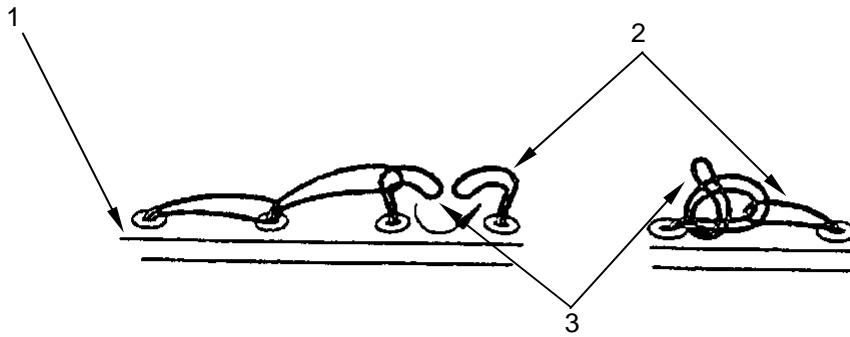


Figure 24. Complete Becket Lacing.

13. Identify the six eave extenders (Figure 25, Item 1).
14. Place eave extenders (Figure 25, Item 1) on eave spindle (Figure 25, Item 3) with brace towards ridge.
15. Align holes on spindle (Figure 25, Item 3) and eave extender (Figure 25, Item 1) and insert the hitch clip pin (Figure 25, Item 2) ensuring it secures both components.

NOTE

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

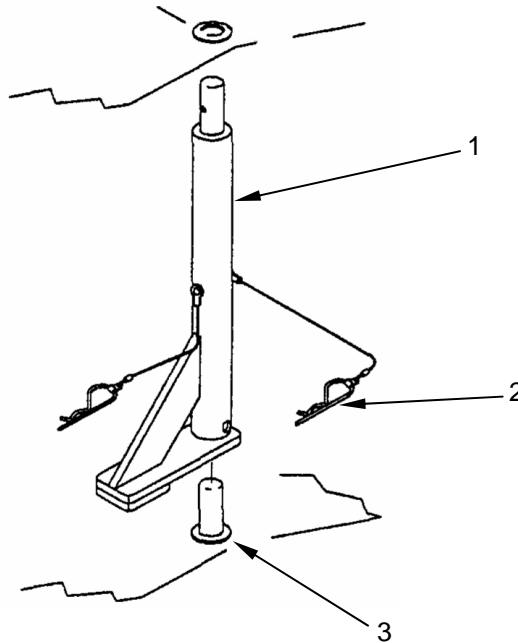


Figure 25. Install Eave Extenders.

Install Guy Line

1. Identify one 19-foot guy line (Figure 26, Item 2) and one tent slip (Figure 26, Item 1) for placement at each of the four eave extender (Figure 26, Item 4) bases.
2. Identify two 19-foot guy lines (Figure 26, Item 2) and tent slips (Figure 26, Item 1) for placement at the end ridge extender (Figure 26, Item 3) base.
3. Thread the guy line (Figure 26, Item 2) through one side of the tent slip (Figure 26, Item 1) and then through the brace and around the pole of the eave (Figure 26, Item 4) extender. Thread two guy lines through the ridge extender (Figure 26, Item 3).
4. Bring guy line (Figure 26, Item 2) through other side of tent slip (Figure 26, Item 1) and tie an overhand knot at end of guy line. Repeat steps 1 through 4 above for all extenders.

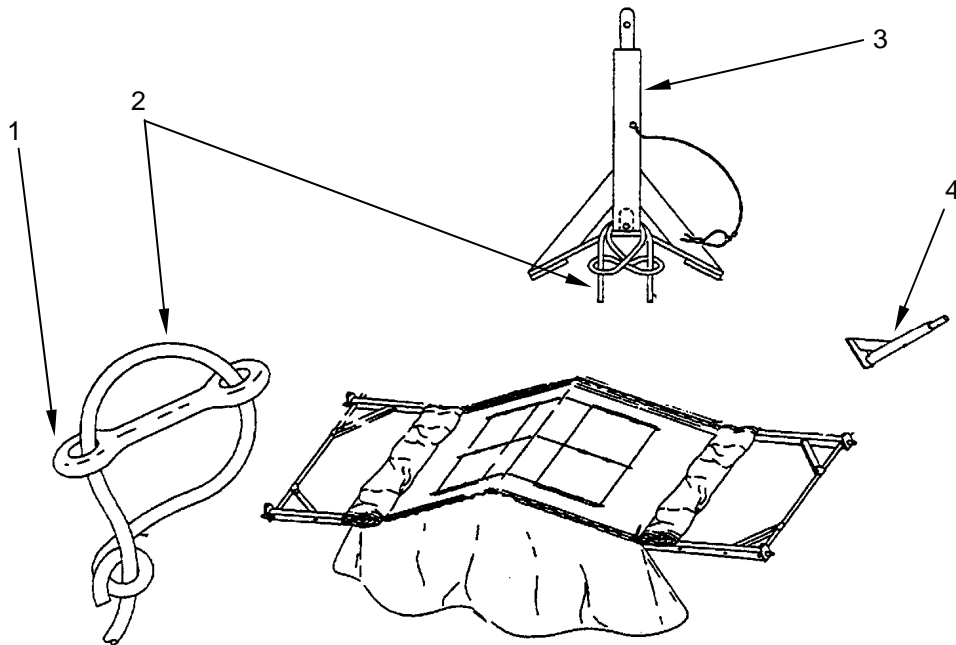


Figure 26. Install Guy Line.

Raising the Frame to Partially-Erect Position



WARNING

Eliminate the possibility of tripping or falling by moving fabric and guy lines. Injury to personnel may result from falls.



WARNING

Frame assembly hinges can pinch, crush, or cut hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves. An expedient way to keep clear of potential danger areas is to keep your hands "outside the triangle" at all times.

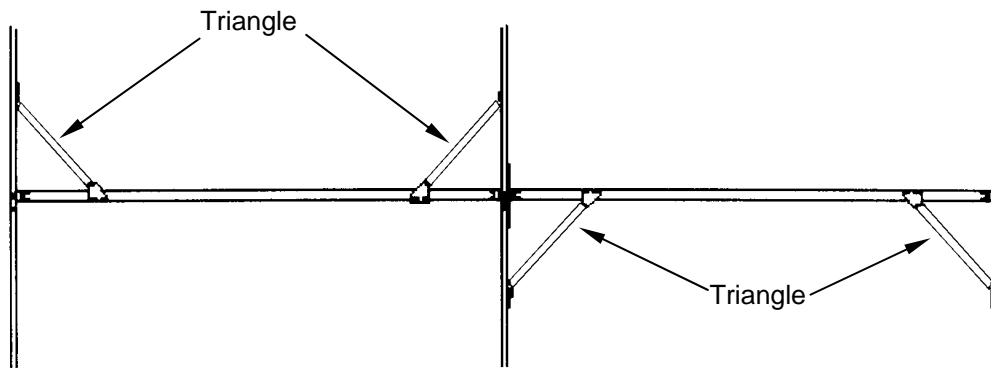


Figure 27. Frame Assembly Danger Points.

CAUTION

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

NOTE

Many TEMPER components are installed with the frame in the partially erect position. This is done in order to install roof or roof mounted components without the need for a step aid.

1. Fold wall fabric (Figure 28, Item 1) towards ridge (Figure 28, Item 2) to expose eave gussets (Figure 28, Item 6). Place folded fabric on ridge fabric (Figure 28, Item 3).
2. Identify quick release pin (Figure 28, Item 5) and ensure it is hanging free.
3. Identify the locking hole in the side arch assembly (Figure 28, Item 7) 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 and not your back. Failure to observe safety precaution may result in serious back injury.

CAUTION

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

4. Step in next to the eave gusset (Figure 28, Item 6).
5. Place one hand on the side arch assembly (Figure 28, Item 7) and one hand on the eave purlin (Figure 28, Item 8) outside the diagonal brace (Figure 28, Item 4).

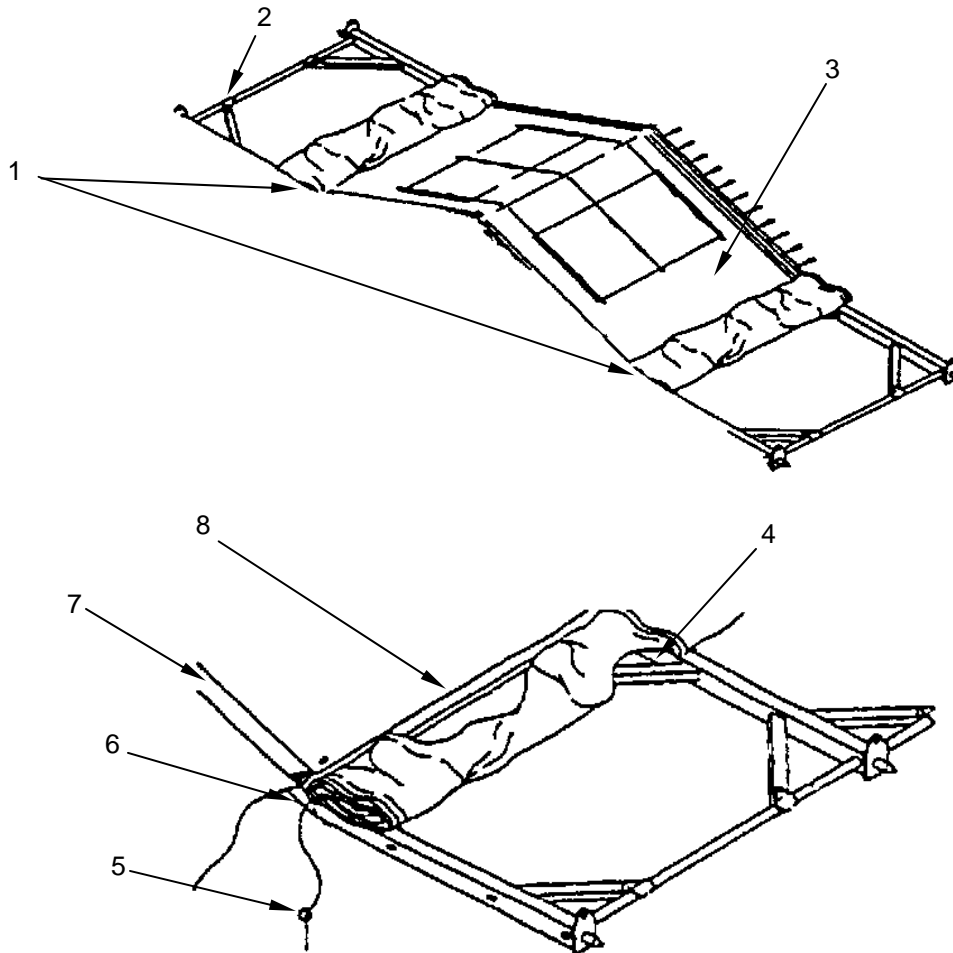


Figure 28. Raising the Frame to Partially-Erect Position.

6. Get in a stable squatting position.
7. Lift frame straight up to shoulder height; drag side arch assembly (Figure 29, Item 4) inward. Place weight of the frame on side arch assembly foot (Figure 29, Item 3).

CAUTION

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

8. Align holes of eave gusset (Figure 29, Item 2) and side arch assembly (Figure 29, Item 4) and install quick release pin.
9. Identify purlin flap (Figure 29, Item 1) on interior of window/roof section.
10. Secure purlin flap (Figure 29, Item 1) to frame at eave purlin using hook and pile fasteners.

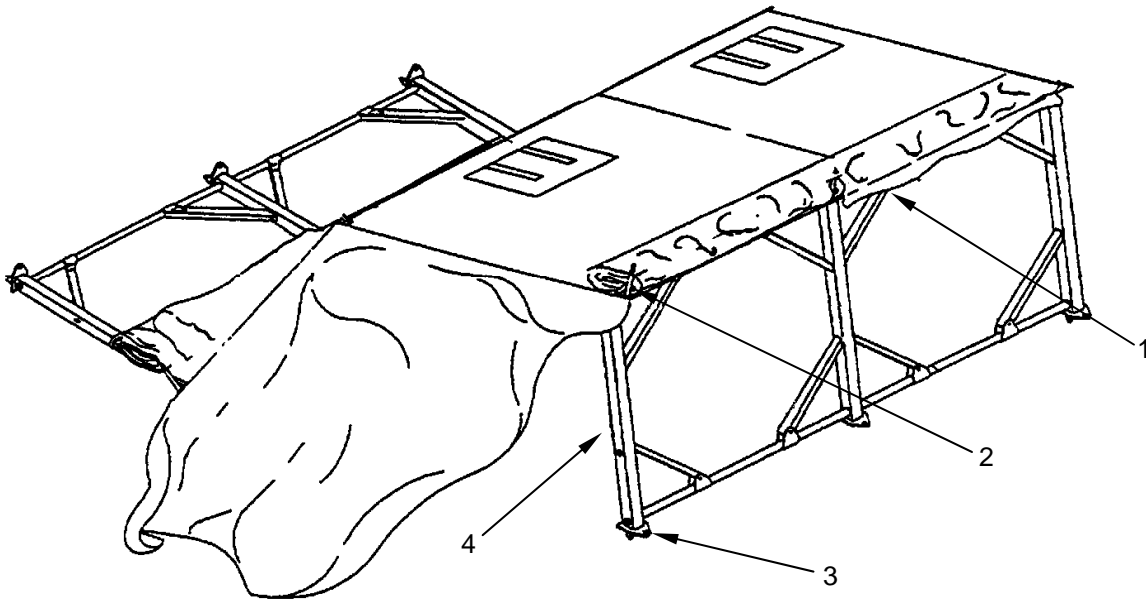


Figure 29. Raising the Frame to Partially-Erect Position – Continued.

Installing TEMPER Floor**CAUTION**

Clear and level ground of sharp objects before installing floor.

NOTE

Partially install the floor to keep the liner clean while it is being put up. Installation will be completed when tent is fully erected.

NOTE

Installation procedures for single ply and insulated floors are identical.

1. Unroll floor sections (Figure 30, Item 5) and install black side down. Place all floor sections alternating hook and pile fasteners (Figure 30, Items 1,4).
2. Secure tie tapes (Figure 30, Item 2) on narrow edge of floor to base purlins (Figure 30, Item 3) on raised side of tent.

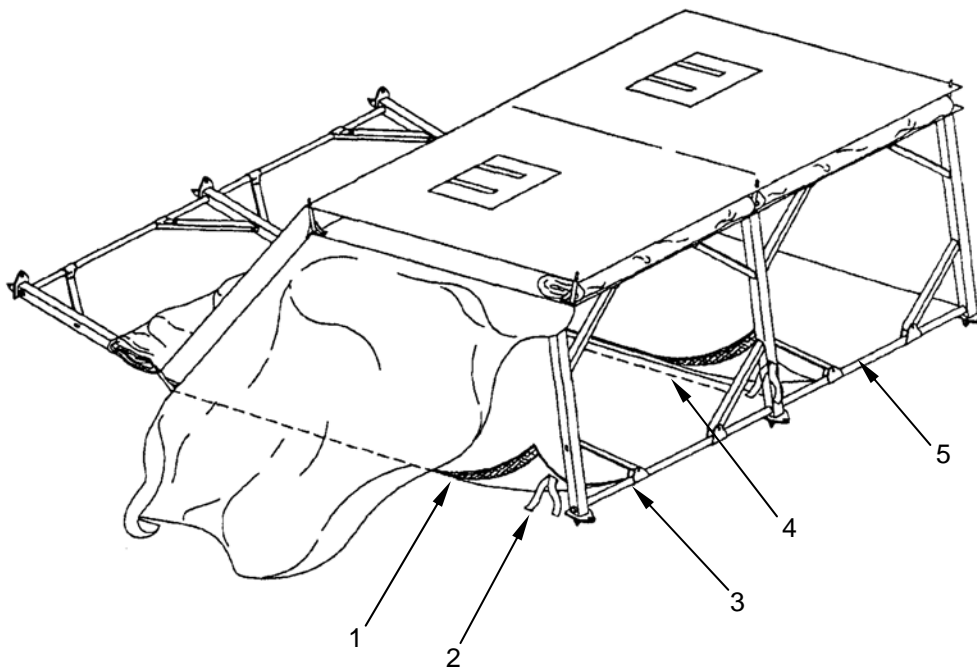


Figure 30. Single Ply Floor.

Installing TEMPER Liner

1. Identify liner sections (Figure 31, Item 5).
2. Unwrap tent liner (Figure 31, Item 5) and unfold it inside tent.
3. Identify three liner, nylon support straps (Figure 31, Item 10) and snap hooks (Figure 31, Item 2) at center of liner.

NOTE

Position outside support straps on ridge purlin, inside the diagonal brace.

4. Wrap D-ring (Figure 31, Item 1) portion of outside support straps (Figure 31, Item 10) around ridge purlin (Figure 31, Item 9). Attach to snap hook (Figure 31, Item 2).
5. Clip remaining strap around ridge purlin (Figure 31, Item 9) in similar manner.
6. Identify the tie tape (Figure 31, Item 4) at center edge of liner (Figure 31, Item 5).
7. Secure the tie tape (Figure 31, Item 4) to the header (Figure 31, Item 3) using a bow knot.
8. Secure the opposite tie tape on the opposite header using a bow knot.
9. Secure liner to frame members with tie tapes (Figure 31, Item 4).
10. Place the light support strap assembly hangers (Figure 31, Item 6) through slits in the liner.
11. Secure liner tie tapes (Figure 31, Item 7) to light support strap assembly (Figure 31, Item 8).
12. Press hook and pile fastener together between each liner section.

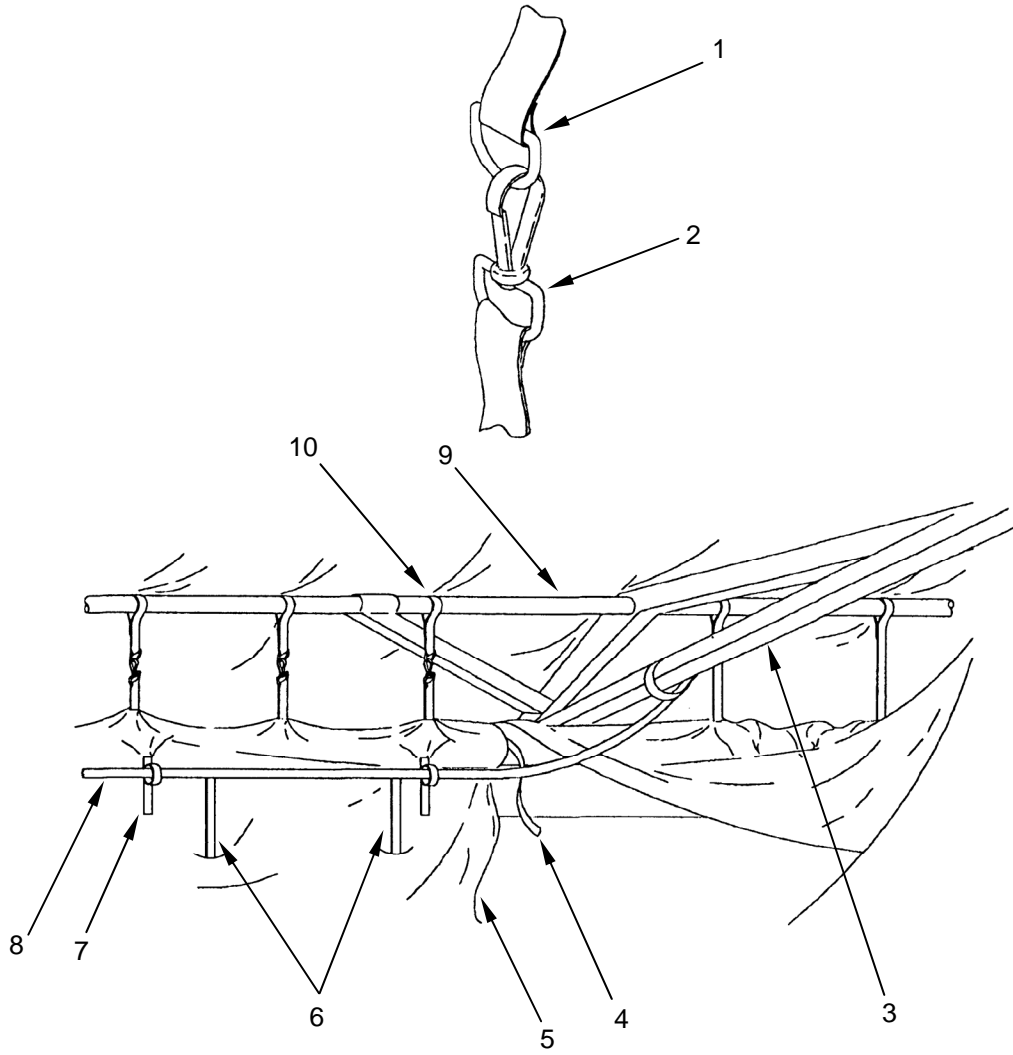


Figure 31. Liner.

Install TEMPER Luminaires

1. Wrap light hanger strap (Figure 32, Item 1) around each end of luminaire (Figure 32, Item 3) on inside of rubber end caps (Figure 32, Item 2).
2. Pull strap (Figure 32, Item 1) up through the "D" ring (Figure 32, Item 4) and press down to engage hook and pile fastener.
3. Mate plug properly to next luminaire (Figure 32, Item 3), ensuring reflecting surface faces up and lamp faces down.
4. Repeat for second luminaire on other side of TEMPER section. Plug the luminaires together on the end opposite the container.

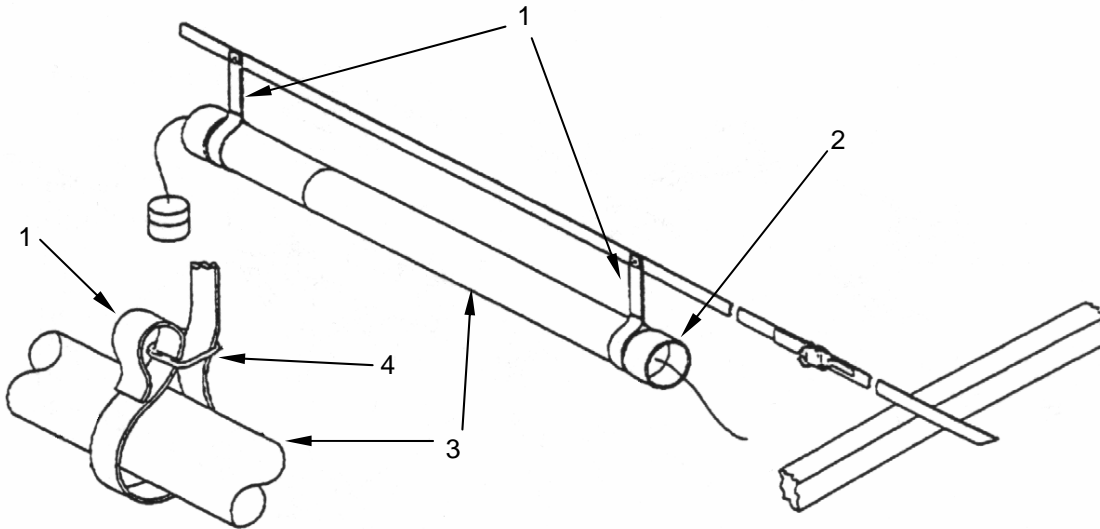


Figure 32. Install Luminaires.

Fully Erecting the Frame**WARNING**

Frame assembly hinges can pinch, crush, or amputate hands and fingers. Keep hands and fingers away from frame assembly ridges and eaves. An expedient way to keep clear of potential danger areas is to keep your hands "outside the triangle" at all times.

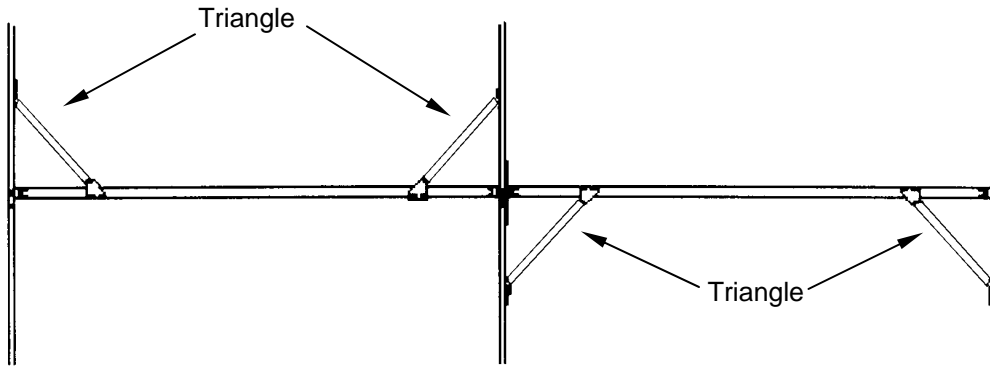


Figure 33. Frame Assembly Danger Points.

CAUTION

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

1. Fold wall fabric (Figure 34, Item 4) towards ridge fabric (Figure 34, Item 3) and lay on roof (Figure 34, Item 2) to expose eave gussets (Figure 34, Item 1).
2. Identify quick release pin (Figure 34, Item 6) and ensure it is hanging free.
3. Identify the locking hole in the side arch assembly (Figure 34, Item 5) and ensure it is free of debris.

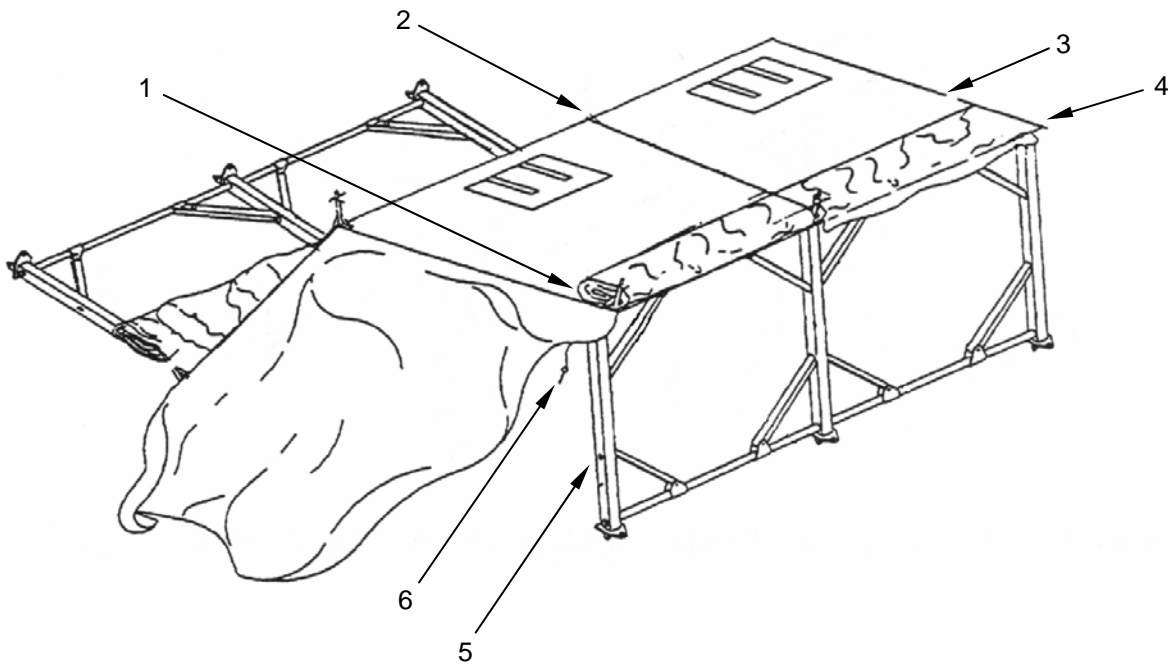


Figure 34. Fully Erecting the Frame.

**WARNING**

Two soldiers should be placed at each arch leg to raise frame. Lift tent from correct squatting position, using your legs and not your back. Failure to observe safety precaution may result in serious back injury.

CAUTION

Tent frame must be raised uniformly to avoid twisting or turning. Damage to frame can result if lifted unevenly.

4. Step in next to the eave gusset (Figure 35, Item 5).
5. Place one hand on the side arch assembly (Figure 35, Item 6) and one hand on the eave purlin (Figure 35, Item 4) outside the diagonal brace (Figure 35, Item 3).
6. Get in a stable squatting position.
7. Lift frame straight up to shoulder height, dragging side arch assembly (Figure 35, Item 6) inward.
8. Place weight of the frame on side arch assembly foot (Figure 35, Item 7).

CAUTION

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

9. Align holes of eave gusset (Figure 35, Item 5) and side arch assembly (Figure 35, Item 6) and install quick release pin (Figure 35, Item 1). Identify purlin flap (Figure 35, Item 2) on interior of window/roof section.
10. Secure purlin flap (Figure 35, Item 2) to frame at eave purlin (Figure 35, Item 4) using hook and pile fasteners.
11. Repeat steps 2 through 10 for the remaining side.

CAUTION

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

12. Set frame bases 20 feet 4 inches apart.

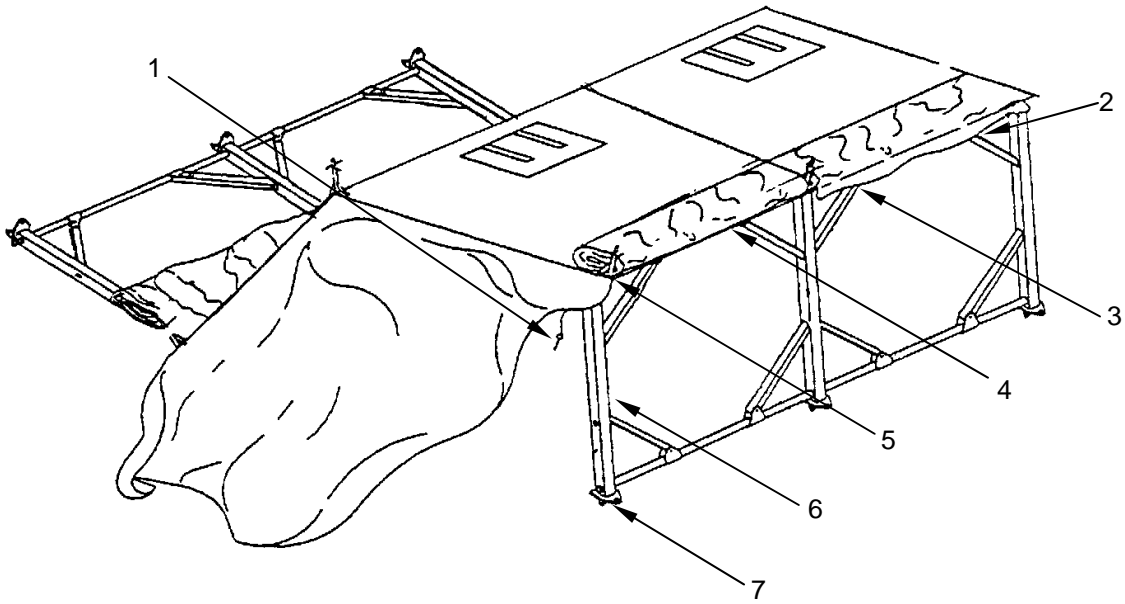


Figure 35. Fully Erecting the Frame – Continued.

Moving the TEMPER Section into Position**WARNING**

The assembled TEMPER is heavy. At least twenty-four persons are required for the 32-foot TEMPER. Two soldiers should be placed at each arch leg to raise frame. Lift tent from correct squatting position, using your legs and not your back. Failure to observe safety precaution may result in serious back injury.

**WARNING**

Helmet must be worn. Throwing tie ropes with attached stakes over container may cause injury to personnel. Failure to observe safety precaution may result in serious injury.

1. Using two soldiers at each arch assembly, pick up and move the TEMPER section within two feet of the container, centering the ridge on the TEMPER section with the center of the open personnel doors.
2. Join hook-and-pile fasteners (Figure 36, Item 5) of modified endwall (Figure 36, Item 6) and double entrance door frame (Figure 36, Item 8).
3. Tie ropes of the rain guard (Figure 36, Item 1) to a tent stake. Throw tent stake over container to ensure rain guard ropes can be secured.
4. Pull rain guard (Figure 36, Item 1) onto the roof of the FP-CBL (Figure 36, Item 2) using rain guard cords (Figure 36, Item 4). Remove tent stakes.
5. Run rain guard cords (Figure 36, Item 4) through the container lifting eyes (Figure 36, Item 3), and tie off to the cleats located on the far side of the container.
6. Secure the lower end of the bootwall to the ground with 12-inch steel pins (Figure 36, Item 7).
7. Enter the TEMPER and complete securing floor tie tapes to base purlins. Complete securing liner tie tapes to eave purlins.

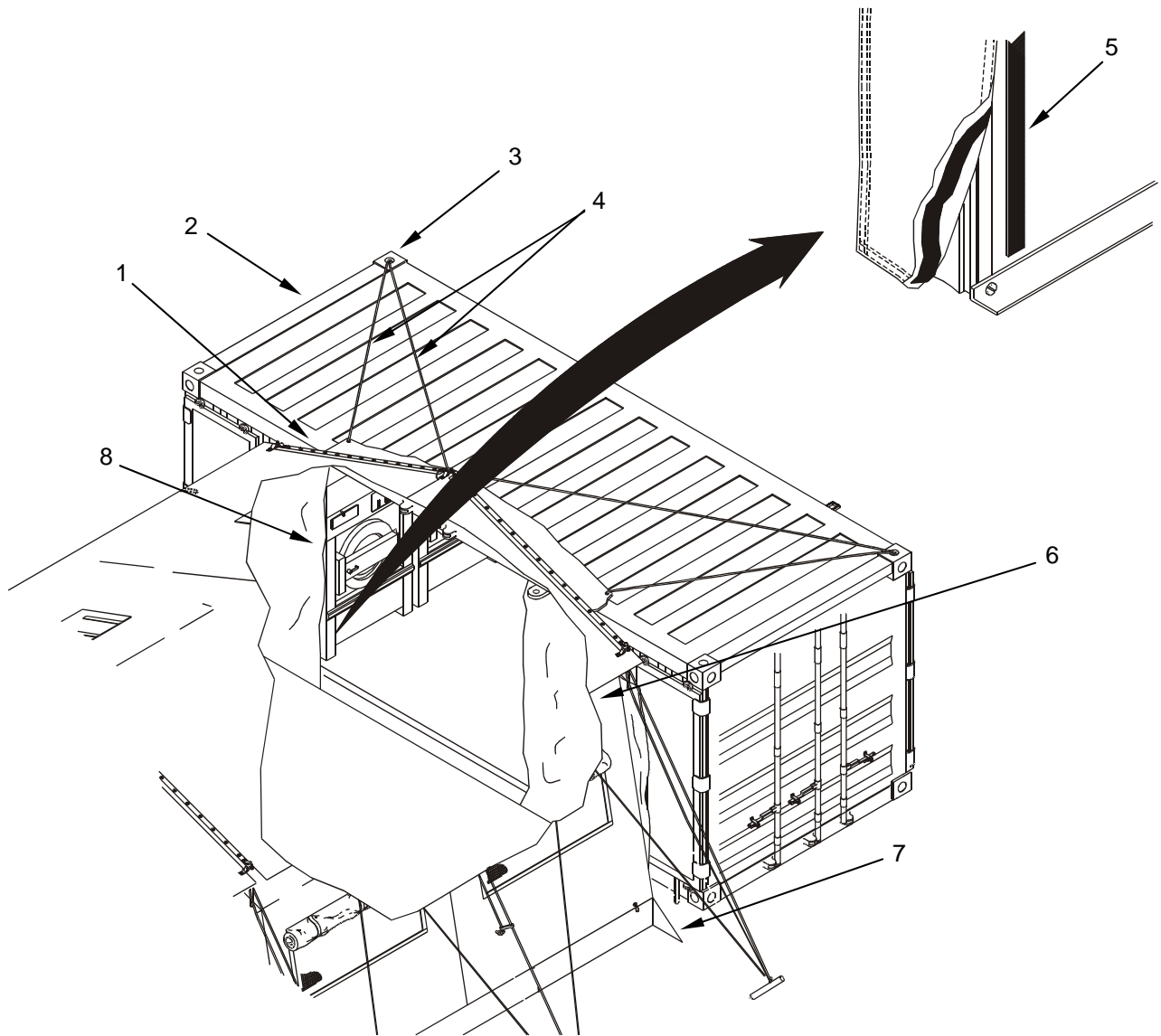


Figure 36. Moving the TEMPER Section into Position.

Install Power Distribution Panel, Electrical Cables, and Convenience Outlets**WARNING**

Electrical voltage and current cannot be seen, but contact with energized equipment can kill you, render you unconscious, or severely burn you. Electricity is unlike most other dangerous things you can come in contact with because it gives no warning. To ensure your safety and that of other maintenance personnel, always observe the following precautions:

Electrical power must be disconnected before any electrical system work is performed to prevent electrical shock, injury, or death (electrocution).

The FP-CBL must be electrically grounded. Failure to ground the FP-CBL may result in serious injury or death from electrical malfunction.

ALWAYS place POWER OFF warning tags on circuit breakers or power supply switches so that no one will apply power while you are performing maintenance.

1. Place the cables (Figure 37, Item 1) and convenience outlets (Figure 37, Item 3) in tent and connect cables to distribution box (Figure 37, Item 2) as shown.

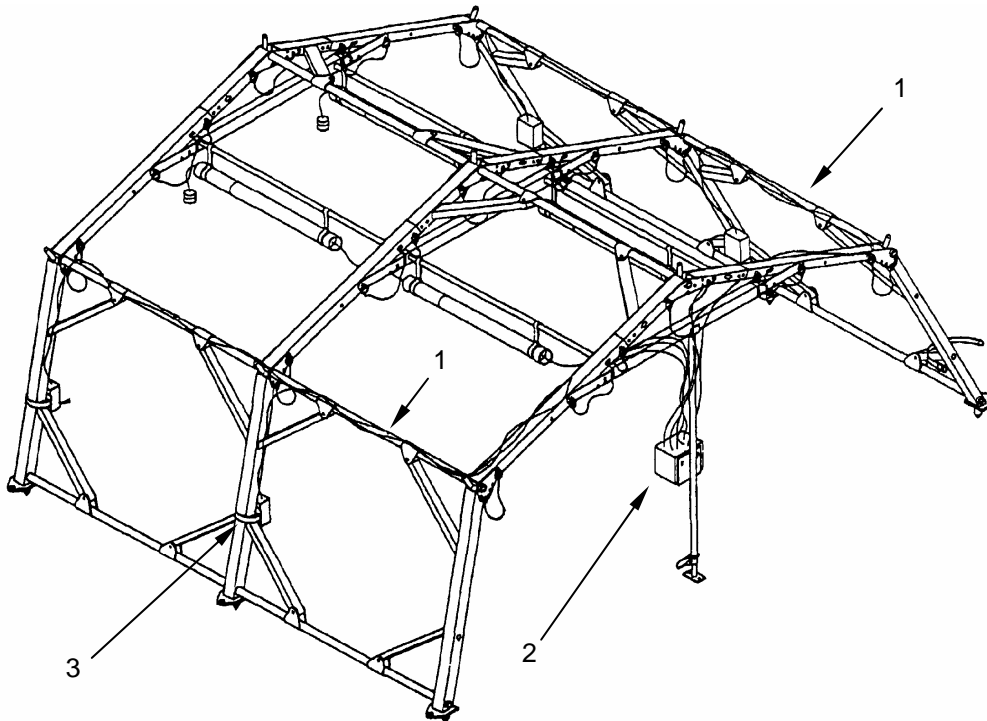


Figure 37. Install Power Distribution Panel, Electrical Cables, and Convenience Outlets
(Sheet 1 of 2).

2. Place power panel stand (Figure 37, Item 4) between liner and tent fabric at left entrance side of tent.
3. Disconnect quick release pin (Figure 37, Item 9) at the bottom of stand.
4. Extend outer column of stand to engage frame header in U-clamp (Figure 37, Item 5).
5. Step on base plate (Figure 37, Item 10) to provide tension on stand.
6. Insert quick release pin (Figure 37, Item 9) to lock stand in place and stake to ground.

NOTE

Stand should not move. If necessary readjust hitch pin for sufficient tension on stand.

7. Insert mounting bolts (Figure 37, Item 13) in rear of distribution box (Figure 37, Item 3) through keyhole slots in power panel stand (Figure 37, Item 4).

CAUTION

Connect all cables and dust caps together. Dirt and dampness may damage electrical connections.

8. Connect the FDECU power cable (Figure 37, Item 11) to the 60 A outlet (Figure 37, Item 12) on the TEMPER distribution box (Figure 37, Item 3).
9. Connect the 60 A power input cable (Figure 37, Item 8) from the FP-CBL power input panel to the power input connector (Figure 37, Item 7) on the TEMPER distribution box (Figure 37, Item 3).
10. Connect the ASH (if used) to any 120 VAC outlet (Figure 37, Item 6) either on the distribution box or the TEMPER convenience outlets.

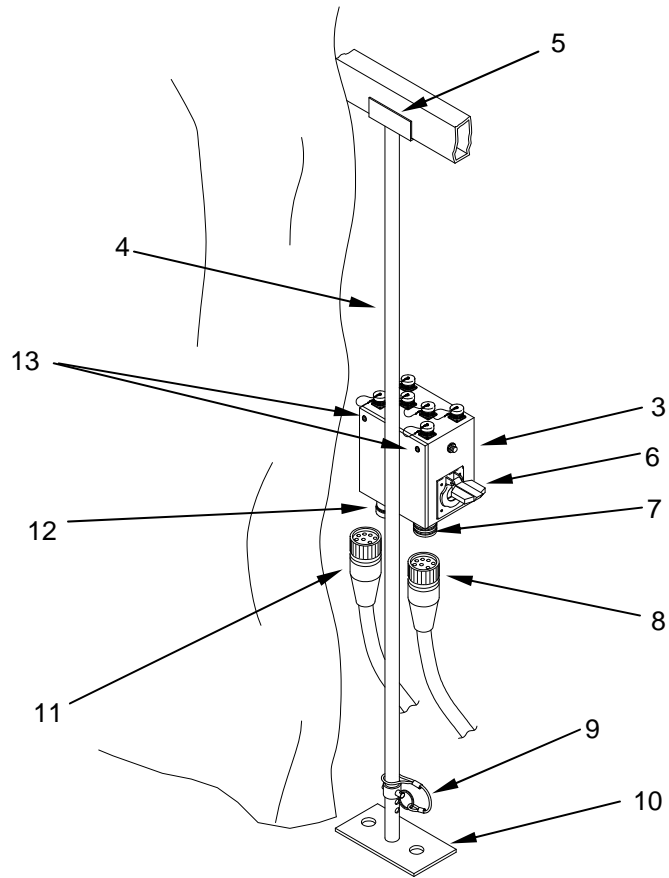


Figure 37. Install Power Distribution Panel, Electrical Cables, and Convenience Outlets
(Sheet 2 of 2).

Complete Becket Lacing and Bootwall Attachment

1. Roll up window flaps (Figure 38, Item 1) and secure.
2. Have two soldiers on the ground complete lacing the window section (Figure 38, Item 2) and the end sections (Figure 38, Item 3) together. Secure weather seal flap (Figure 38, Item 4).
3. Pull sod cloth (Figure 38, Item 6) under base purlins (Figure 38, Item 5) and end wall section (Figure 38, Item 3).

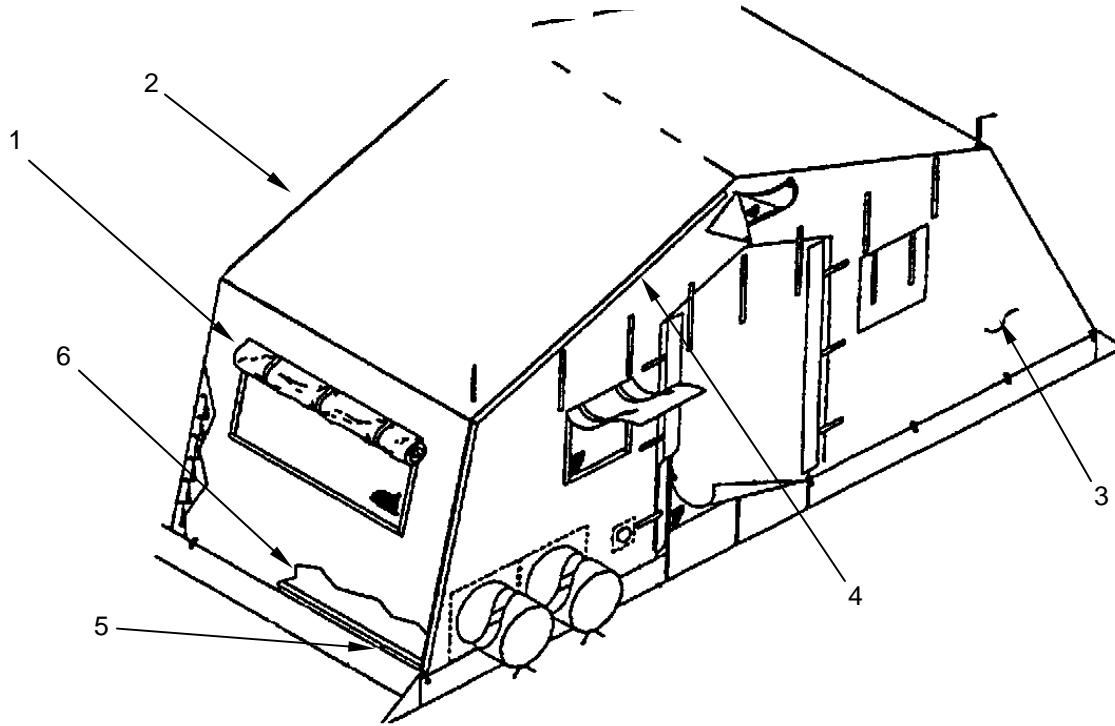


Figure 38. Complete Becket Lacing and Bootwall Attachment.

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.

1. Place a 24-inch wooden stake (Figure 39, Item 2) approximately 10 feet from the sides at the corners of the tent section at each eave extender and slant stake(s) towards tent.
2. Connect loop of eave extender guy line (Figure 39, Item 1) and ridge extender guy lines (Figure 39, Item 1) to bottom notch of wooden stake (Figure 39, Item 4).
3. Connect loop of fly guy line (Figure 39, Item 3) to top notch of wooden stake (Figure 39, Item 2).
4. Stake tent frame foot to ground using 12-inch steel pins (Figure 39, Item 5) through foot loops.
5. Stake foot loops (Figure 39, Item 6) to ground and tighten all guy lines.

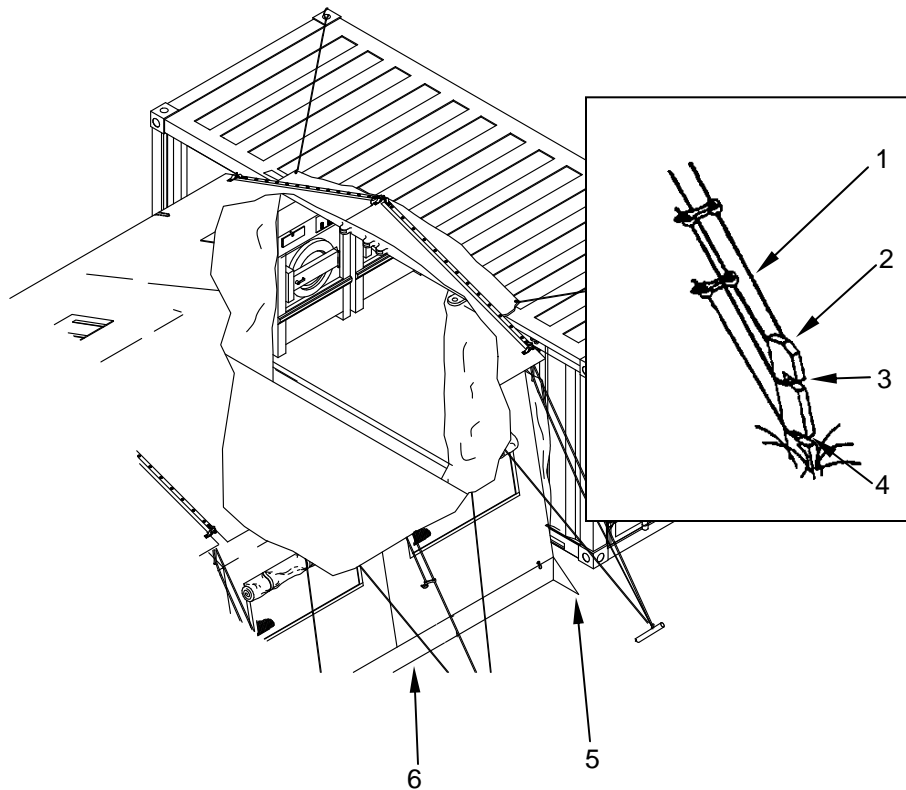


Figure 39. Stakes and Guy Lines.

Install Vestibules

NOTE

The FP-CBL TEMPER Tent uses three vestibules. They are all assembled and installed on the TEMPER in the exact same manner.

1. Unroll vestibule adapter (Figure 40, Item 1) tent door.
2. Identify and lay out guy lines (Figure 40, Item 16).
3. Identify and lay out vestibule fabric (Figure 40, Item 17).
4. Identify, lay out and assemble vestibule frame sections (Figure 40, Item 11) inside of TEMPER tent.
5. Identify ridge spindle grommets (Figure 40, Item 4) at one end of vestibule (Figure 40, Item 17) and vestibule adapter (Figure 40, Item 1).
6. Align vestibule spindle grommets (Figure 40, Item 3) with vestibule adapter spindle grommet (Figure 40, Item 18).
7. Insert vestibule frame spindles (Figure 40, Item 5) in vestibule adapter and vestibule spindle grommets (Figure 40, Items 3 and 18).
8. Secure ridge grommets (Figure 40, Item 4) with hitch clip pins (Figure 40, Item 6).
9. Becket lace the vestibule fabric (Figure 40, Item 17) to the adapter (Figure 40, Item 1) starting at the ridge and working towards each eave.
10. Tie off at eave with half hitch knot.
11. Cover with weather seal flaps (Figure 40, Item 2).
12. Install remaining hitch clip pins (Figure 40, Item 6).
13. Complete becket lacing.
14. Carefully bring one completed vestibule frame (Figure 40, Item 11) underneath vestibule (Figure 40, Item 1).
15. Place completed vestibule frame spindles (Figure 40, Item 5) through three grommets (Figure 40, Item 3) at center of vestibule.
16. Place hitch clip pins (Figure 40, Item 6) through spindles.

CAUTION

Orient the hitch clip pins towards inside of vestibule at vestibule door frame so that the rounded end of the pin is against the fabric of the vestibule. Vestibule door fabric may tear if the hitch clip pins are oriented towards the outside.

17. Carefully bring one completed vestibule frame (Figure 40, Item 11) underneath vestibule (Figure 40, Item 1).
18. Place completed vestibule frame spindles (Figure 40, Item 5) through three grommets (Figure 40, Item 3) at end of vestibule.

Installing Vestibules - Continued

19. Install vestibule door (Figure 40, Item 8) and secure ridge hitch clip pins (Figure 40, Item 6).
20. Becket lace from ridge to eave, seal weather flap (Figure 40, Item 2) install remaining hitch clips pins (Figure 40, Item 6) and complete becket lacing.
21. Extend frames (Figure 40, Item 11) and fabric (Figure 40, Item 17).
22. Install two guy lines (Figure 40, Item 16) under hitch clip pins (Figure 40, Item 6) on eave spindles (Figure 40, Item 7) of last vestibule frame.
23. Place 24-in wooden stakes (Figure 40, Item 9) about 6 feet out, facing towards vestibule door.
24. Tie guy lines (Figure 40, Item 16) to stakes (Figure 40, Item 9) and tighten.
25. Secure vestibule fabric (Figure 40, Item 17) to vestibule frame (Figure 40, Item 11) with tie tapes.
26. Install a 12-in steel pin (Figure 40, Item 10) in base plates of end vestibule frame (Figure 40, Item 11).
27. Identify and install single ply floor (Figure 40, Item 14) and secure with tie tapes (Figure 40, Item 12) to vestibule frame (3).
28. Install insulated floor (Figure 40, Item 15) on top of single ply floor (Figure 40, Item 14) .
29. Secure with tie tapes (Figure 40, Item 13).

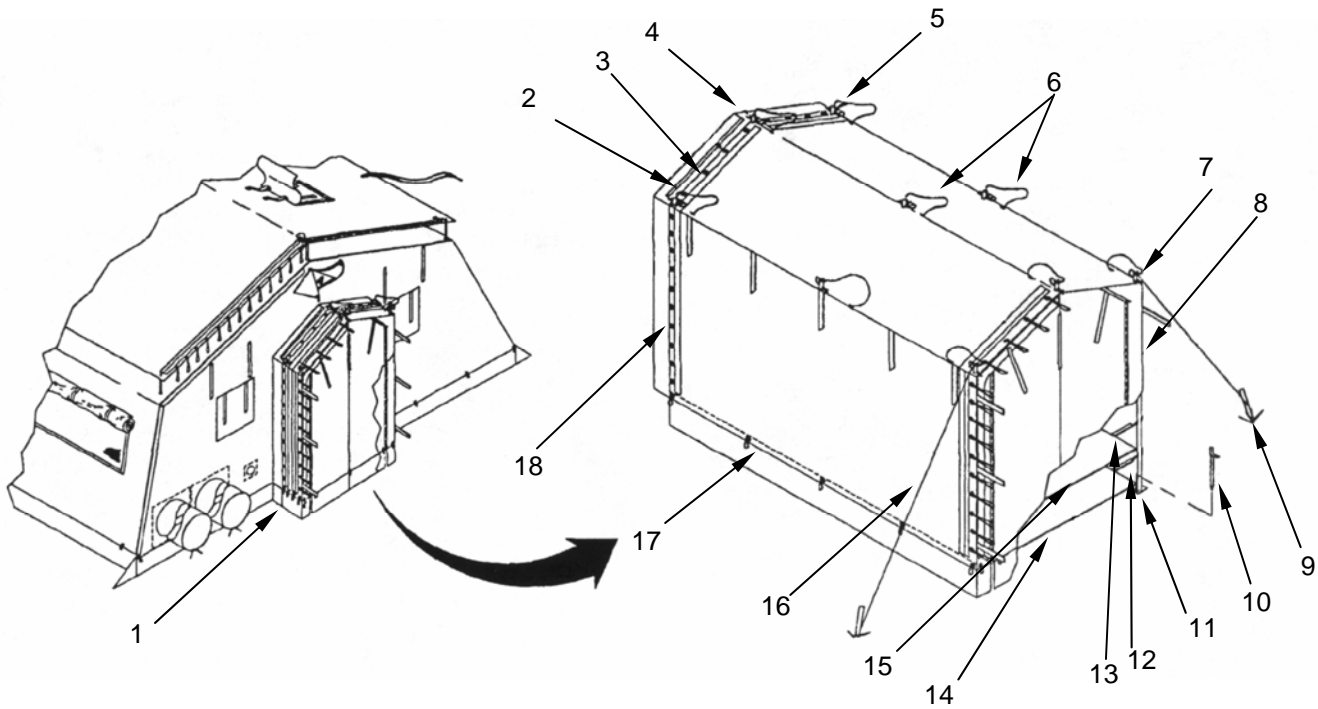


Figure 40. Install Vestibules.

CREW MAINTENANCE**OPERATION UNDER USUAL CONDITIONS****INITIAL SETUP:****Equipment Condition:**

FP-CBL set up and operational

OPERATE AND FP-CBL SUPPORT ITEMS

Use the following procedures to operate FP-CBL components. Reference plates have been placed on the washers to provide quick reference for washer operating cycles.

Always do BEFORE PMCS before operating FP-CBL component machinery.

Close container end doors during equipment operation.

END OF TASK**VALVE SETUP**

1. Open the washer double service doors.
2. Rotate cold water shutoff valves (Figure 1, Item 1) (located at water service panel) 90 degrees to the OPEN position. Handles will then be in-line with water service pipes. The valves shown in the illustrations below are in the OPEN position.
3. Rotate hot water shutoff valves (Figure 1, Item 2) (located at water service panel) 90 degrees to the OPEN position. Handles will then be in-line with water service pipes. The valves shown in the illustrations below are in the OPEN position.

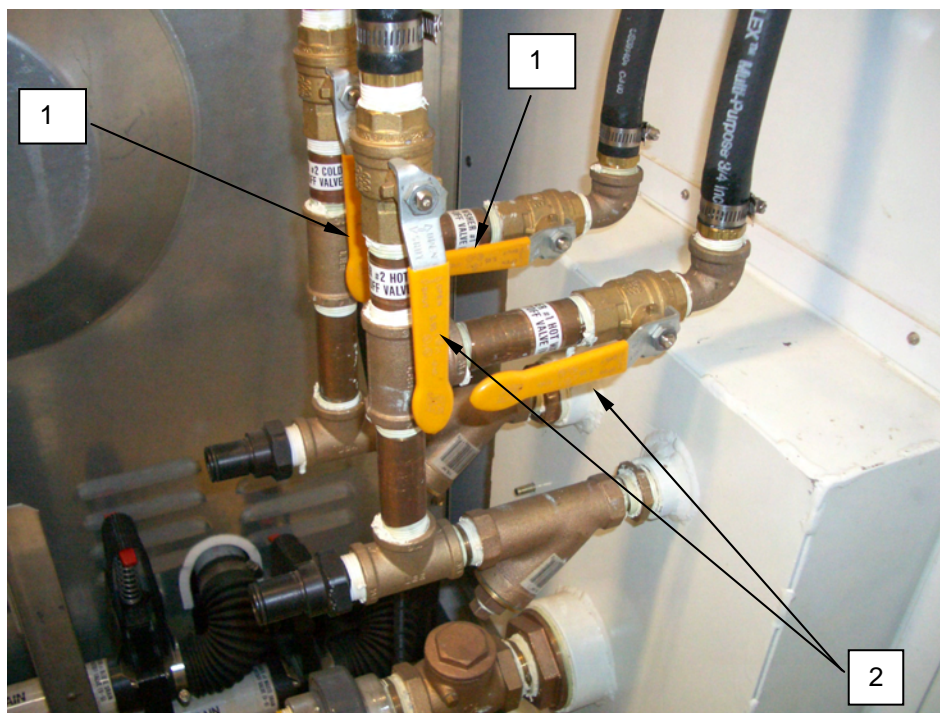


Figure 1. Valve Setup.

0007-1

4. Locate the reuse tank drain valve (Figure 2) and set to CLOSE position as shown below.

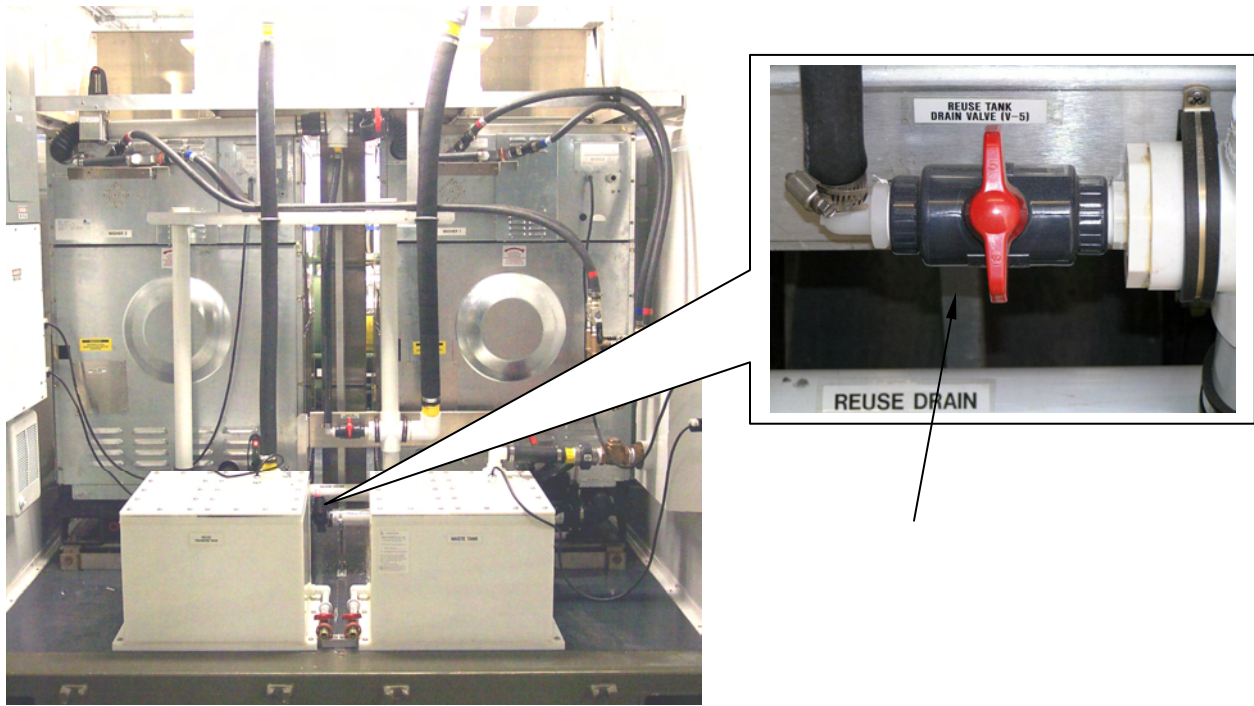


Figure 2. Close Reuse Tank Drain Valve.

5. Locate the reuse transfer tank drain valve (Figure 3) and set to CLOSE position as shown below.

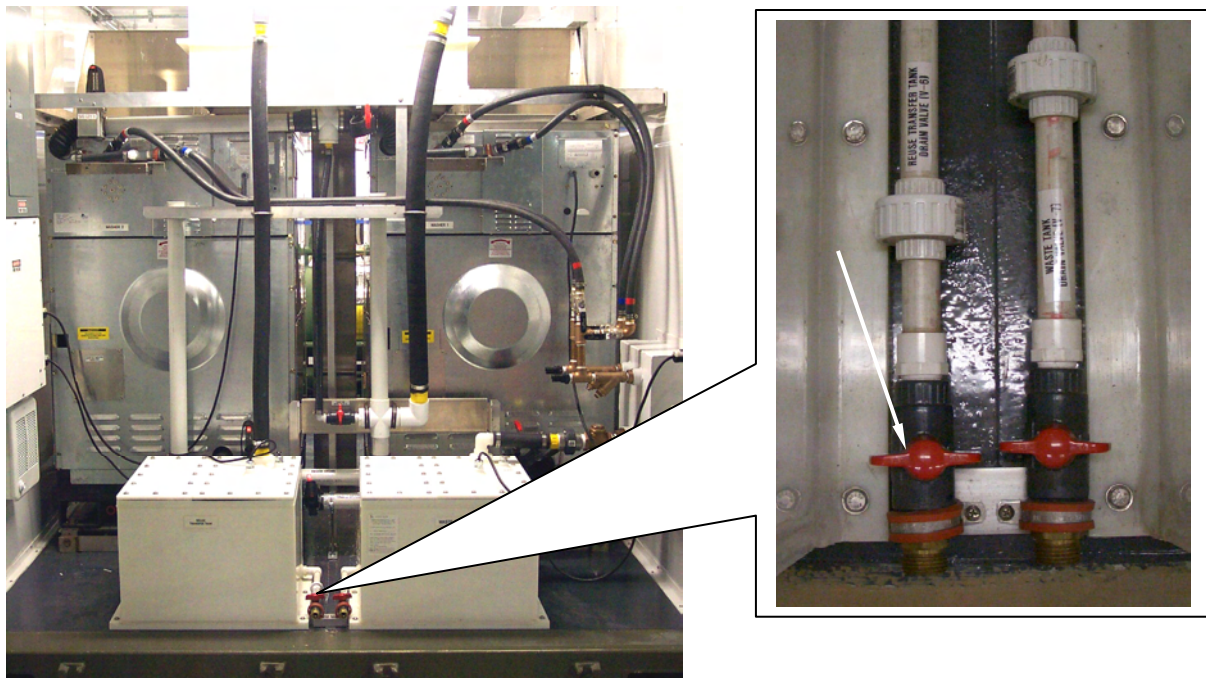


Figure 3. Close Reuse Transfer Tank Drain Valve.

6. Locate the waste tank drain valve (Figure 4) and set to CLOSE position as shown below.

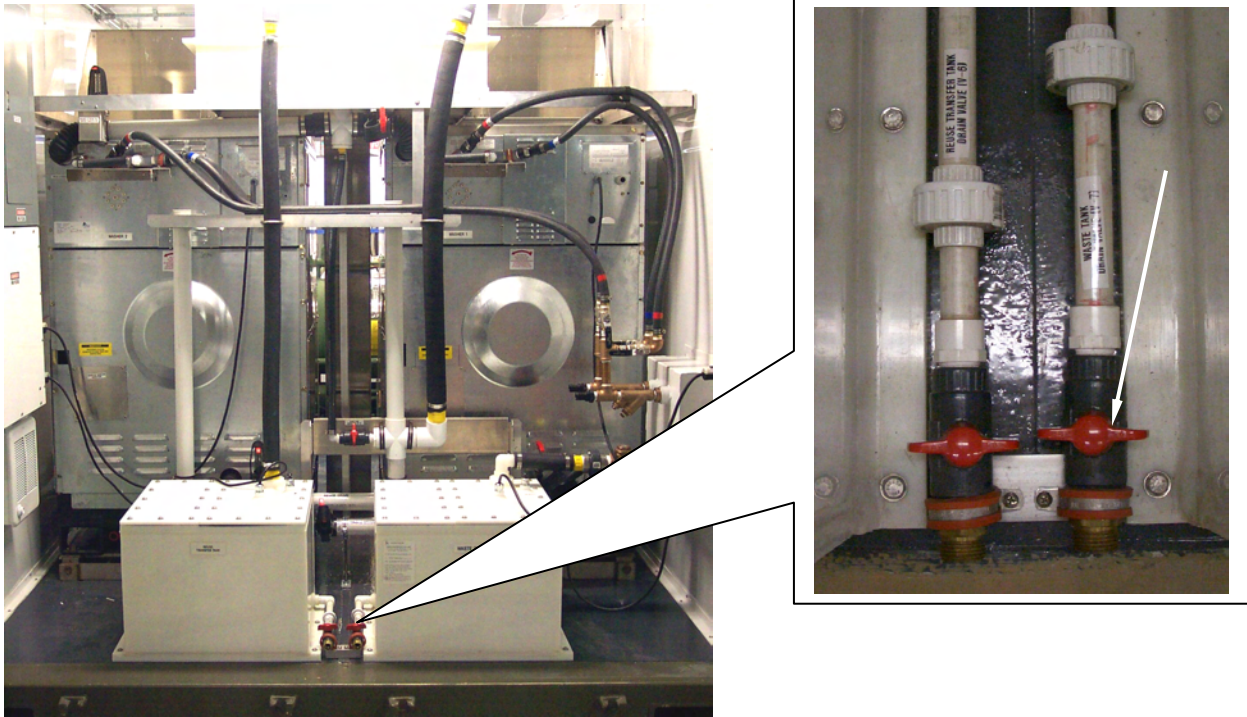


Figure 4. Close Waste Tank Drain Valve.

7. Locate washer #1 waste drain shutoff valve (Figure 5) and set to OPEN position as shown below.

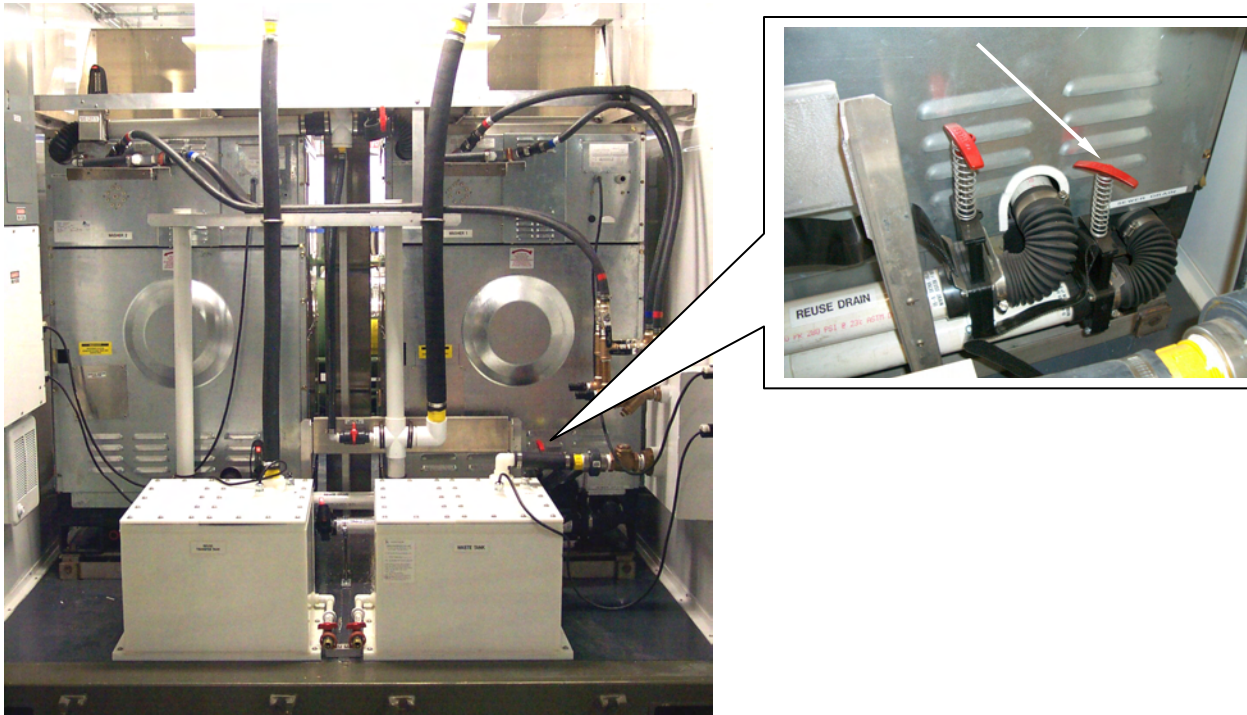


Figure 5. Close Washer #1 Waste Drain Tank Shutoff Valve.

8. Locate washer #1 reuse drain shutoff valve (Figure 6) and set to OPEN position as shown below.

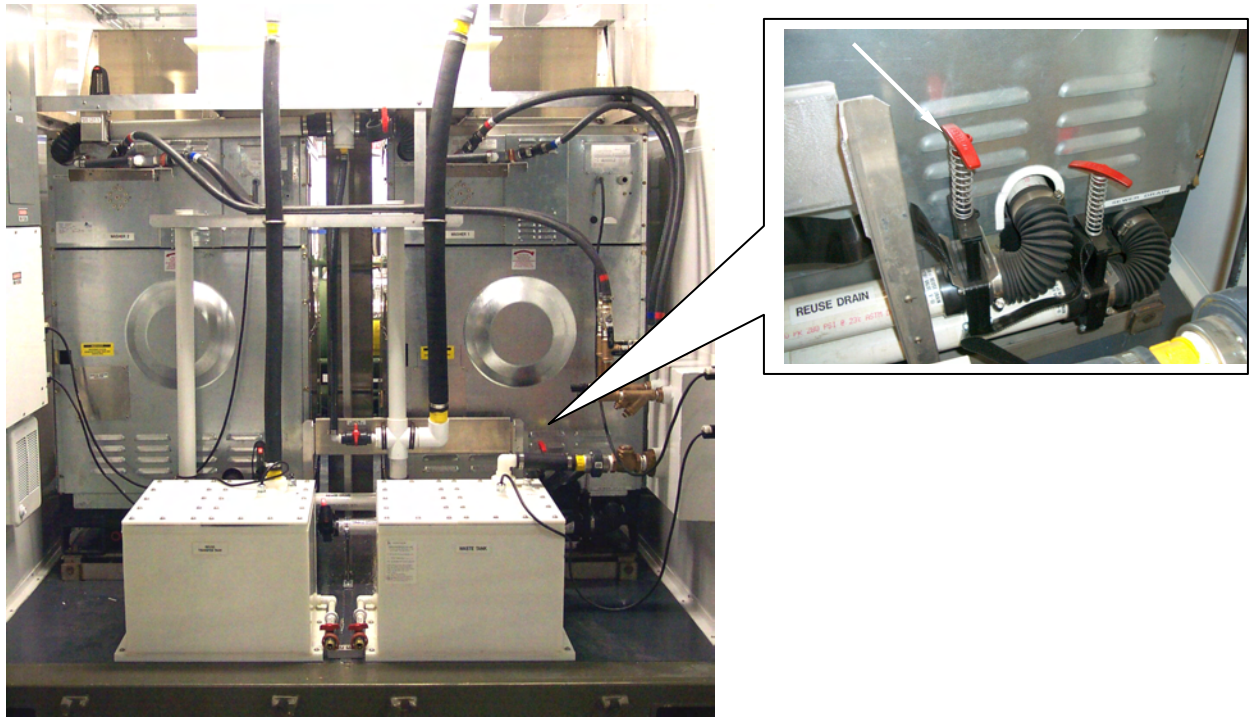


Figure 6. Open Washer #1 Reuse Shutoff Valve.

9. Locate washer #1 reuse fill shutoff valve (Figure 7) and set to OPEN position as showed below.

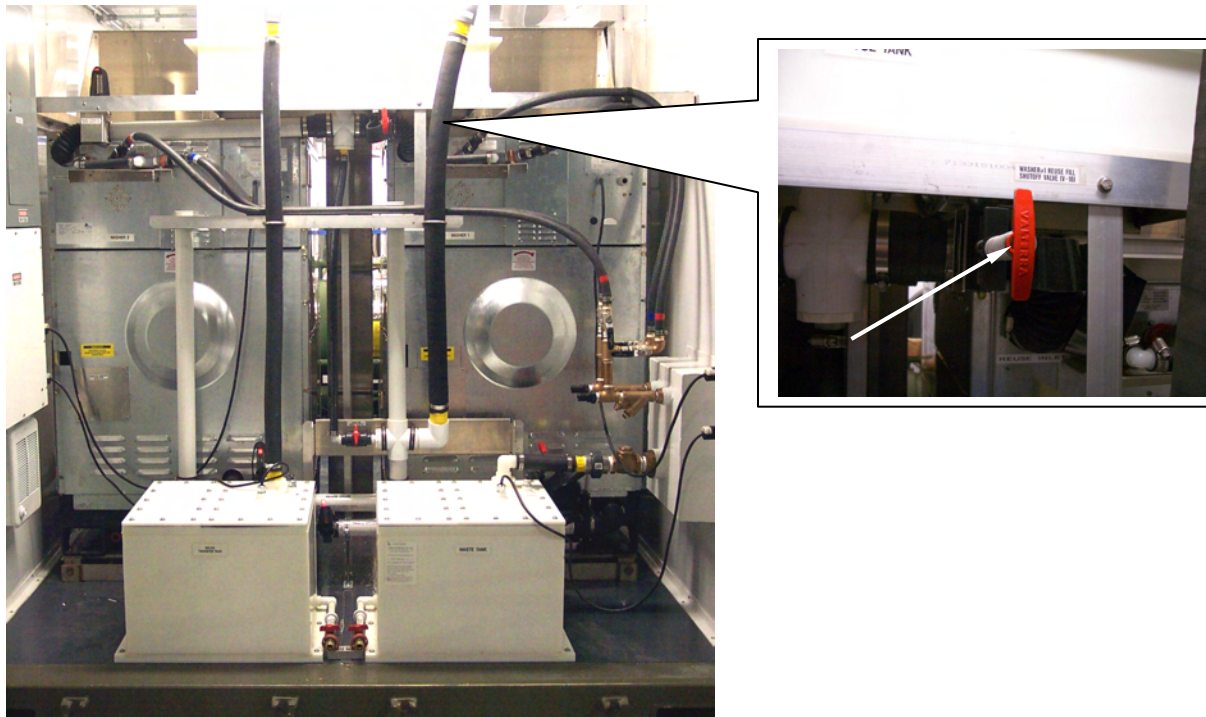


Figure 7. Open Washer #1 Reuse Fill Shutoff Valve.

10. Locate washer #2 waste drain shutoff valve (Figure 8) and set to OPEN position as showed below.

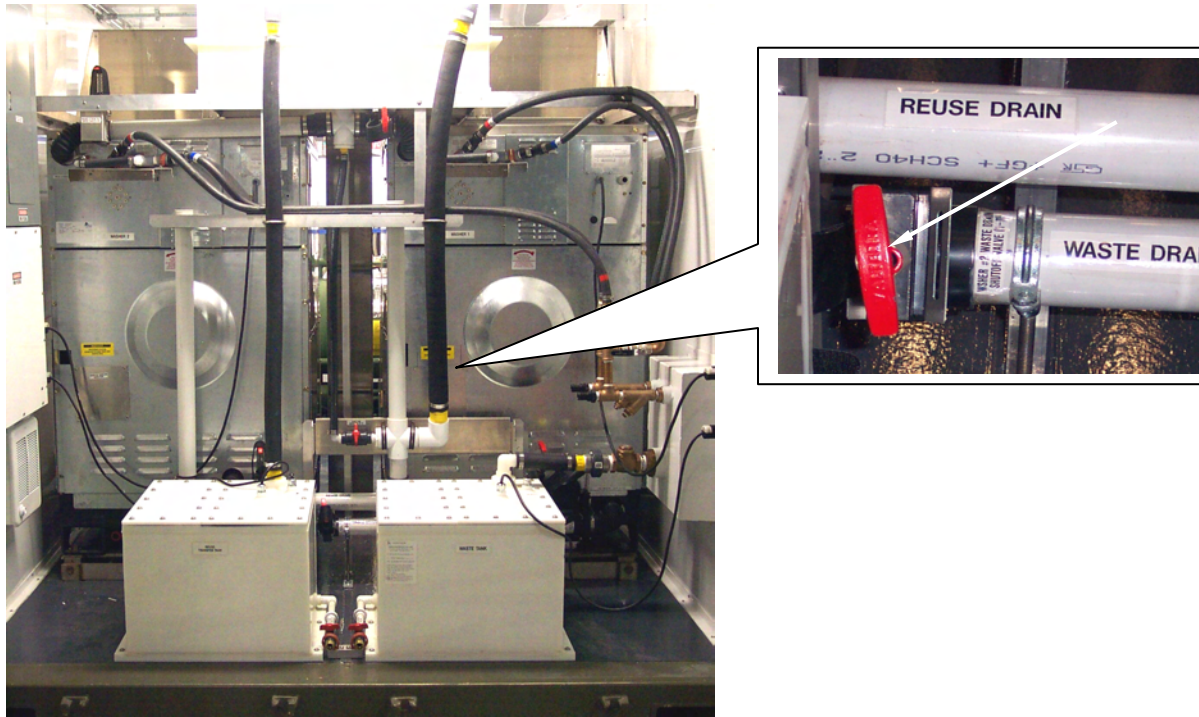


Figure 8. Open Washer #2 Waste Drain Shutoff Valve.

11. Locate washer #2 reuse drain shutoff valve (Figure 9) and set to OPEN position as showed below.

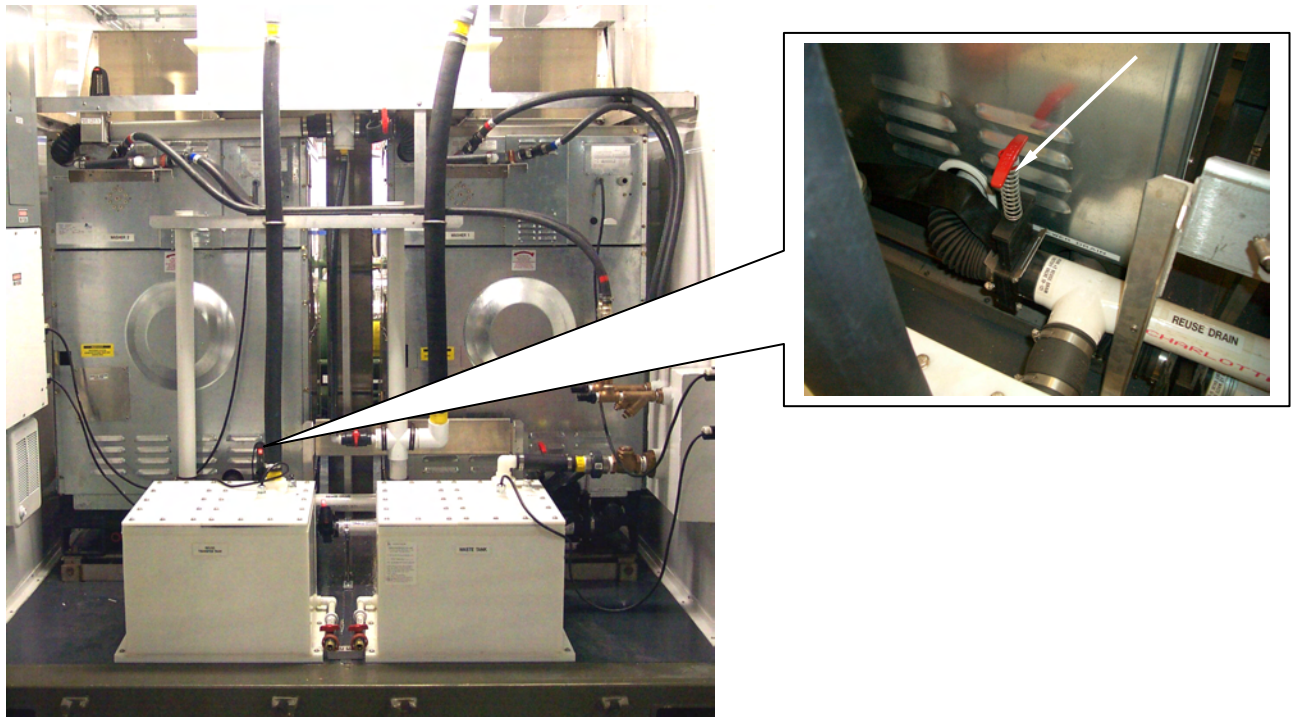


Figure 9. Open Washer #2 Reuse Drain Shutoff Valve.

12. Locate washer #2 reuse fill shutoff valve (Figure 10) and set to OPEN position as showed below.
13. Close washer end service doors.

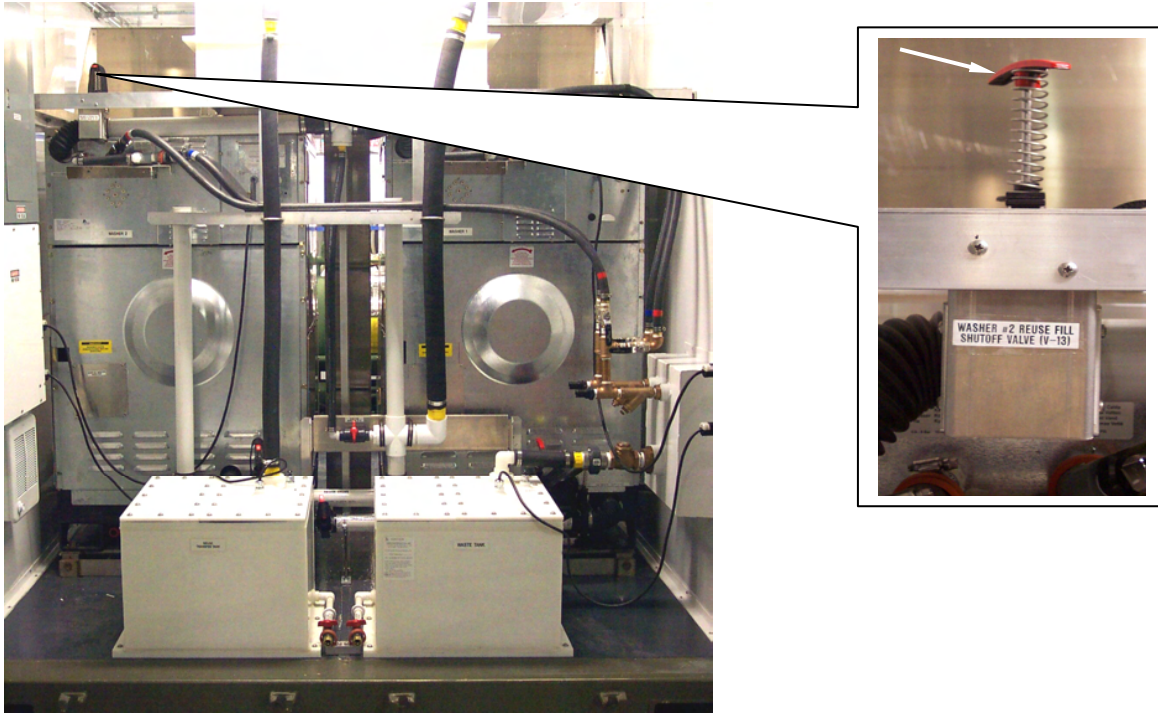


Figure 10. Open Washer #2 Reuse Fill Shutoff Valve.

END OF TASK

OPERATE WASHER**WARNING**

Use caution when operating the washers. The washers are equipped with a suspension to dampen vibration, and the washer drum may be observed to move in the washer cabinet. Injury to personnel may occur if fingers are slipped between the washer drum and the washer cabinet.

NOTE

Use the emergency stop only if the washer need to be stopped immediately; that is, in the event of an equipment malfunction, leak, or any situation that might endanger personnel or equipment. The emergency stop shuts down all power to the washer and drains the washer to the waste tank. **DO NOT USE THE EMERGENCY STOP FOR ROUTINE SHUTDOWN.**

1. Verify washers electrical plugs are plugged into receptacles.
2. Verify waste pump and reuse transfer pump electrical plugs are plugged into receptacles.
3. Twist OUT the emergency stop switch (Figure 11, Item 2) clockwise on the washer control panel.
4. Press the release button (Figure 11, Item 5) on the latch (Figure 11, Item 4) and open the washer door (Figure 11, Item 3). The washer may be filled with up to 50 pounds of laundry – for example, this would come to 18 complete sets of BDUs (blouse and trousers).
5. Close the washer door (Figure 11, Item 3). Ensure the door has latched securely.
6. Add the required amount of liquid detergent, sour, bleach, sodium thiosulfate, and/or softener as shown in Table 1 for the desired washer operating cycle and items to be washed. Open the washer supply tray access door (Figure 11, Item 7). Slide out the appropriate numbered supply tray 1, 2, 3, or 4 (Figure 11, Item 6) and add the required material. Slide the supply tray back in place. Close the washer tray access door.
7. The front panel display (Figure 11, Item 1) on the washer should be lit. This display will be on at all times that power is ON indicating the machine is ready for loading and unloading.
8. Refer to Table 1 to determine the cycle number for the clothes being laundered.
9. Enter the desired cycle number by pressing (do not punch) with your finger the numbers on the keyboard (Figure 11, Item 9) and note that this number is displayed. When keys are pressed on the keyboard, a beep will be heard. If an error is made, simply press the numbers again. As numbers are entered, they move from right to left on the display.
10. To start the selected cycle, press the “START” key (Figure 11, Item 8). As the cycle proceeds, the display (Figure 11, Item 1) will show the function being executed, step number and the cycle number selected.

NOTE

Air in system may affect initial washer fill rate.

11. The front panel display (Figure 11, Item 1) will indicate when the cycle is complete. At that time, the washer may be unloaded by pressing the release button (Figure 11, Item 5) on the latch (Figure 11, Item 4) and using the latch to open the washer door (Figure 11, Item 3). The washer door will not open while the washer is in an operating cycle.
12. For maximum efficiency of washer, do not fill basket with more than 50 pounds of laundry.

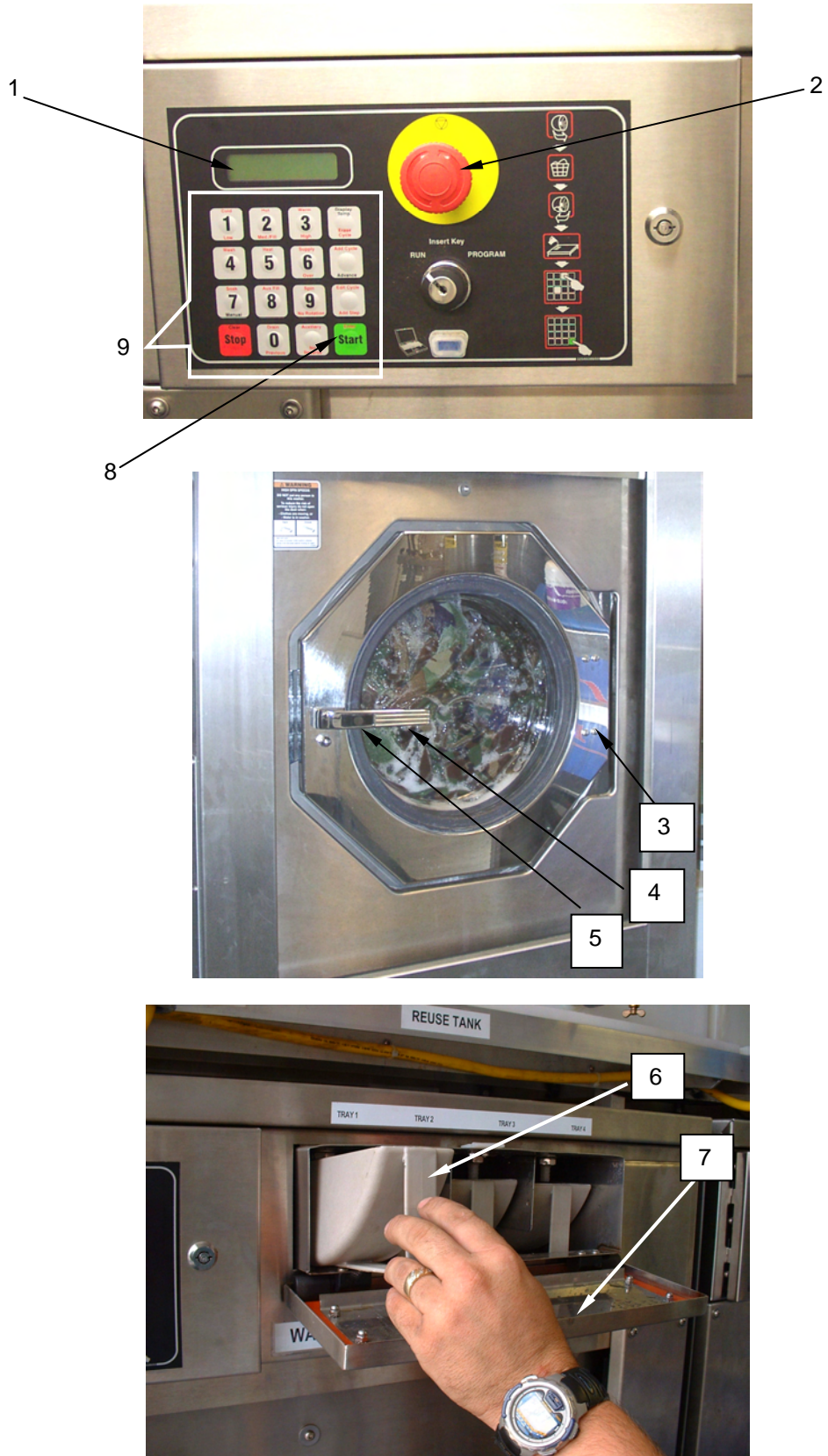


Figure 11. Operating the Washers.

END OF TASK

Pre-programmed Wash Cycles

Table 1, Pre-Programmed Washer Cycles, lists wash cycle options pre-programmed into the washer control panel. This table replaces any pre-programmed cycles listed in the washer technical manual. Columns in the table are as follows:

Operating Cycle - Indicates the types of items that may be washed in the given wash cycle.

Cycle Number - Indicates the number of the cycle to be entered into the washer control panel.

Water Reuse - Indicates whether the water reuse system is used in the given wash cycle. Only if the water reuse system fails to work properly, or if items to be laundered are heavily soiled, should wash cycles be used which do not use the water reuse system (wash cycles 03 thru 08).

Supply Tray - Indicates the amount and type of cleaning agent to be added to each of the four supply compartment bins. The number indicates ounces of cleaning agent; the letter indicates type of cleaning agent (i.e., 6 ld is 6 ounces of liquid detergent).

Time (minutes) - Indicates the approximate wash time, in minutes, to complete the wash cycle.

Pre-programmed Extraction Cycle - If washed items are still excessively wet at completion of their wash cycle, press 09 for a 4.5-minute extraction cycle.

Table 1. Pre-Programmed Washer Cycles.

Operating Cycle:	Cycle Number	Water Reuse	Supply Tray (ounces/*)				Time (minutes)
			1	2	3	4	
BDUs	13	X	-	-	-	6 ld	41
Sleeping Bags	14	X	-	-	-	6 ld	53.5
Lightly Soiled Garments	17	X	-	-	-	6 ld	39
BDUs	3		-	-	-	6 ld	39
Sleeping Bags	4		-	-	-	6 ld	51.5
Formula VIII From FM 10-280	5		3 s	-	-	4 ld	76.5
White Garments	6		3 b	-	-	6 ld	39
Lightly Soiled Garments	7		-		-	6 ld	37
Formula III from FM 10-280 **	8		1.5 st	3 b	4 ld	9 ld	128
Extract Only	9		-	-	-	-	4.5
Reuse Tank Flush	30		-	-	-	-	14
Reuse Tank Drain Assist	31		-	-	-	-	5
Winterize Washer Cold Water Lines	34		-	-	-	-	11
Winterize Washer Hot Water Lines	35		-	-	-	-	7

* ld = liquid detergent, s = sour, b = bleach, st = sodium thiosulfate, sf = softener

** 3 oz of sour and softener must be added to supply tray 3 after step 12 of the wash cycle has completed.

OPERATE DRYER

1. Set circuit breakers (Figure 12) on dryer circuit breaker panels to ON.

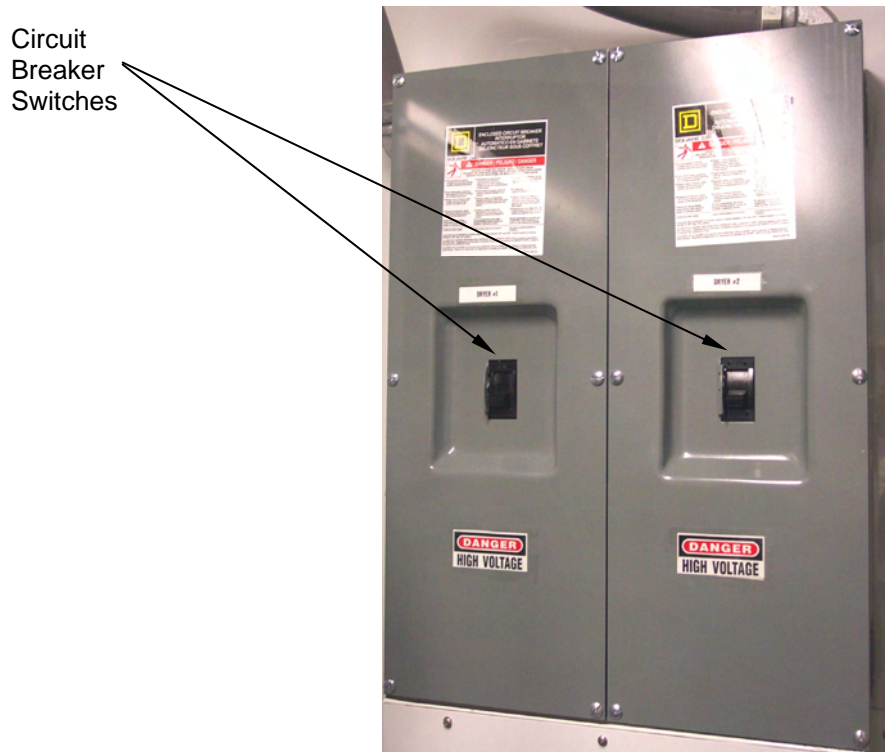


Figure 12. Operating the Dryers.

NOTE

Ensure the lint screen is clean and in place before proceeding.

For maximum efficiency of dryer, do not fill basket with more than 75 pounds or one washer load of wet clothing.

2. Pull the emergency stop (Figure 13, Item 2) OUT.
3. Open the dryer door (Figure 13, Item 3) and fill the dryer with no more than 50 lbs. of wet clothing (approximately 18 complete sets of BDUs). Ensure that the clothes do not prevent the door from closing. Use the door handle (Figure 13, Item 1) to close the dryer door securely, but do not slam. Do not press on the dryer door glass.
4. Table 2 lists pre-programmed dryer cycles that should be used to dry laundry.

OPERATE DRYER - CONTINUED

Table 2. Pre-Programmed Dryer Cycles.

For drying	Cooling			Drying				Non-reversing/ reversing
	Auto	Timed	Minutes	Auto	Timed	Minutes	Temperature	
BDUs	-	X	5	-	X	30	130°F (M)	reversing
Sleeping Bags	-	X	5	-	X	30	130°F (M)	reversing
White Garments	-	X	5	-	X	30	130°F (M)	reversing
Hospital Linens	-	X	5	-	X	30	160°F (H)	reversing

5. Press either HIGH TEMP or MEDIUM TEMP in accordance with the temperature shown for the material being dried in Table 2.
6. Press the START (Figure 13, Item 4) button to start the dryer
7. Do not open the dryer door (Figure 13, Item 3) when the dryer is running. To pause a drying cycle, use the STOP key (Figure 13, Item 11). Press the START key (Figure 13, Item 10) to resume the cycle.
8. Use the exhaust fan as necessary to dissipate heat from the dryers.
9. When the cycle is complete, an alarm will sound and "LR" (Load Ready) will show in the display. Remove the clothes and place in a clean laundry basket for folding in the TEMPER work area.

END OF TASK

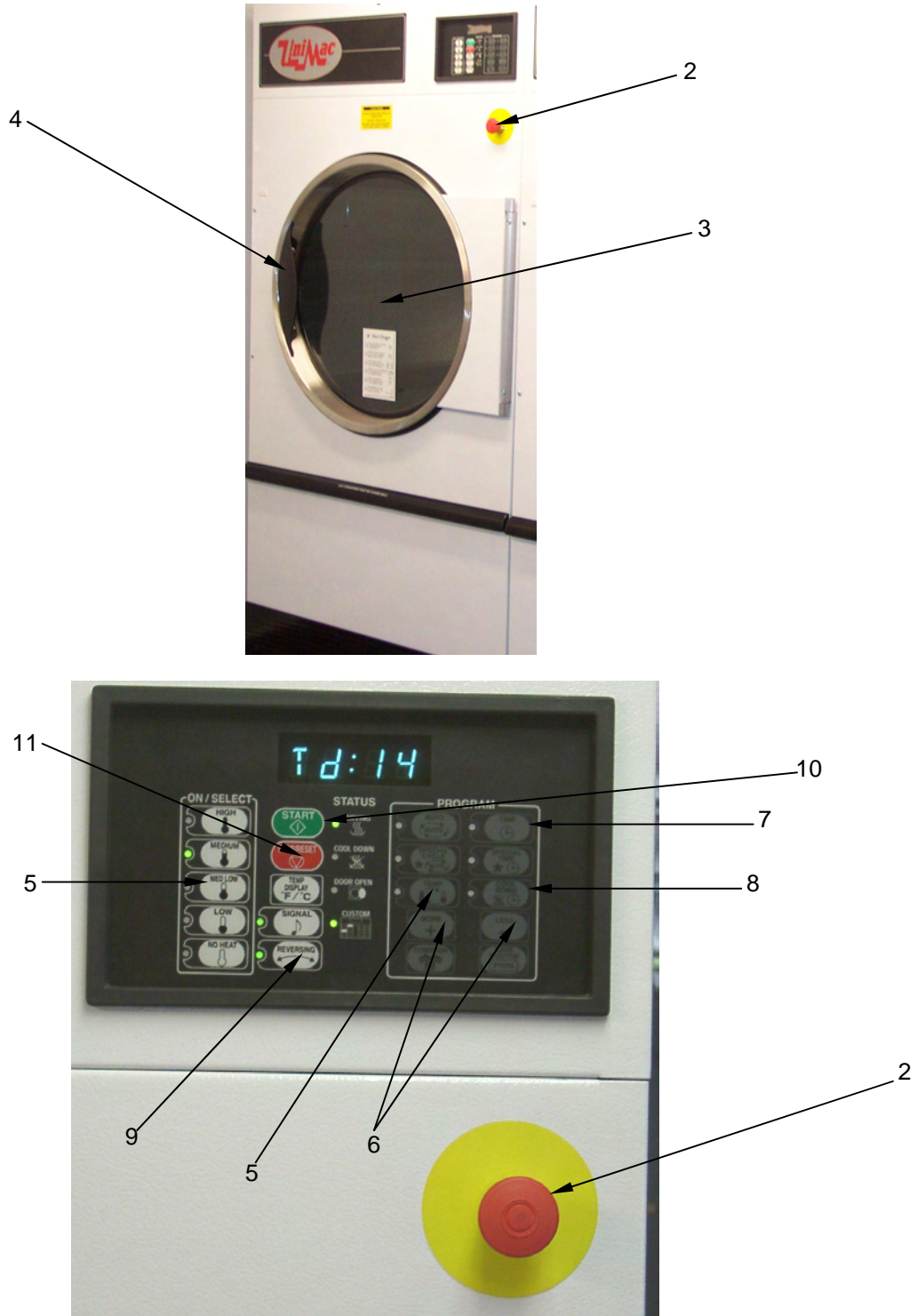


Figure 13. Programming Drying Cycles.

END OF TASK

OPERATING THE SPACE HEATER**CAUTION**

Ensure that the space heater is operating whenever the temperature of the container interior is expected to be 32°F or below. Failure to do so will allow the interior plumbing to freeze, making the system non-functional and causing potential damage to components.

1. Verify that the main breaker is set to the ON position.
2. Set the heater circuit breaker #2 on the main circuit breaker panel to ON.
3. Set the thermostat dial (Figure 14) to a desired setting then readjust to maintain desired temperature.
4. Allow the unit to automatically cycle ON and OFF to maintain selected temperature.

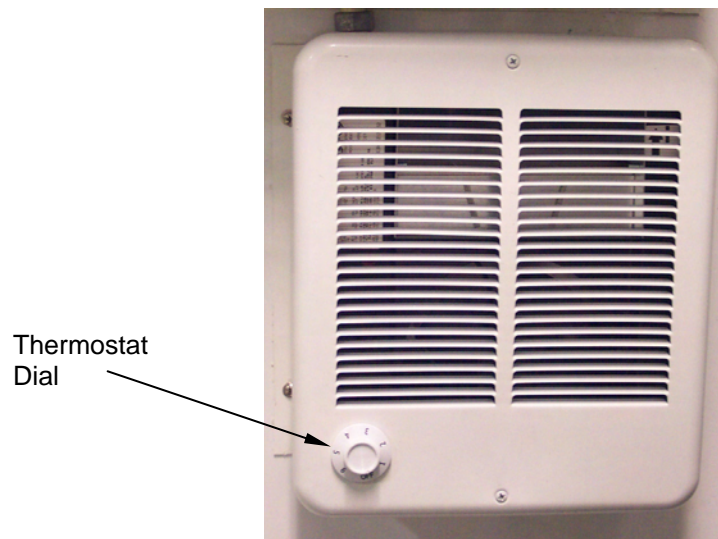


Figure 14. Operating the Space Heater.

END OF TASK

OPERATING THE EXHAUST FAN

1. Set the main breaker to ON position.
2. Set exhaust fan circuit breaker #5 on main circuit breaker panel to ON.
3. Operate fan with ON/OFF switch (Figure 15) as required.



Figure 15. Operating the Exhaust Fan.

END OF TASK**OPERATING THE INTERIOR LIGHTING**

1. Set the main breaker to ON position.
2. Set lighting circuit breaker #1 on the main circuit breaker panel to ON.
3. Use the ON/OFF switch (Figure 16) to control lights.

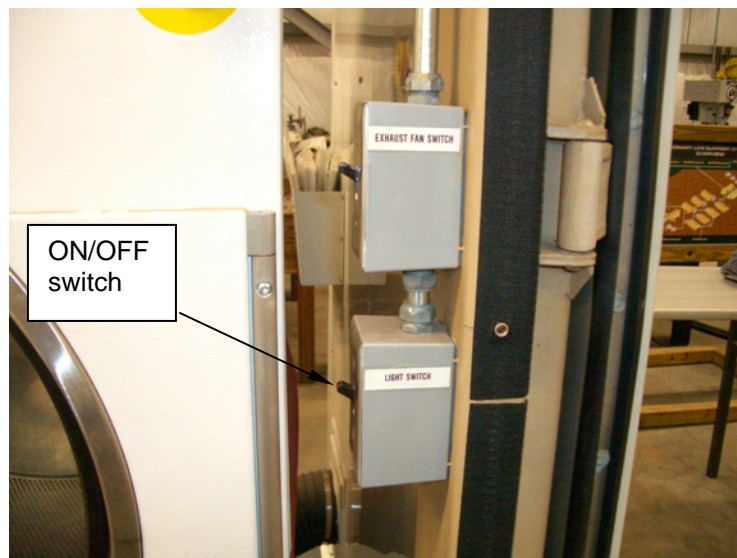


Figure 16. Operating the Overhead Lighting.

END OF TASK

SYSTEM SHUTDOWN

Shutting Down Dryers

1. Remove all items from dryers.

NOTE

Ensure the lint screen is clean and in place IAW WP 0033 before proceeding.

2. Push the emergency stop (Figure 17) to the IN position.

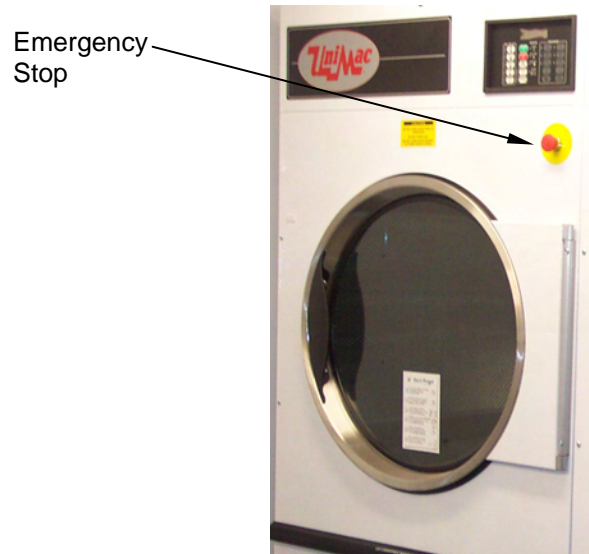


Figure 17. Shutting Down the Dryers.

2. Set circuit breakers (Figure 18) on dryer circuit breaker panels to OFF.



Figure 18. Set Breakers to OFF.

END OF TASK

Shutting Down Washers

CAUTION

Use the emergency stop only if the washer needs to be stopped immediately, such as in the event of an equipment malfunction, leak, or any situation that might endanger personnel or equipment. It should not be used to shut the washers during normal operation. The emergency stop shuts down all power to the washer and drains the washer to the waste tank.

NOTE

Refer to WP 0008 before shutting down washers for extended periods of time or before movement for winterization procedures. This procedure must be accomplished while utilities are still connected and available. Coordination with Force Provider facilities support section personnel will be necessary to maintain utility services until the winterization procedures have been completed.

1. Ensure all wash cycles have been completed and washers have drained.
2. Remove all items from washers (Figure 19).
3. Push the emergency stop switch to the IN position.
4. Set all breakers to OFF position.



Figure 19. Shutting Down the Washers.

END OF TASK

Shut Off Valves

1. Open the washer double service doors.
2. Locate washer #2 reuse fill shutoff valve (Figure 20) and set to CLOSED position.

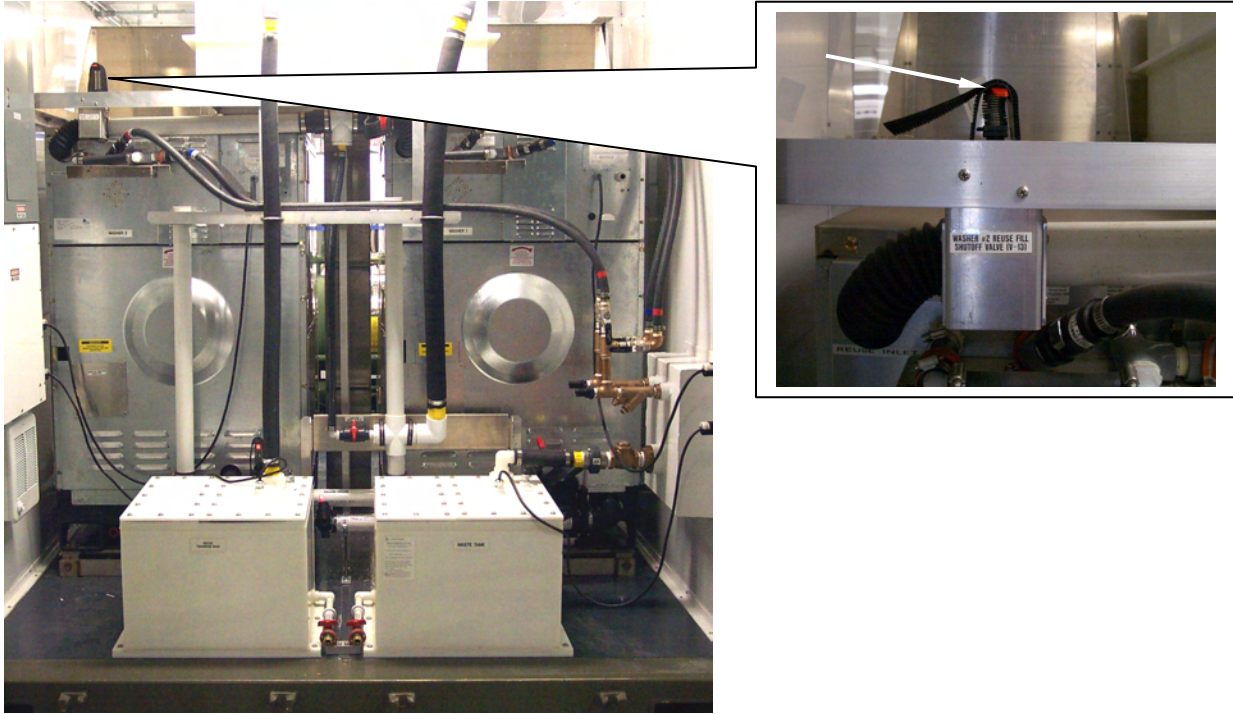


Figure 20. Close Washer #2 Reuse Fill Shutoff Valve.

3. Locate washer #2 waste drain shutoff valve (Figure 21) and set to CLOSED position.

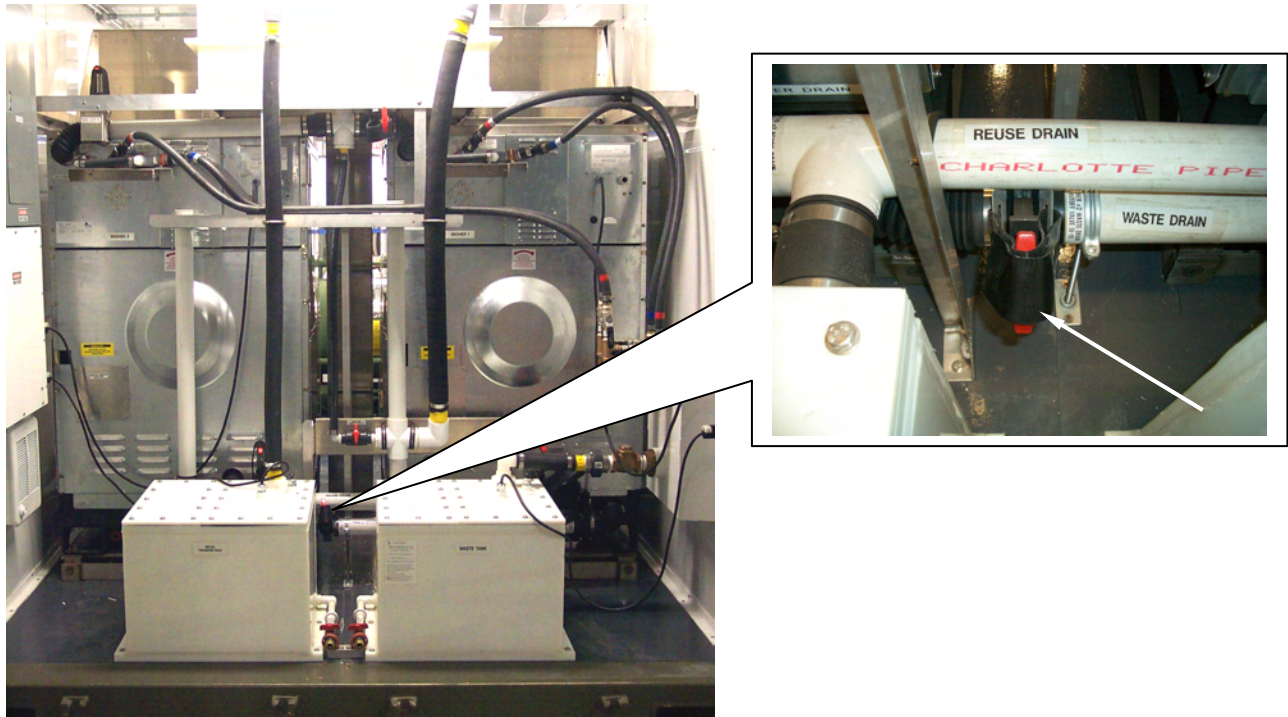


Figure 21. Close Washer #2 Waste Drain Shutoff Valve.

4. Locate washer #2 reuse drain shutoff valve (Figure 22) and set to CLOSED position.

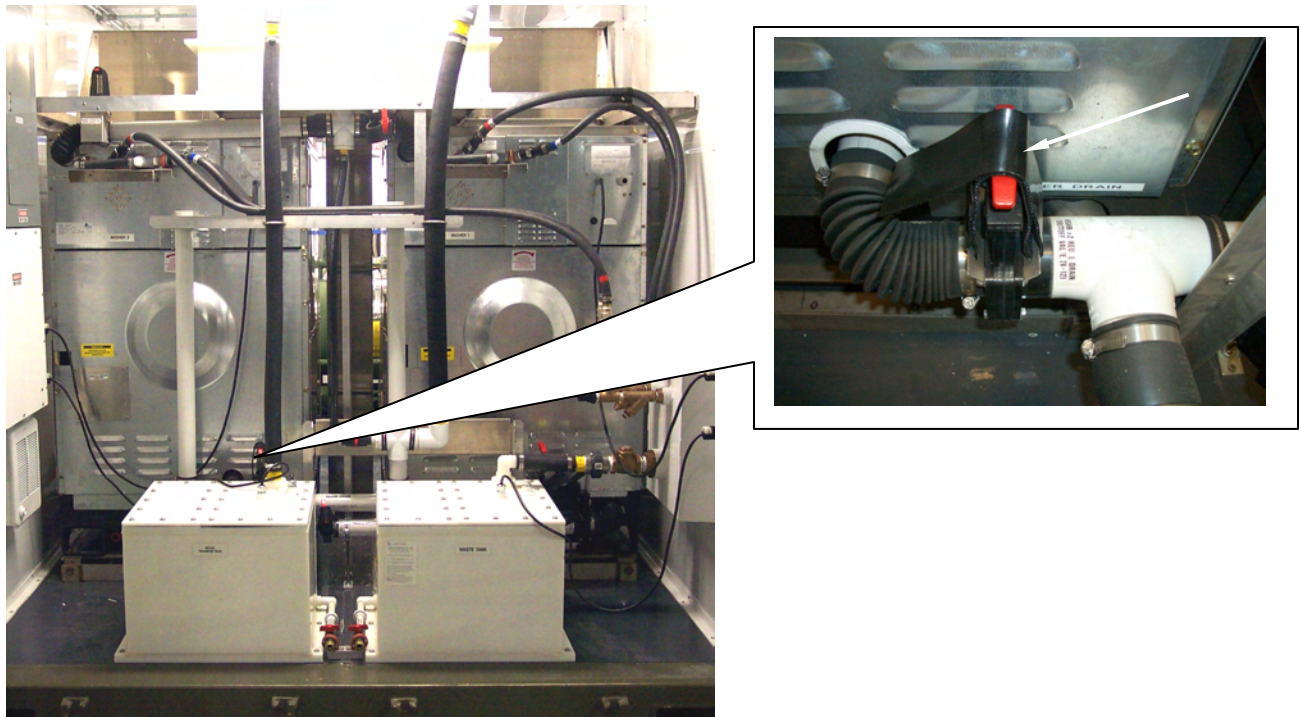


Figure 22. Close Washer #2 Reuse Drain Shutoff Valve.

5. Locate washer #1 reuse drain shutoff valve (Figure 23) and set to CLOSED position.

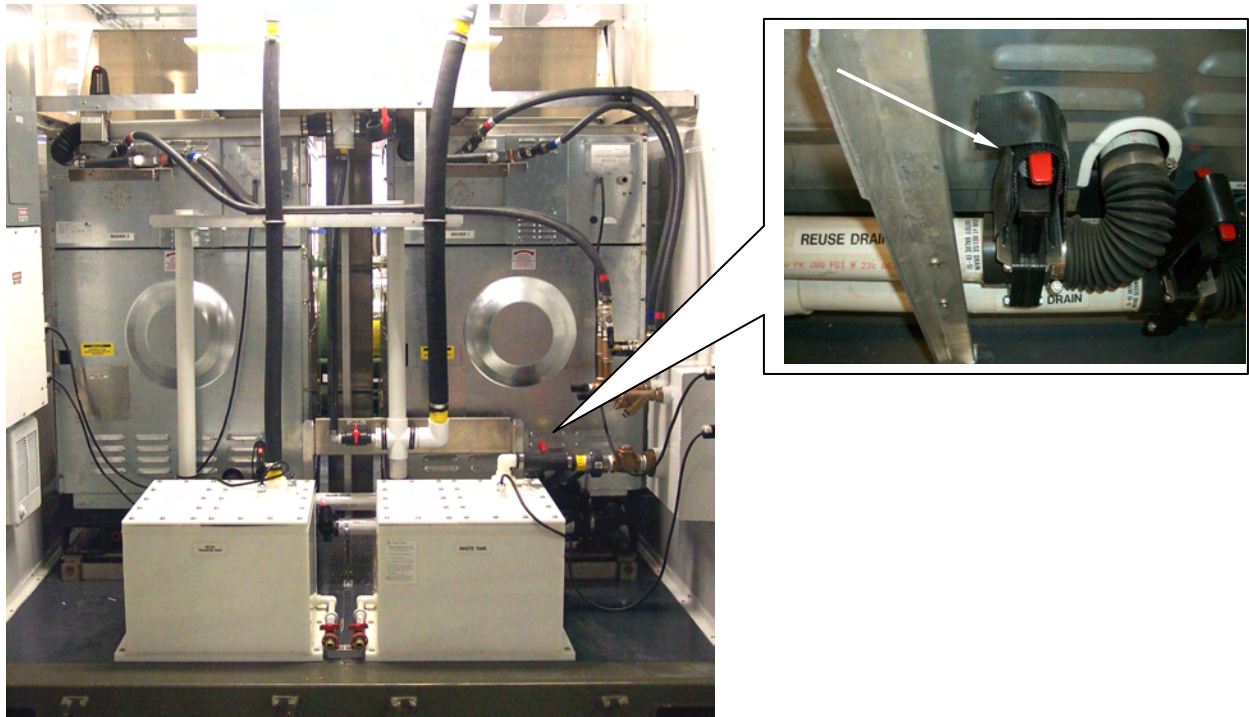


Figure 23. Close Washer #1 Reuse Drain Shutoff Valve.

6. Locate washer #1 reuse fill shutoff valve (Figure 24) and set to CLOSED position.

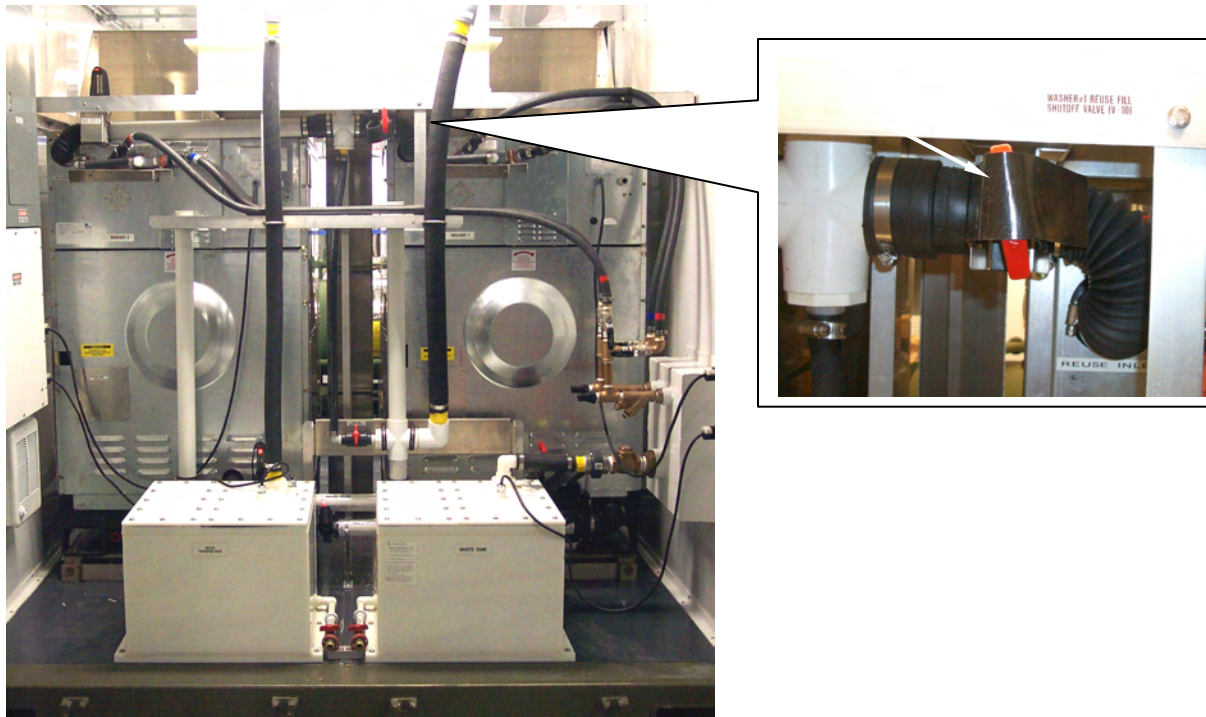


Figure 24. Close Washer #1 Reuse Fill Shutoff Valve.

7. Ensure the waste tank drain valve (Figure 26, Item 2) is set to the CLOSED position.
8. Locate the reuse tank drain valve (Figure 25) and set to OPEN position.

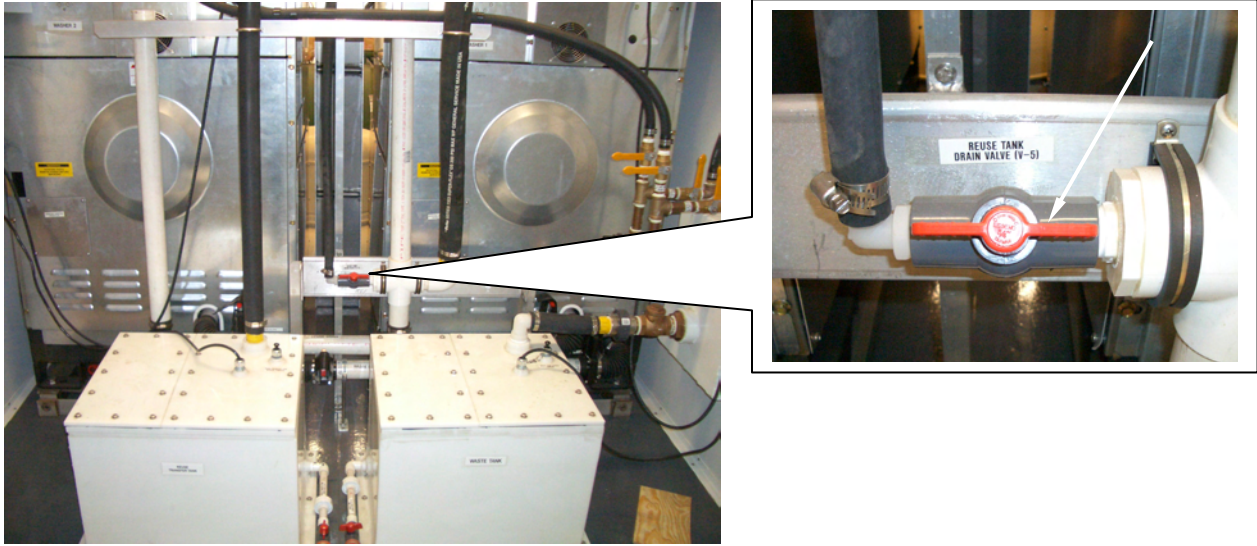


Figure 25. Open Reuse Tank Drain Valve.

9. Attach the supplied drain hose (Figure 26, Item 1) to the waste tank drain connection (Figure 26, Item 3). Place the open end of the hose in an approved waste water container.
10. Set the waste tank drain valve (Figure 26, Item 2) to the OPEN position.

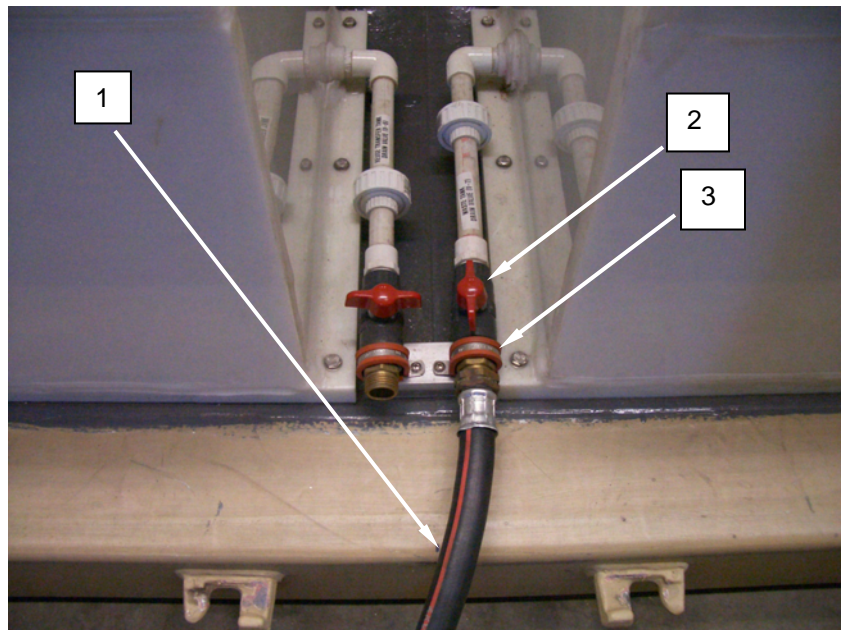


Figure 26. Open Waste Tank Drain Valve.

11. Locate washer #1 waste drain shutoff valve (Figure 27) and set to CLOSED position.

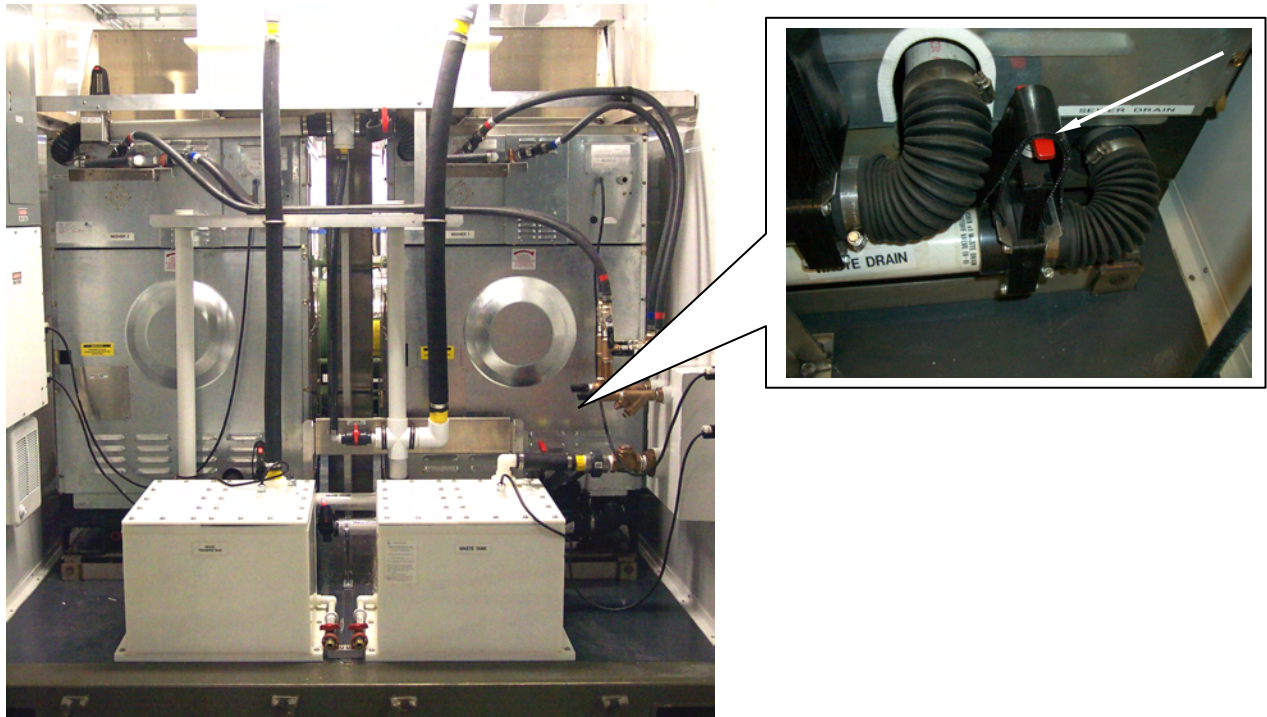


Figure 27. Open Washer #1 Waste Drain Tank Shutoff Valve.

12. Attach the supplied drain hose (Figure 28, Item 1) to the drain connection (Figure 28, Item 2) and put the open end into an approved waste water container.
13. Locate the reuse transfer tank drain valve (Figure 28, Item 3) and set to OPEN position. Once the tanks are fully drained, close the valves and remove the drain hoses.

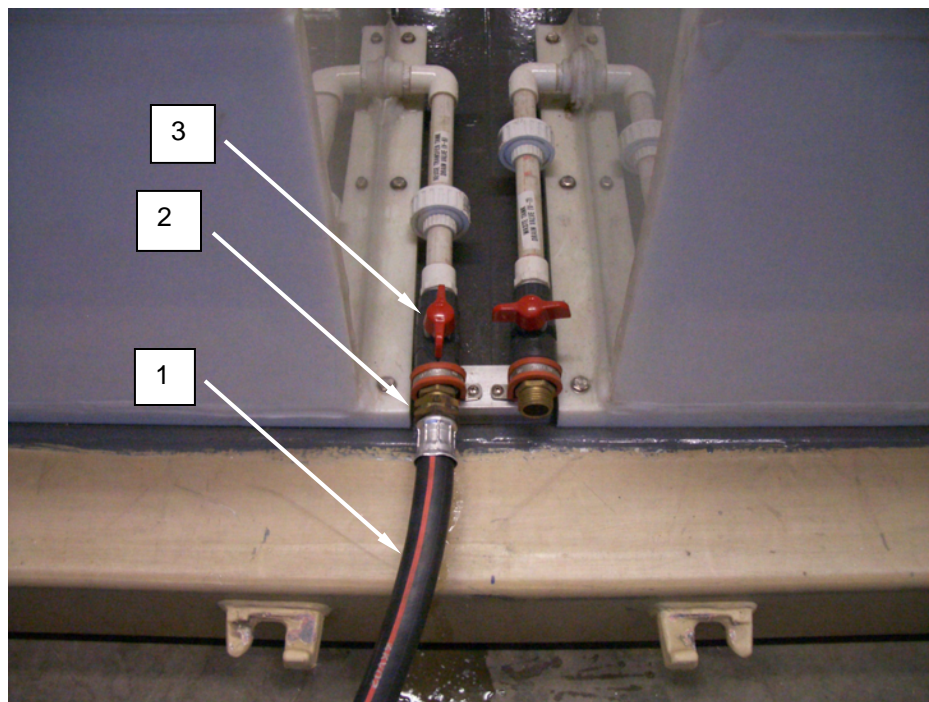


Figure 28. Open Reuse Transfer Tank Drain Valve.

14. Rotate cold water shutoff valves (Figure 29, Item 1) (located at water service panel) 90 degrees to the CLOSED position. Handles should not be in-line with water service pipes.
15. Rotate hot water shutoff valves (Figure 29, Item 2) (located at water service panel) 90 degrees to the CLOSED position. Handles should not be in-line with water service pipes.
16. Close the washer double service doors.
17. Shutdown M-80 Water Heater IAW TM 10-4520-259-13&P.

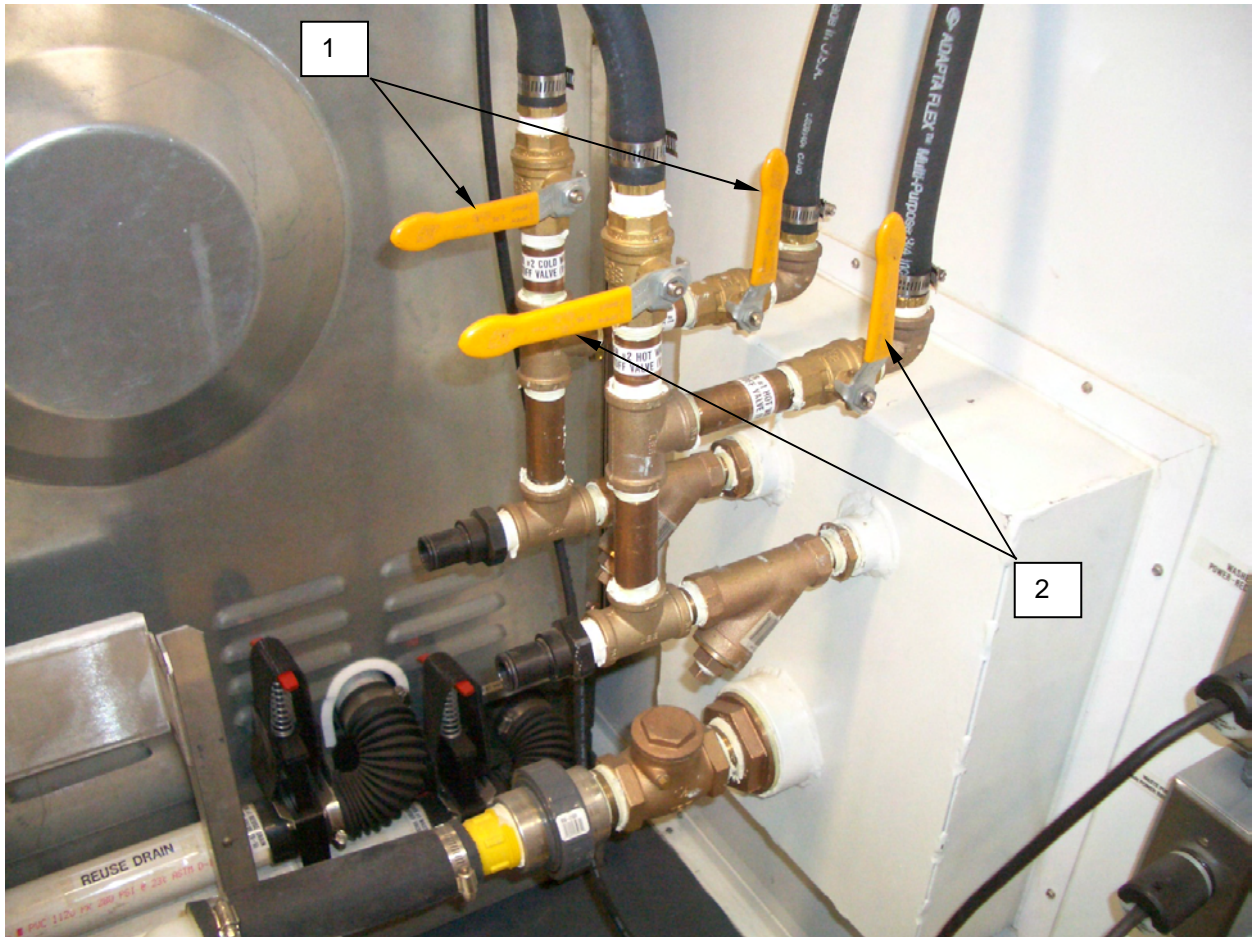


Figure 29. Valve Setup.

END OF TASK

Shutting Down the Space Heater

CAUTION

If subfreezing temperatures are expected during the shutdown period, the space heater should remain ON to prevent the internal plumbing to freeze.

Set the heater circuit breaker #2 on the main circuit breaker panel to OFF to shutdown the space heater (Figure 30).



Figure 30. Shutting Down Space Heater.

END OF TASK

Shutting Down the Exhaust Fan

1. Shut down fan with ON/OFF switch (Figure 31) as required.
2. Set exhaust fan circuit breaker #5 on main circuit breaker panel to OFF.



Figure 31. Shutting Down Exhaust Fan.

END OF TASK

Shutting Off the Lighting

1. To turn off lighting, utilize the ON/OFF switch (Figure 32) to control lights.
2. Set lighting circuit breaker #1 on the main circuit breaker panel to OFF.

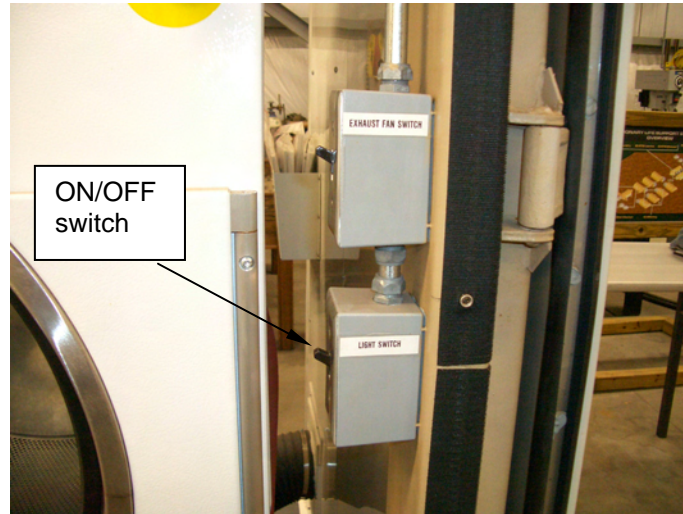


Figure 32. Turn Off Overhead Lighting.

3. Set the main breaker to OFF position unless the space heater is to remain ON throughout the shutdown period.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**PREPARATION FOR MOVEMENT****INITIAL SETUP:****References**

TM 10-8340-224-13
TM 10-5419-206-13
TM 10-5419-206-23P
TM 10-4520-259-13&P

GENERAL

Following are instructions for the preparation for movement and field packing of the Force Provider Containerized Batch Laundry (FP-CBL), part of the Force Provider Laundry subsystem. TM 10-5419-206-13 contains procedures for the concurrent preparation for movement of the remaining Force Provider Laundry subsystem equipment to be packed into TRICON 2A and 2B.

Refer to WP 0048 of TM 10-5419-206-13 for packing instructions of cold weather components if Modification System Cold Weather (MSCW) has been used.

Replace damaged or missing packing materials identified at the beginning of the packing instructions. Packing materials are listed in the Transportation and Storage Container Subsystem RPSTL or Bulk Items List (TM 10-5419-206-23P, WP 0007).

Prior the preparation for its movement and packing, the FP-CBL washing system must be winterized. This procedure must be accomplished while utilities are still connected and available. Coordination with Force Provider facilities support section personnel will be necessary to maintain utility services until the winterization procedures have been completed.

PREPARE WASHER AND WASHING SYSTEM FOR MOVEMENT

Use the following procedures to winterize the washing system and disconnect the water supply equipment from the FP-CBL.

Winterization

1. Shut off the external cold water supply and hot water supply feeding the FP-CBL container.
2. OPEN the cold water valve (Figure 1, Item 2) and hot water valve (Figure 1, Item 1) inside the FP-CBL container.



Figure 1. Hot and Cold Water Shutoff Valves.

3. Open reuse tank drain valve (Figure 2, Item 1).
4. Lift the manual override (Figure 2, Item 2) on the reuse transfer tank for 10 seconds or until no water is being discharged to the reuse tank.

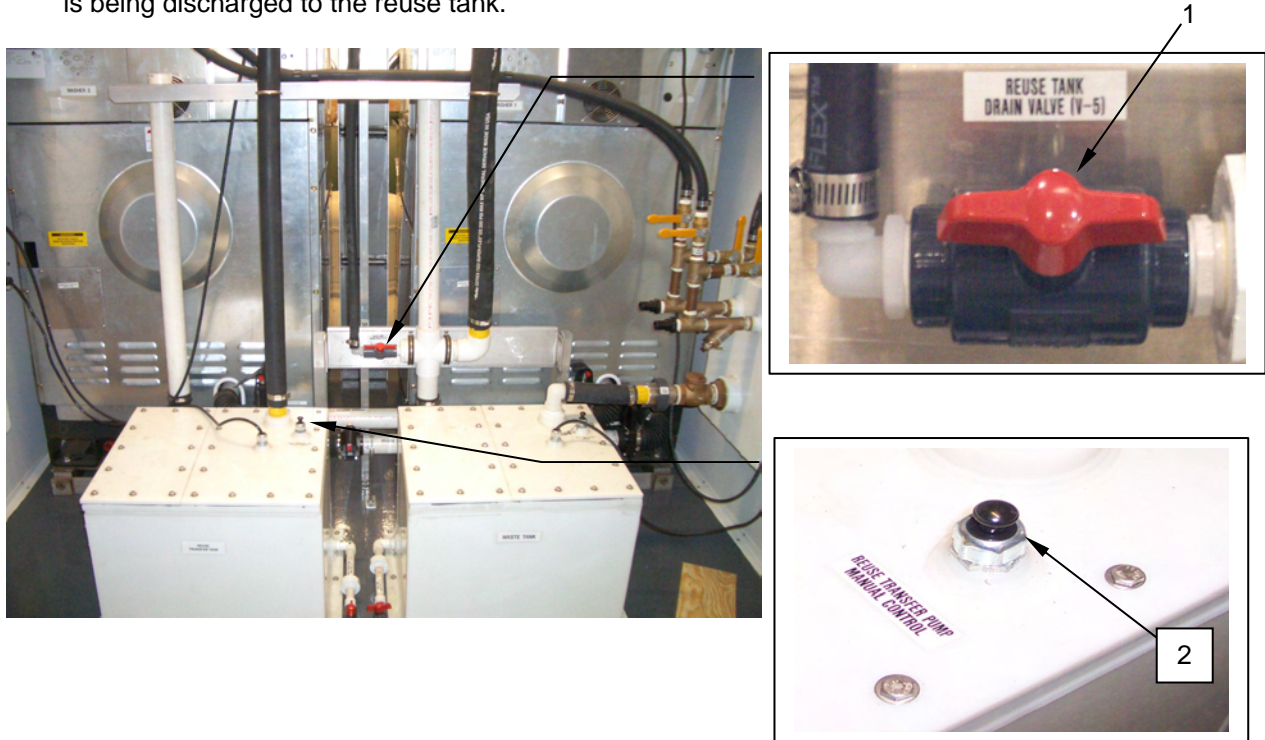


Figure 2. Draining the Reuse Transfer Tank.

5. Initiate Cycle 31 on Washer #1 or Washer #2 control panel (Figure 3) (this will relieve pressure on the cold and hot water lines while assisting in draining the reuse tank).
6. Upon indication of "Cold Water Did Not Fill", Press ENTER and then press ADVANCE.
7. Upon indication of "Hot Water Did Not Fill", Press ENTER and then press ADVANCE.



Figure 3. Initiating Cycle 21 on Washer.

8. Upon completion of Cycle 31 disconnect the external cold water hose (Figure 4, Item 1) and hot water hose (Figure 4, Item 2) assemblies (excess water in the water lines will drain to the ground).
9. Allow excess water in lines to drain from cold water and hot water quick connects on the side of the FP-CBL exterior.
10. Upon drainage of cold/hot water quick connects replace plugs (Figure 4, Item 3) on both quick connects.

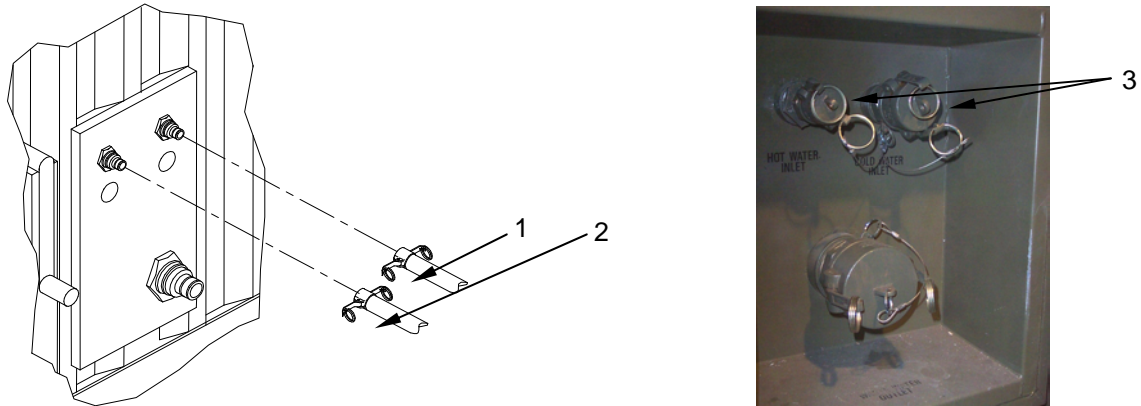


Figure 4. Disconnect Potable Water Lines.



WARNING

The air compressor is approximately 42 lbs and somewhat awkward to carry. To prevent injury, two persons are required when carrying the air compressor.

11. Remove the air compressor (Figure 5, Item 1) from behind the dryer and place behind the washer service area.
12. Connect one end of the air compressor hose to the air compressor.
13. Connect other end of air compressor hose to the cold-water winterization quick connect (Figure 5, Item 2).

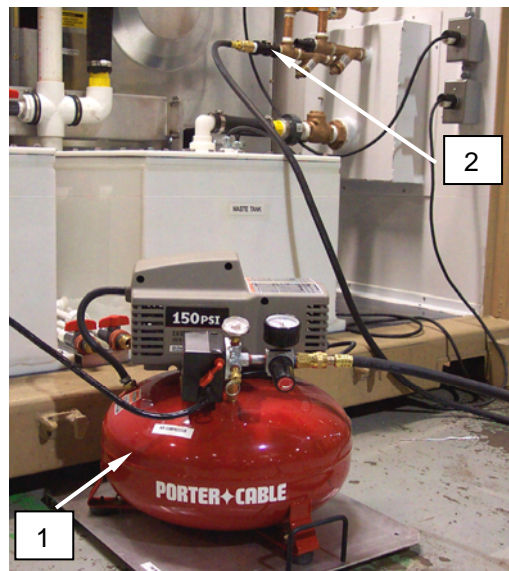


Figure 5. Connect Air Compressor to Cold Water Quick Connect.

14. Connect the air compressor electrical plug into the service receptacle (Figure 6, Item 1) on main power circuit breaker box.
15. Turn on the air compressor (Figure 6, Item 2).

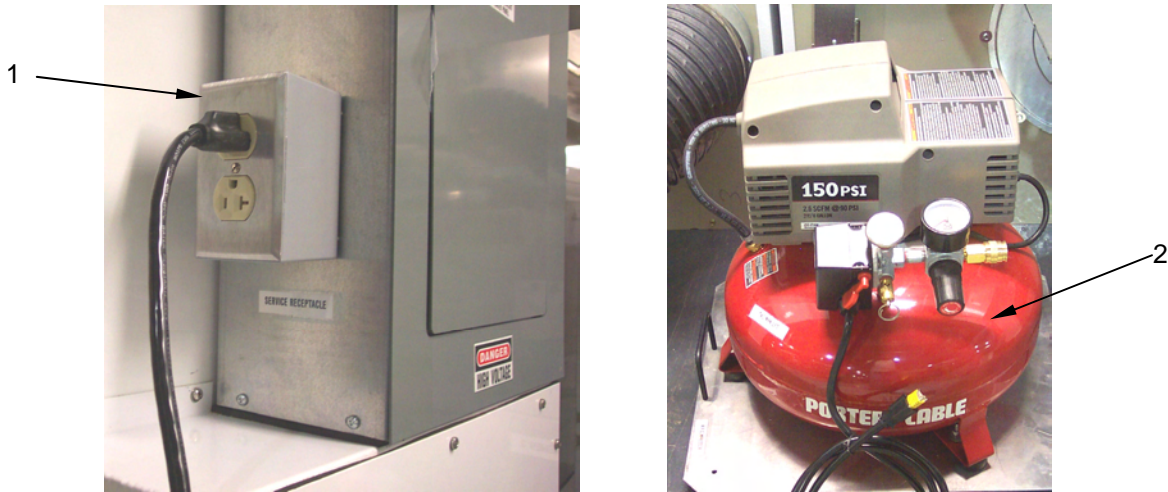


Figure 6. Connect Air Compressor to Service Receptacle.

16. Allow the air compressor tank pressure to increase and set the regulator to approximately 60 psi. Follow the air compressor instructions to adjust the regulator pressure.

CAUTION

Do not allow pressure to increase beyond 60 psi, otherwise damage to the system could result.

17. The air compressor tank pressure (Figure 7, Item 1) should continue to increase to 150 psi with the regulator pressure (Figure 7, Item 2) remaining at 60 psi.

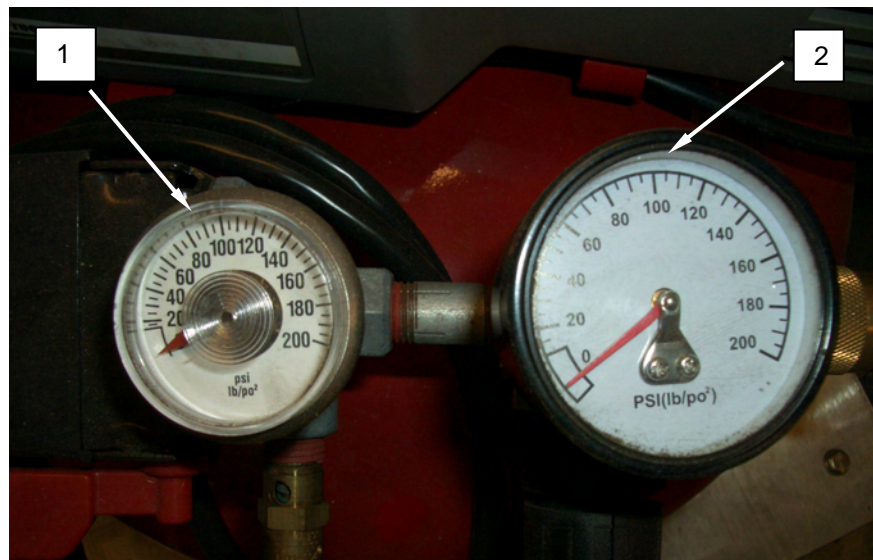


Figure 7. Setting the Air Compressor Regulator.

18. Wait for water to completely drain from the reuse tank into the waste tank.

19. Initiate Cycle 34 on Washer #1 control panel (Figure 8) to evacuate water from the washer supply and detergent lines.
20. Press ENTER then ADVANCE when the washer indicates a "DID NOT FILL IN TIME" alarm.
21. Upon completion of Cycle 34 open and close the washer door and allow the air compressor tank pressure to increase.
22. Initiate Cycle 34 on Washer #2 control panel (Figure 8) to evacuate water from the washer supply and detergent lines.



Figure 8. Initiating Cycle 34 on Washer.

23. Press ENTER then ADVANCE when the washer indicates a "DID NOT FILL IN TIME" alarm.
24. Upon completion of Cycle 34, open and close the washer door and turn off the air compressor.
25. Open the air compressor regulator (Figure 9) by pulling out knob and turning clockwise to depressurize the cold water supply line.
26. Verify the air compressor regulator pressure reads 0 (zero) psi.
27. Disconnect the air compressor hose from the cold water winterization quick connect.



Figure 9. Opening Air Compressor Regulator.

**WARNING**

Failure to depressurize the cold water line could result in personal injury.

28. Connect the air compressor hose to the hot water winterization quick connect (Figure 10, Item 1).
29. Turn on the air compressor.
30. Allow the air compressor tank pressure to increase and set the regulator (Figure 10, Item 2) to approximately 60 psi to adjust the regulator pressure.

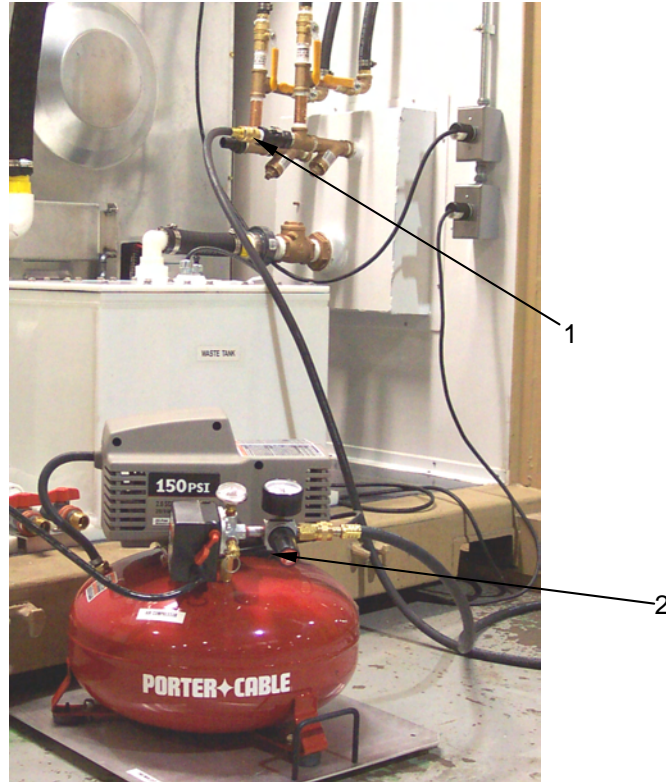


Figure 10. Connect the Air Compressor Hose to the Hot Water Winterization Quick Connect.

CAUTION

Do not allow pressure to increase beyond 60 psi, otherwise damage to the system could result.

31. The air compressor tank pressure (Figure 11, Item 1) should continue to increase to 150 psi with the regulator pressure (Figure 11, Item 2) remaining at 60 psi.

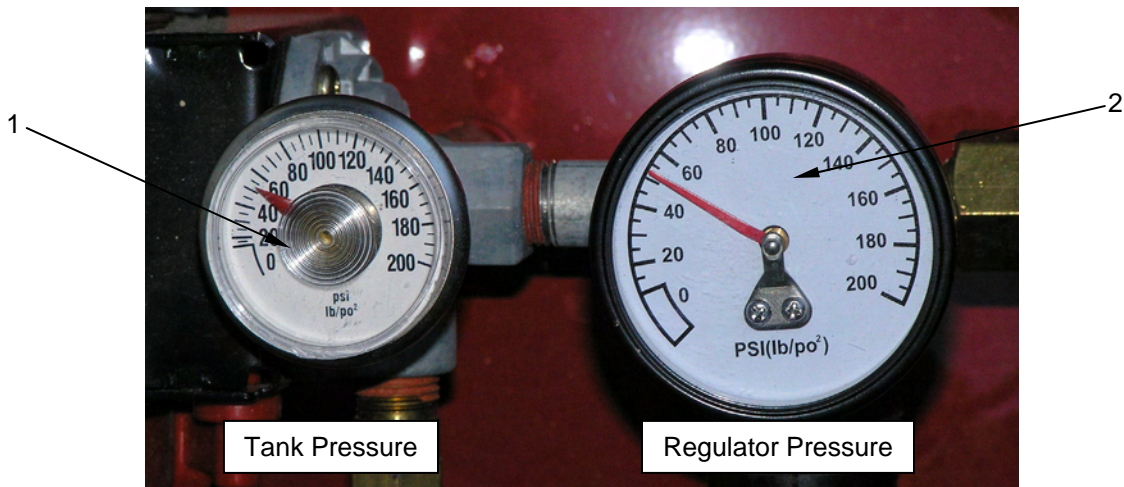


Figure 11. Monitoring Air Compressor Pressure.

32. Initiate Cycle 35 on Washer#1 control panel to evacuate water from the washer supply and detergent lines.
33. Press ENTER then ADVANCE when the washer indicates a "DID NOT FILL IN TIME alarm.
34. Upon completion of cycle 35 open and close the washer door and allow the air compressor tank pressure to increase.
35. Initiate Cycle 35 on Washer #2 control panel to evacuate water from the washer supply and detergent lines.
36. Press ENTER then ADVANCE when the washer indicates a DID NOT FILL IN TIME alarm.
37. Upon completion of cycle 35, open and close the washer door and turn off the air compressor.
38. Disconnect the air compressor electrical plug from the service receptacle.
39. Open the air compressor regulator (Figure 12, Item 3) by pulling out knob and turning clockwise to depressurize the hot water supply line.



WARNING

Failure to depressurize the hot water line could result in personal injury.

40. Verify the air compressor regulator pressure (Figure 12, Item 2) reads 0 (zero).
41. Disconnect the air compressor hose from the hot water winterization quick connect.
42. Open the air compressor tank purge to relieve the air compressor tank pressure.
43. Verify the air compressor tank pressure (Figure 12, Item 1) reads 0 (zero).



Figure 12. Verify Air Compressor Regulator Pressure Reads Zero.

- 44. Disconnect the air compressor hose from the air compressor.



WARNING

The air compressor is approximately 42 lbs and somewhat awkward to carry. To prevent injury, two persons are required when carrying the air compressor.

- 45. Drain any water from the air compressor tank IAW WP 0035 and store the air compressor behind the dryers.
- 46. Empty washer #1 supply trays (Figure 13, Item 1) .
- 47. Empty washer #2 supply trays (Figure 13, Item 2).



Figure 13. Empty Washer Soap Trays.

- 48. Wipe out residual water in washer #1.
- 49. Wipe out residual water in washer #2.



WARNING

Avoid skin contact with graywater. Graywater is to be considered hazardous at all times. Full protection in the form of rubber gloves and safety glasses should be used when performing any type of maintenance that involves graywater. Failure to follow this warning may result in serious illness.

50. Lift manual override (Figure 14) on the waste tank for 10 seconds or until no water is being discharged.



Figure 14. Lifting the Manual Override on Waste Tank.

51. Connect the drain hoses to the reuse transfer tank hose connection (Figure 15, Item 4) and waste tank drain hose connection (Figure 15, Item 3).
52. Open the reuse tank drain valve (Figure 15, Item 1) and waste tank drain valve (Figure 15, Item 2).
53. Ensure that tanks have fully drained. Remove the drain hose assemblies connected to the reuse transfer tank and waste tank.
54. Close the reuse transfer tank valve (Figure 15, Item 1) and waste tank valve (Figure 15, Item 2).

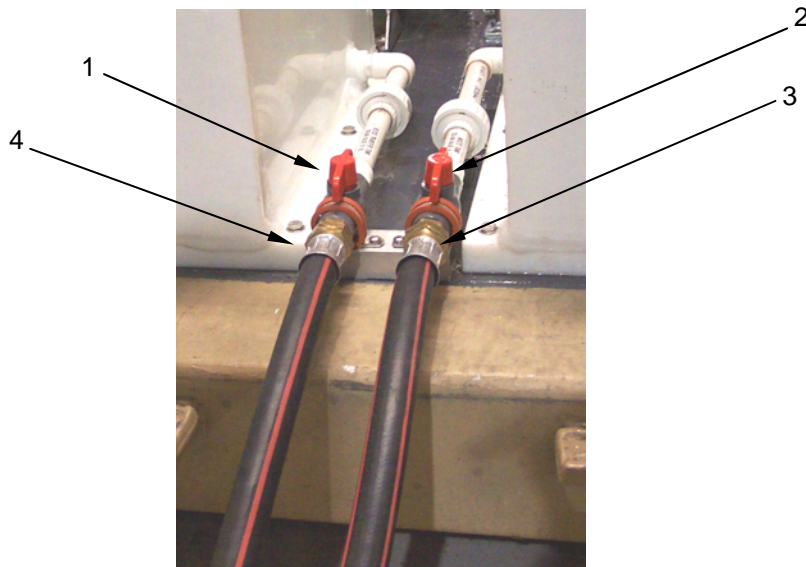


Figure 15. Draining the Reuse Transfer and Waste Tanks.

55. Place drain hoses inside washer #1 (Figure 16).

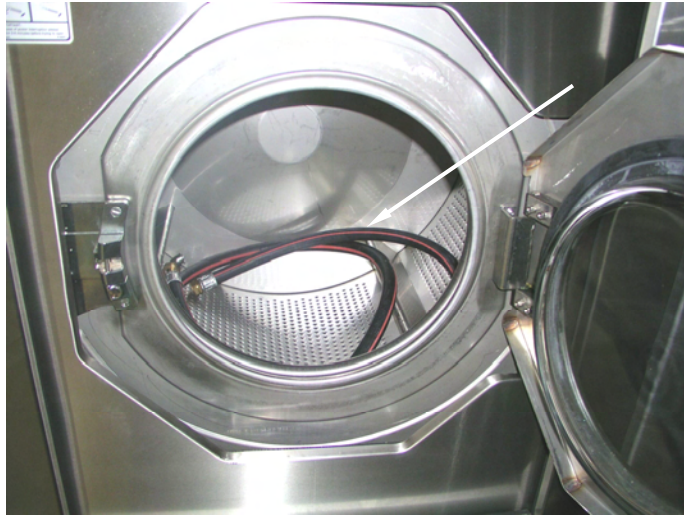


Figure 16. Place Drain Hoses Inside Washer #1.

56. Remove the 3-inch waste discharge hose (Figure 17) quick connect.

57. Allow any residual water from the 3-inch quick connect to drain.

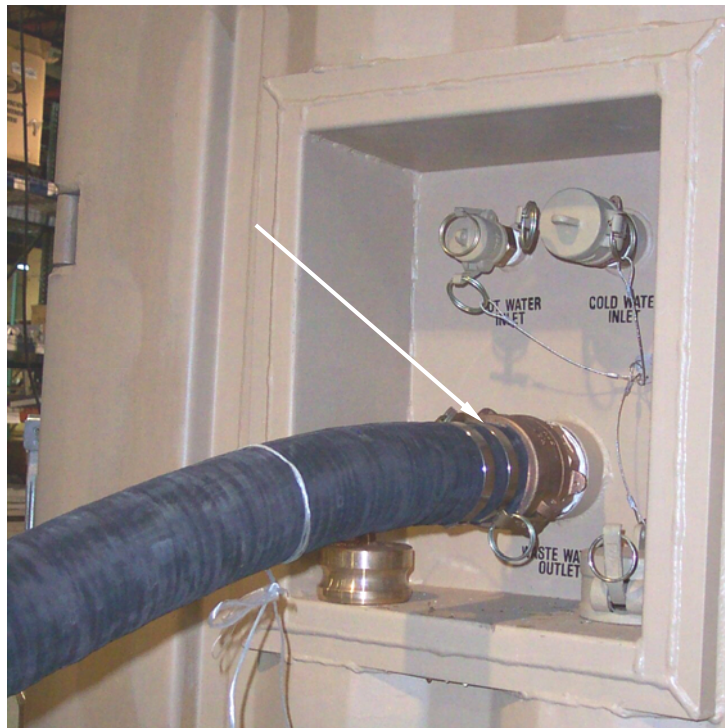


Figure 17. Remove 3-inch Waste Discharge Hose Quick Connect.

58. Replace the 3-inch waste discharge quick connect cap (Figure 18).

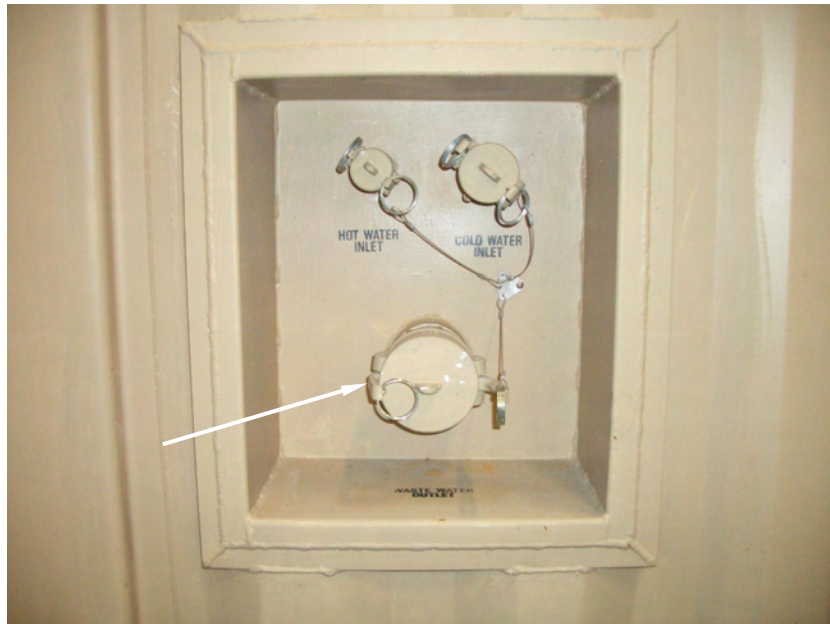


Figure 18. Replace 3-inch Waste Discharge Quick Connect Cap.

END OF TASK

Install Washer Shipping Brackets

CAUTION

Shipping brackets must be installed prior to any movement of the FP-CBL container. Serious damage to equipment may result from unsecured washers.

1. Retrieve shipping brackets (Figure 19, Item 1) and retaining bolts (Figure 19, Item 2) from their storage area between Dryer No 2 and the entry wall.
2. Insert the shipping brackets (Figure 19, Item 1) in the 1-inch holes at the base of the washer.
3. Push the brackets through until the brackets ends touch the base of the washer
4. Align the brackets ends with the threaded holes in the base of the washer. It may be necessary to rock the washer drum slightly to align the holes.
5. Install the retaining bolts (Figure 19, Item 2) through the brackets ends and into the threaded holes.
6. Tighten the retaining bolts (Figure 19, Item 2).
7. Install snubber by sliding into snubber bracket at the base of the washer.

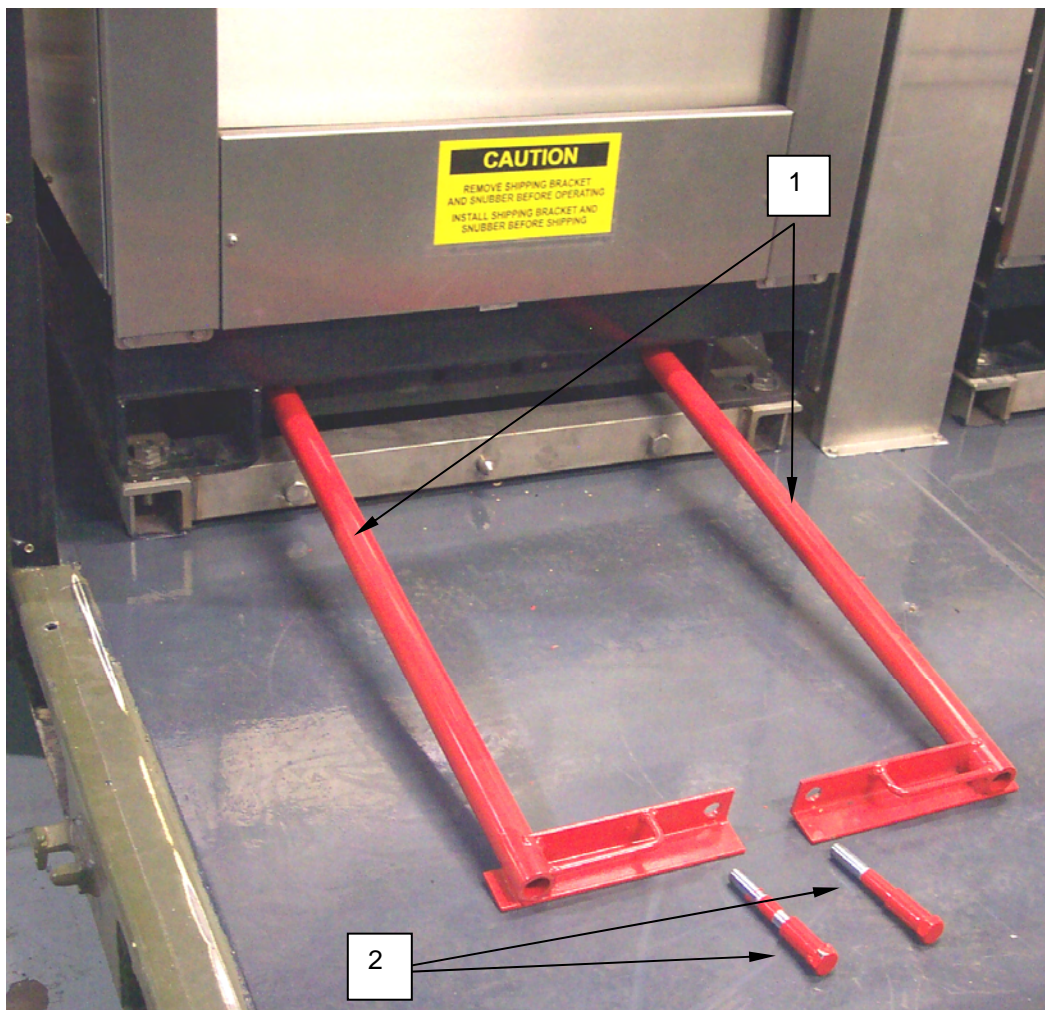


Figure 19. Install Washer Shipping Brackets.

END OF TASK

PREPARATION FOR MOVEMENT OF POWER SUPPLY EQUIPMENT

The following procedures outline the steps to prepare the power supply equipment for movement.

1. Ensure FP-CBL components have been shut down.
2. Switch the FP-CBL circuit breakers to OFF.
3. Set all PDISE-M100 circuit breakers (Figure 20, Item 1), including MAIN (Figure 20, Item 2), to OFF.



WARNING

Power supply shall be shut off and disconnected only by qualified personnel. Power source must be shut off and disconnected before attempting to disassemble power supply equipment. Failure to observe this warning may result in severe injury or death by electrocution.

4. Have qualified personnel shut off power to PDISE-M100 (Figure 20, Item 4). Power source must be shut off and disconnected before attempting to disassemble power supply equipment.
5. Have qualified personnel disconnect 100A/4-foot pigtails (Figure 20, Item 5) from power source.

Disassembly

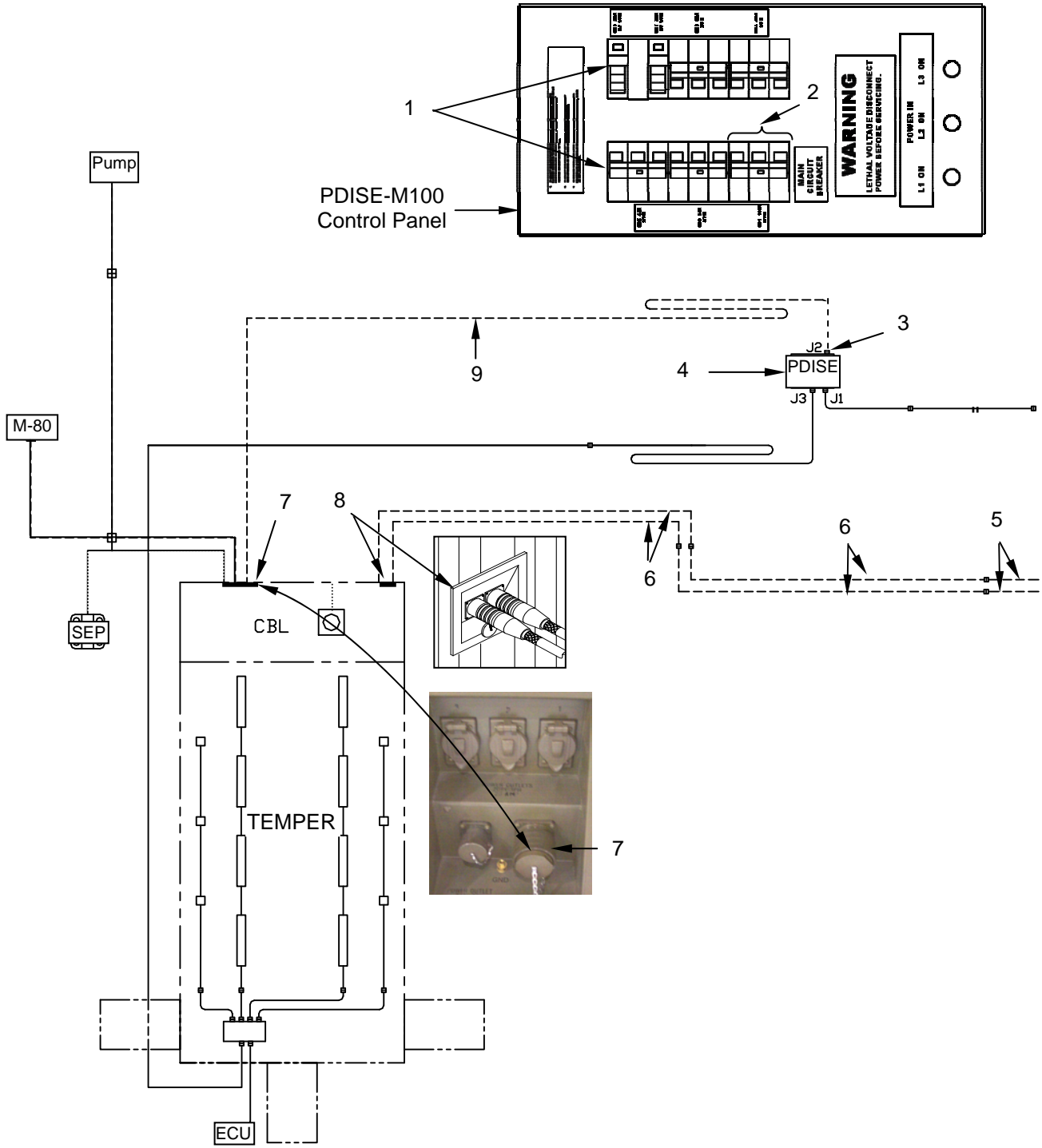
To disassemble the power supply equipment, proceed as follows:

1. Disconnect 100A/50-foot service cables (Figure 20, Item 6) from the pigtails (Figure 20, Item 5). Install dust caps.
2. If more than one cable was used, disconnect 100A/50-foot service cables (Figure 20, Item 6). Install dust caps.
3. Disconnect 100A/50-foot service cables (Figure 20, Item 6) from dryer power input panel (Figure 20, Item 8) on the FP-CBL. Install dust caps.
4. Disconnect 100A/50-foot service cable (Figure 20, Item 9) from J2 connector (Figure 20, Item 7) on the PDISE-M100 (Figure 20, Item 4). Install dust caps.
5. If more than one cable was used, disconnect 100A/50-foot service cables (Figure 20, Item 9). Install dust caps.
6. Disconnect 100A/50-foot service cable (Figure 20, Item 9) from the washer power input panel (Figure 20, Item 7) on the FP-CBL. Install dust caps.
7. Clean service cables and pigtails with rag and scrub brush soaked in a warm detergent solution. Wipe surfaces with a clean, damp rag and then allow to completely air dry.

Prepare Service Cables and Pigtails.

1. Coil each disconnected 100A/50-foot service cable into a uniform coil having a diameter no greater than 26 inches. Secure each coil using four cable carrying straps (to be packed into TRICON 2B)
2. Ensure dust cap is installed on each of the three disconnected 100A/4-foot pigtails and secured on the cable connector (to be packed into TRICON 2B).
3. Position items near ISO container, but do not begin packing container yet. Procedures for field packing the containers follow later in this work package.

Grounding Rod. Disconnect cable and cable clamp and remove grounding rod from soil. Clean and return to TRICON 11C, System Support Kit, Part B located with the Administration Subsystem.



- Cable part of FP-CBL setup (TM 10-3510-225-13&P)
- _____ Cable part of laundry subsystem setup
- Cable required only if SEP is used

Figure 20. Prepare Service Cables and Pigtails for Packing.

END OF TASK

Disconnect Fresh-Water Components

Disconnect the fresh water components as follows:



WARNING

Hot water may remain in M-80 Water Heater and hoses after shutdown. Allow water to cool before attempting to disassemble system. Failure to observe this warning may result in burn injury to personnel.

NOTE

The hot and cold fresh water supply hoses may have been disconnected from the water service panel previously, as part of the winterization procedure.

1. Disconnect water hoses (Figure 21, Item 1) from Tee (Figure 21, Item 3), M-80 water heater (Figure 21, Item 2), and water supply (Figure 21, Item 4).
2. Install all dust caps.
3. Coil hoses and set aside.

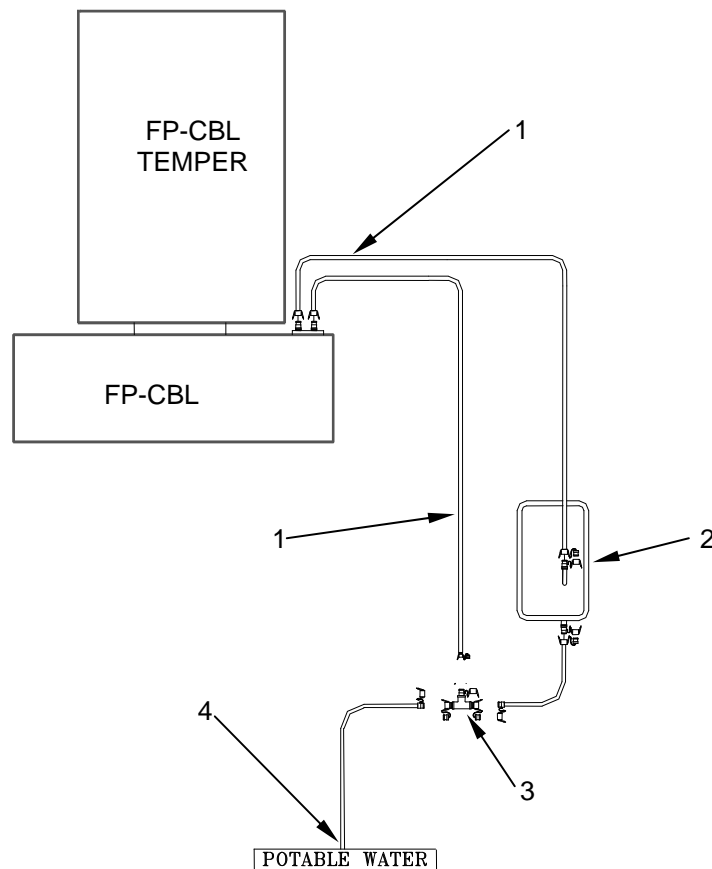


Figure 21. Disconnect Freshwater Components.

END OF TASK

Disconnect Wastewater Hose

If the wastewater hose was not disconnected as part of the winterization procedure, proceed as follows:



WARNING

Avoid skin contact with wastewater. Wastewater is to be considered hazardous at all times. Full protection in the form of rubber gloves and safety glasses should be used when performing any type of maintenance that involves wastewater. Failure to follow this warning may result in serious illness.

NOTE

The wastewater hose may have been disconnected from the water service panel previously, as part of the winterization procedure.

1. Disconnect wastewater hose (Figure 22, Item 1) from the water panel and the Sewage Ejection Pump (SEP) (Figure 22, Item 2).
2. Install dust caps and plugs. Coil hose and set aside.

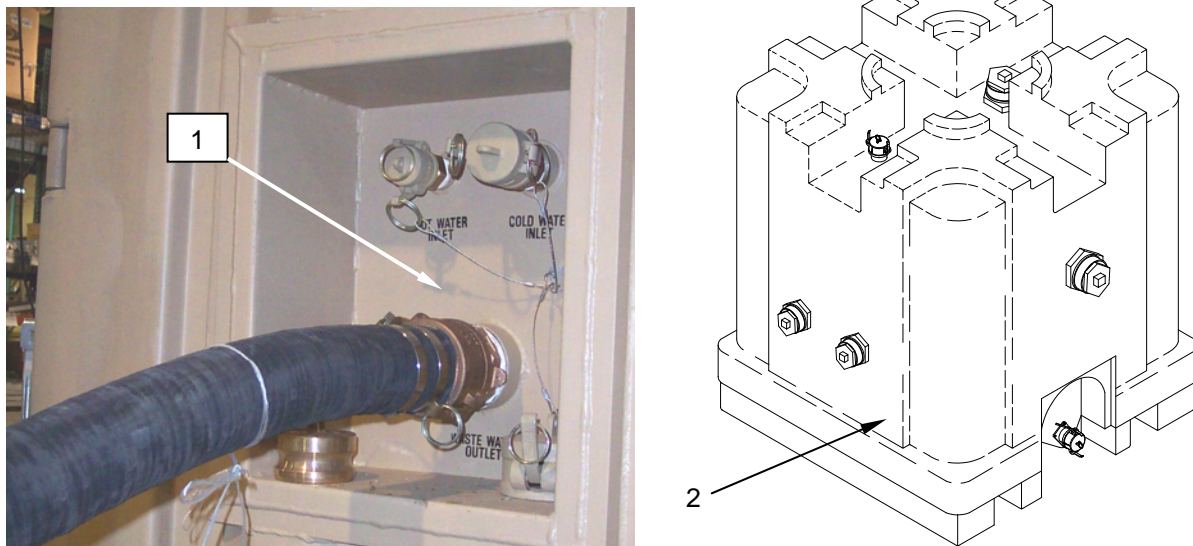


Figure 22. Disconnect Wastewater Hose from Water Panel and SEP.

END OF TASK

Prepare M-80 Water Heater for Movement**WARNING**

Hot water may remain in M-80 Water Heater and hoses after shutdown. Allow water to cool before attempting to disassemble system. Failure to observe this warning may result in burn injury to personnel.

**WARNING**

The M-80 Water Heater is heavy, awkward and difficult to maneuver. To prevent injury, six persons are required to move the heater into the container and position it for stowage.

1. Drain hot water from M-80 water heater tank in accordance with TM 10-4510-259-13&P (M-80 water heater) and TM 10-5419-206-13 (Force Provider). Water may still be hot.
2. Prepare M-80 (Figure 23, Item 1) for storage or shipment in accordance with TM 10-4520-259-13&P.

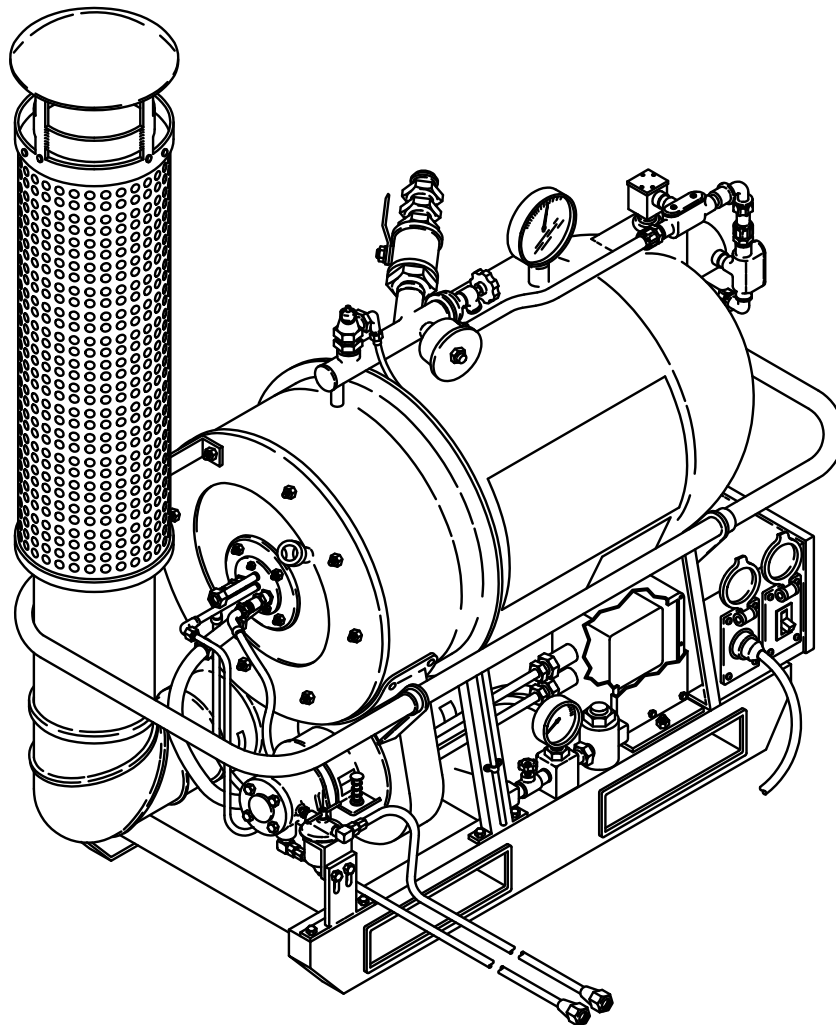


Figure 23. Prepare M-80 Water Heater for Movement.

END OF TASK

Remove Exhaust Fan



WARNING

Moving the exhaust fan requires four persons. Two soldiers are stationed on the FP-CBL roof to handle the fan, and two are stationed on the ground. Failure to comply may result in serious injury or death to personnel.

1. Retrieve the exhaust fan panel stowed near the dryer in order to reinstall it on the roof of the container.
2. Unplug exhaust fan (Figure 24, Item 1) from exhaust fan outlet (Figure 24, Item 2) inside the container.
3. Using the folding hand grips on outside wall of container, have two persons climb on top of FP-CBL. Have a person on the ground hand the exhaust fan panel (Figure 24, Item 3) to a person on the roof of the container along with the tools necessary to remove the bolts securing the exhaust fan.
4. Remove all bolts (Figure 24, Item 4) and move the exhaust fan from the exhaust fan opening. Install the exhaust fan panel (Figure 24, Item 3), aligning the bolts (Figure 24, Item 4) with holes. Tighten all bolts securely.
5. Have two persons move the exhaust fan (Figure 24, Item 1) to the edge of the container roof and carefully hand down to two persons positioned on the ground. Hand down any tools to a person positioned on the ground.
6. Have the two persons positioned on the roof of the FP-CBL carefully climb down using the folding hand grips.

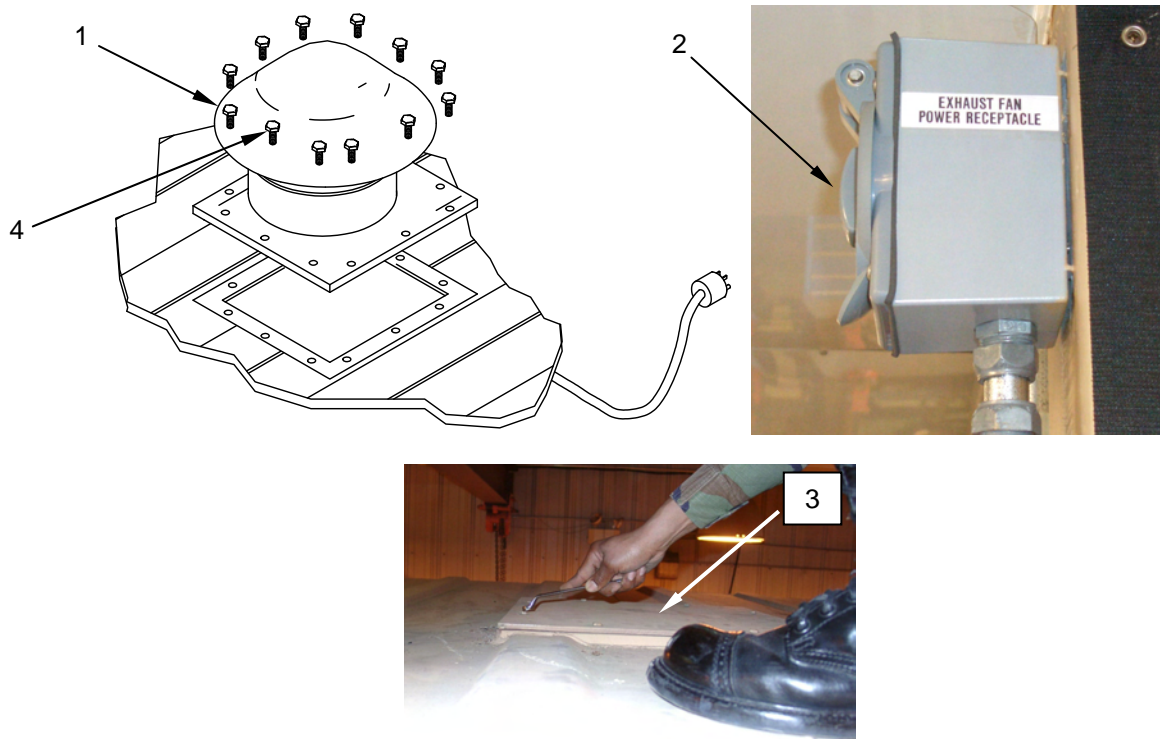


Figure 24. Removing Exhaust Fan.

END OF TASK

PREPARATION FOR MOVEMENT OF LAUNDRY TEMPER

Striking the TEMPER will be accomplished as part of the Force Provider Laundry subsystem preparation for movement as described in TM 10-5419-206-13 and TM 10-8340-224-13.

TEMPER/Laundry Bootwall must be kept separate from other TEMPER components for packing into ISO Container 2C as part of the FP-CBL.

Bootwall must be internally and externally cleaned of dirt, debris and corrosion, and dried thoroughly, before packing. Sweep loose dirt from both sides of each fabric section and vinyl liners and clean with a scrub brush and warm soapy water. Rinse with clean water and allow fabric to completely air dry. On a clean dry surface, fold to approximately 33-inch x 36-inch, with the identification label exposed. Set aside.

PREPARE DRYERS FOR MOVEMENT

1. Clean the lint screens (Figure 25, Item 1) on both dryers.
2. Sweep any residual dirt from the lint screen compartment (Figure 25, Item 2).

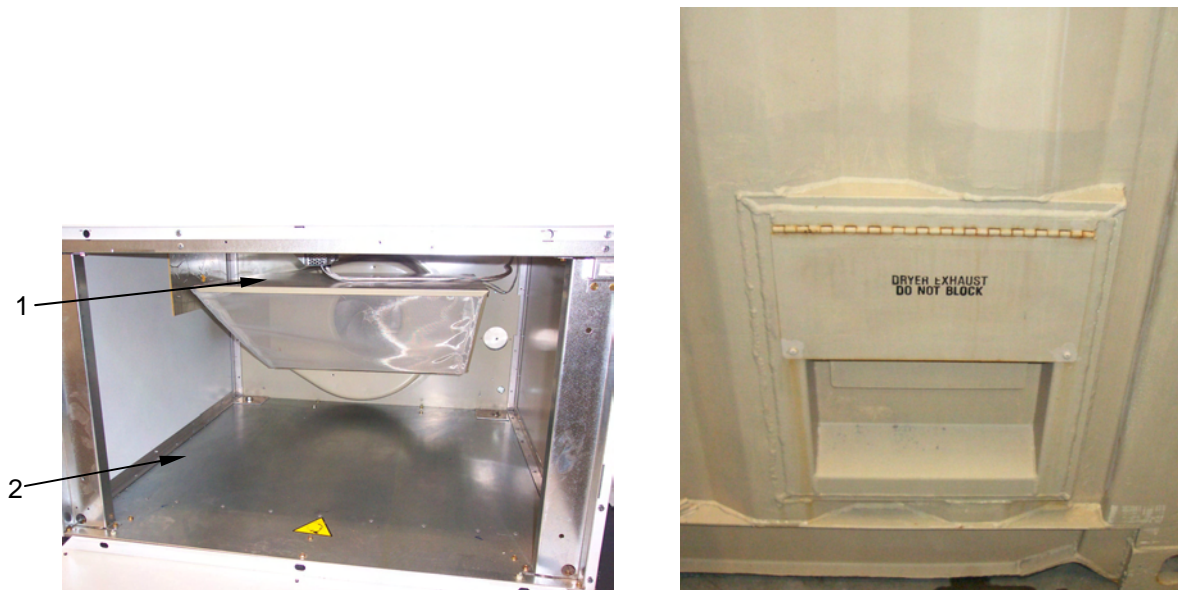


Figure 25. Prepare Dryers for Movement.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**OPERATION UNDER UNUSUAL CONDITIONS**

INITIAL SETUP:**References**

TM 10-4520-259-13&P

GENERAL

Refer to WP 0007, Operation Under Usual Conditions – Operating Instructions, for specific operating procedures, and use this Work Package for supplemental information for operating the FP-CBL in unusual conditions.

UNUSUAL ENVIRONMENTS AND WEATHER

Unusual conditions include severe weather, such as 90 to 100 percent humidity for a week or more; external ambient temperatures of 32°F (0°C) or below for a week or more; 100°F (38°C) or above temperatures for a week or more; blowing sand, dust, heavy rain or snow.

OPERATION IN SNOWY OR MUDDY CONDITIONS

Ensure TEMPER and FP-CBL are placed on firm foundations.

OPERATION IN HIGH WINDS

Check TEMPER stakes and lines frequently. Add additional guy lines if available. Do not attempt to erect or move the TEMPER in high winds.

OPERATION IN SALT AIR OR SEA SPRAY CONDITIONS

Wash exterior of FP-CBL frequently.

OPERATION IN DUSTY OR SANDY CONDITIONS

Keep container and TEMPER doors shut at all times.

Clean washer and dryer lint filters frequently.

OPERATION IN RAINY AND/OR HUMID CONDITIONS

Run exhaust fan as needed to provide a comfortable working environment. Do not open service doors.

OPERATION IN HIGH ALTITUDE CONDITIONS

The only piece of equipment which could be affected by high altitude operation is the M-80 water heater. Refer to TM 10-4520-259-13&P.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DECONTAMINATION

Perform immediate operational or thorough decontamination procedures in accordance with FM 3-5 as the mission, resources, and tactical situation permit.

**WARNING**

For immediate decontaminating procedures use ONLY hot soapy water for spot decontamination of hot surfaces of the M-80 heater and stack. Shut down and cool the heater for any additional decontamination procedures. DO NOT spray DS2 or any other combustible decontamination solutions or compounds on an operating heater or stack. DO NOT spray DS2 or any other combustible decontamination solutions or compounds on any equipment surfaces or components where the operating temperatures reach or exceed the flashpoint of DS2 (160°F or 71.1°C).

END OF WORK PACKAGE

CREW MAINTENANCE

ON VEHICLE EQUIPMENT LOADING PLAN

INITIAL SETUP:

Tools and Special Tools

References

Tool Kit, General Mechanics (WP 0099, Item 3)

TM 10-4520-259-13&P

INTRODUCTION

This work package lists user equipment and its location on the Force Provider Containerized Batch Laundry (FP-CBL).

SCOPE

This work package lists user equipment and its location on the Force Provider Containerized Batch Laundry (FP-CBL).

PACKAGING OF FP-CBL COMPONENTS

Package FP-CBL components as follows:

1. Locate the following hose sections and prepare as described. Ensure hoses are drained and dust caps are installed.

Table 1. FP-CBL Components.

Component	P/N	CAGE	Qty
Hose assembly, potable water, QDISC, Cam-lock, 1-1/2-in x 5-ft, M x F	9-1-0781-33	(81337)	1
Hose assembly, potable water, QDISC, Cam-lock, 1-in x 25-ft, F x F	9-1-0781-85	(81337)	1
Hose assembly, potable water, QDISC, Cam-lock, 1-1/2-in x 20-ft, F x F	9-1-0781-94	(81337)	1
Hose assembly, black water, QDISC, Cam-lock, 3-in x 10-ft, F x F	9-1-0782-94	(81337)	1
Hose assembly, drain, 3/4 inch	See below *	-	2

* The 3/4 inch drain hose assembly is a component included as part of each washer assembly for use as a supply hose but is not used for this purpose with the FP-CBL. It does not have a manufacturer's part number and CAGE. A replacement can be acquired through local purchase.

2. Locate the M-80 Water Heater and prepare its components as follows:

Table 2. M-80 Water Heater Components.

Component	NSN-P/N	Qty
Elbow, Air Conditioning	4520-01-311-0900	1
Pipe, Air Conditioning	4520-01-306-2111	2
Cap, Flue	4520-01-306-2057	1
Drum Fill Adapter Assembly, Type II	4510-01-214-9139	1
Hose Assembly, Fuel	4720-00-063-7222	2
Technical Manual, M-80 Water Heater	TM 10-4510-206-14	1

3. Locate the two fuel hose assemblies and drain fuel from hose (into an approved container) if required.
4. Thread end of one hose to the fuel feed connection. Coil hose into loose loops and connect the other end to the fuel line holder.
5. Thread end of the second hose to the fuel overflow connection. Coil hoses into loose loops and connect the other end to the fuel line holder.

6. Locate the drum fill adapter assembly, Type II. Remove drum adapter extension and thread into the ¼-inch return port. Hand-tighten. Secure top of adapter close with nylon wire tie.
7. Secure drum fill adapter to M-80 water heater frame at fuel hose storage connection with two nylon wire ties.
8. Open all valves and drain cocks on M-80.
9. Locate flue pipe and attach to M-80 at the appropriate location.
10. Locate the commercial manuals for the washer and dryer. Stow the commercial manuals as well as this technical manual (TM 10-3510-225-13&P) in the document holder located inside the dryer access area on wall.

END OF TASK

INVENTORY AND PACK FP-CBL

Verify all components are accounted for packing in the FP-CBL.

Table 3. FP-CBL (2C) Inventory Listing.

Item	Qty	P/N	Check
Located in FP-CBL Container (ISO 2C)			
Technical Manual, Containerized Batch Laundry	1	TM 10-3510-225-13&P	
Hose Assembly, Air Compressor	1	34241387	
Anchor, Water Heater Tie-Down	4	342423117	
Tee Assembly, Cold Water, 1 1/2" Fx1 1/2" Fx1 1/2" M	1	9-1-0158	
Exhaust Fan Assembly	1	9-1-0552	
Power Cable Assembly	1	9-1-0584	
Boot Wall, TEMPER Laundry	1	9-1-0586	
Hose Assembly, Hot Water Heater Inlet, M x F , 1 1/2" Dia., 5Ft L	1	9-1-0781-33	
Hose Assembly, Hot Water, F x F , 1" Dia., 25Ft L	1	9-1-0781-85	
Hose Assembly, Cold Water, F x F , 1 1/2" Dia., 20Ft L	1	9-1-0781-94	
Hose Assembly, Waste Water, F x F , 3" Dia., 10Ft. L	1	9-1-0782-94	
Key Sets, Washer and Dryer	1	N/A	
Containerized Batch Laundry (2C), Packaging Instructions	1	9-1-0087	
Strap, Ratchet, 15' w/Hook, 1" wide	8	126-724	
Washer, Plain Flat, CRES, 1/4" (nom)	4	MS15795-810	
Washer, Plain Flat, CRES, 5/16" (nom)	8	MS15795-812	
Screw, Cap, Hex Head, CRES, 1/4-20 x 3/4" lg	4	MS35307-306	
Screw, Cap, Hex Head, CRES, 5/16-18 x 3" lg	8	MS35307-344	
Washer, Lock, Internal Tooth, CRES, 1/4"	4	MS35333-74	
Washer, Lock, Internal Tooth, CRES, 5/16"	8	MS35333-75	
Hose Assembly, Drain, 3/4", Commercial	1	N/A	
Technical Manual, Commercial Washer Operation	1	N/A	
Technical Manual, Commercial Washer Installation	1	N/A	
Technical Manual, Commercial Dryer Operation	1	N/A	
Technical Manual, Commercial Dryer Installation	1	N/A	
DD Form 1750 Pack List	1	DD1750	
M-80 Water Heater Pack Out			
Cap, Flue	1	6-1-8264	
Assembly, Fuel Hose	1	MS 28741-8-1440	
Adapter, Fuel Drum	1	6-1-8285	
Technical Manual, M-80 Water Heater	1	TM 10-4510-206-14	

Table 4. FP-CBL Laundry Tent Kit, (2A) Inventory Listing.

Item	Qty	P/N	Check
Located in Laundry Tent Kit TRICON (2A)			
Tent, Extble, Modular, Personnel (TEMPER) Type XIX, 32 Ft.	1	MIL-T-44271	
Pin, Tent, Steel, 18"	1	5-4-196	
Technical Manual, TEMPER Tent	1	TM 10-8340-224-23P	
TEMPER Electrical Distribution Box, Type III, 120V	1	1-6-6041	
Light Set, Fluorescent	2	BR2005	
Stand, Distribution Box, TEMPER	1	1-6-6005	
TEMPER Convenience Outlet Assembly, 3 Drop	2	9-1-0624	
Electrical Feeder System, PDISE M100	1	TA13229E6351	
Cable Assembly, Power, 60A, 100 Ft. L	1	M29184/3-02	
Tank, Fabric, Collapsible, Water, 3K Gal.	1	MIL-T-53048	
Mallet, Wood, 6" Face X 8" L Head, TY 9	1	LLL-M-71	
Sledge Hammer, 12 lbs.	1	A-A-1293	
Shovel, Round Point, D Handle, TY 4, CL A	1	GGG-S-326	
Broom, Upright, TY 2	1	H-B-0051	
Fire Extinguisher, ABC, Dry Chemical, 10 lbs., TY 1	1	A-A-393	
Mesh Bags, Laundry, 1 DZ	20	JJ-N-180	
Pin, Laundry, 5", Qty-100	3	A-A-52127	
Trunk, Locker	13	A-A-59490	
Nozzle, Garden Hose	1	5100-243	
Table, Folding, 6 Ft., Aluminum	4	9-1-0191	
Chair, Folding, Steel, TY 1	5	AA-C-291	
Bucket, Mop, Steel, Oval, 16 Qt., w/ Casters	1	A-A-262	
Wringer, Mop, Size-Sm., Type-Gear & Rack	1	A-A-261	
Mop, Head, TY 1	1	T-M-561	
Mop Handle, TY 1	1	NN-H-101	
Floor Mat, Altered Item	2	9-1-0189	
Hose Assembly, Nonmetallic, Garden, TY 2	1	L-H-520	
Laundry Tent Kit (2A), Packaging Instructions	1	9-1-0085	
Shelf, Shipping and Storage	2	1041A	
Beam, Shoring	5	1059	
Lumber, 2" X 6" X 75 3/4"	3	N/A	
Pin, Tent, Wood, 24"	30	5-4-1	
Container, Tent Pin, TEMPER	2	5-4-8487	
Box, Tent Pin	2	9-1-0076	
DD Form 1750 Pack List	1	DD1750	

Table 5. FP-CBL Laundry Tent Kit, (2B) Inventory Listing.

Item	Qty	P/N	Check
Located in Laundry Kit TRICON (2B)			
Technical Manual, Force Provider System	1	TM 10-5419-206-13	
Technical Manual, Force Provider System (RPSTL)	1	TM 10-5419-206-23P	
Power Cable Assembly, Tee, 20A	2	6-1-8222	
Truck, Hand Box, laundry, Plastic, 12 Bushel	2	A-A-50025-4	
Can, Ash and Garbage, 32 Gal., Steel	3	A-A-1069	
Special Purpose Web, Tie Down	4	FDC5770-5	
Power Cable, Class L to Commercial 20A	1	9-1-0182	
Door, Double Bump Through, Class A	2	5-4-4081	
Cable, Pigtail, 100A, 4ft Length	3	13227E7020	
Cable, Assembly, Service, 100A, 50ft Length	6	13227E7024	
Cable, Assembly, Service, 60A, 100ft Length	1	M29184/3-02	
Ramp, Containerized Batch Laundry	1	42392027	
Drum, Shipping and Storage, Steel, 55-Gal, TY 1	1	PPP-D-729	
Sewage Ejection Pump, Waste Water Evacuation	1	9-1-0527	
Cover, Can, Ash and Garbage	3	A-A-1069	
Lumber, 2" X 6" X 75 3/4"	3	N/A	
Shelf, Shipping and Storage	2	1041A	
Beam, Shoring	5	1059	
DD Form 1750 Pack List	1	DD1750	

FP-CBL System Support Package (SSP)

A FP-CBL SSP containing the spare and repair parts listed below is shipped in TRICON 11C, System Support Kit (Part B), as part of the FP Site Preparation and Maintenance Kit. The SSP will be inventoried and maintained by the FP Administration Subsystem maintenance section for use on FP-CBL equipment.

Table 6. FP-CBL System Support Package (SSP) Inventory Listing.

Item	Qty	P/N
Washer/Dryer System Support Package (Located in TRICON 11C)		
V-Belt, Basket/Motor	2	9001569
Valve, Main Sewer Drain	1	F380619
Valve, Fill, Cold/Hot Water, 2 Way, 220V	1	9001377
Inlet Valve, Supply, 3 Way, 240V 50/60Hz	1	F0381737-00
Door Handle	1	9001481
Door Handle Stop	1	9001467
V-Belt, Drive	1	M412981
V-Belt, Cylinder	2	M412090
Fuse, 1.25A	2	M414103
Fuse, 3.5 A	2	M414232
Fuse, 250V, 2A	2	M413118
Lint Screen	2	44063601
Valve, Reuse Fill/Drain, 2",NC,18A, J-LIP, 220V	1	F380632
Restrictor, Supply Inlet Flow, 3.5L/Min	1	F380119
Rod, Ground	1	A-A-558804

END OF TASK

PACKING PROCEDURES FOR ISO CONTAINER TYPE 2C (FP-CBL)

The following materials and items are required to pack the FP-CBL Container:

Table 7. Materials and Items Required to Pack the FP-CBL Container.

Item, NSN	Qty
Nylon Cable Ties (5975-00-838-7450)	As required
Straps, Ratchet, 1-In x 15-foot w/Hook (5842-01-522-0705)	8

Use the following procedures to pack ISO Type 2C:

1. Open double entrance doors of FP-CBL ISO container and remove non-installed items from container. Ensure interior is clean and dry.
2. Locate the following components in the quantities indicated and as previously packaged. Place the items inside dryer drums with additional cushioning material as necessary:

Table 8. Materials and Items Packed Inside Washer and Dryer Drums.

Component	P/N	CAGE	Qty
Tee Assembly, QDISC, Cam-Lock, 1-1/2-in F X 1-1/2-in F X 1-1/2-in M	9-1-0158	81337	1
Power Cable Assembly, Tee, 20A	9-1-0584	81337	1
Laundry Temper Bootwall	9-1-0586	81337	1
Washer And Dryer Key Set Key Set	N/A	59618	1
Hose Assembly, Air Compressor	34241387	0U5N7	1
Hose Assembly, Drain, 3/4-Inch, Commercial	TBD	N/A	2
Commercial Washer And Dryer Manuals	N/A	N/A	4

3. Locate six each 1-inch x 15-foot ratchet straps (Figure 1) and connect two each together to form three pairs. Run the straps around the two dryers securing the top access door, the dryer drum door, and the bottom lint door, as shown. Place cushioning material between the strap ratchet and the dryer unit if necessary to prevent damage to the dryer units during shipping. Fold the loose ends of the strap and secure in place near ratchet with nylon cable ties.

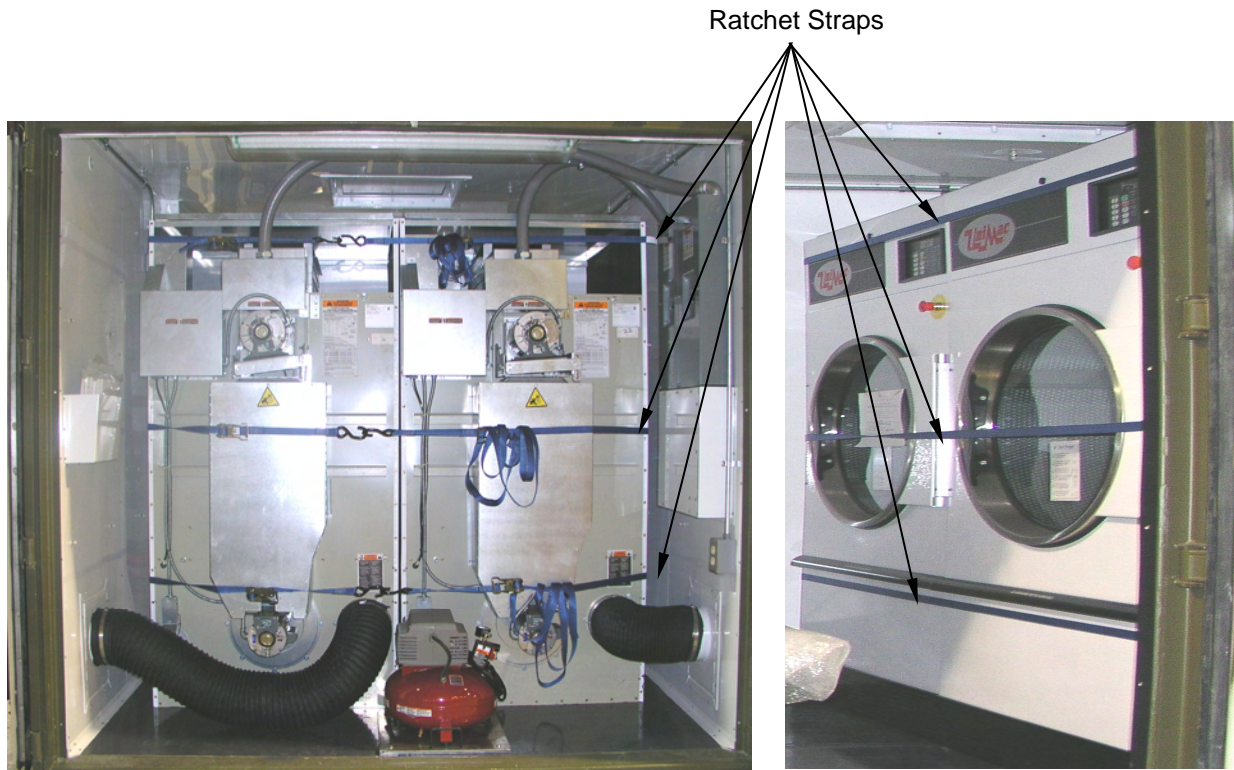


Figure 1. Install Ratchet Straps.

END OF TASK

Securing Exhaust Fan in FP-CBL



WARNING

Moving the exhaust fan requires two persons. Failure to comply may result in serious injury or death to personnel.

1. Locate the exhaust fan (Figure 2, Item 1) and move it inside the FP-CBL. Position the fan on the left side of the container in front of the washers. Align the 1/4-inch threaded inserts in the floor. Locate the following mounting hardware (Figure 2, Item 2), and secure the exhaust fan to the floor as shown.

Table 9. Materials and Items Required to Secure Exhaust Fan.

Component	P/N-Cage	Qty
Screw, Cap, Hex Head, 1/4-20 X 3/4-inch	MS 35307-306 (96906)	4
Washer, Lock, Internal Tooth, 1/4-inch	MS 35333-74 (96906)	4
Washer, Plain, Flat, CRES, 1/4-inch ID	MS15795-810 (96906)	4

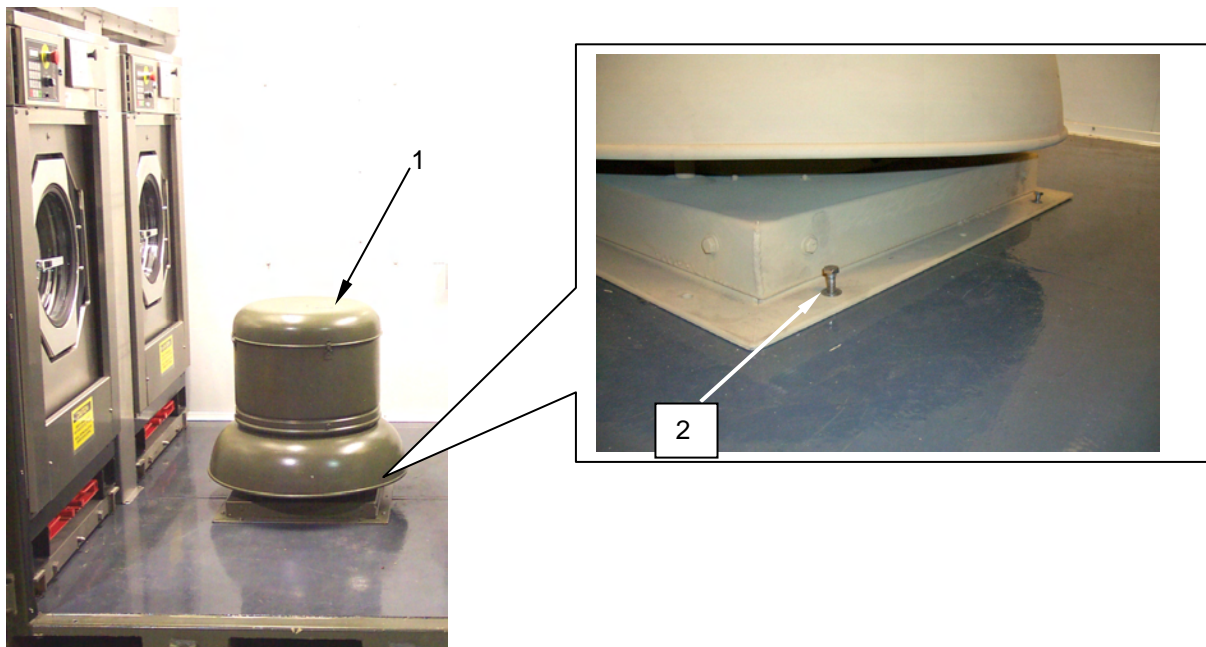


Figure 2. Securing Exhaust Fan.

2. Locate the following hose assemblies previously prepared for packing:

Table 10. Hose Assemblies for Packing.

Component	P/N	CAGE	Qty
Hose assembly, potable water, QDISC, Cam-lock, 1-1/2-in x 5-ft, M x F	9-1-0781-33	81337	1
Hose assembly, potable water, QDISC, Cam-lock, 1-in x 25-ft, F x F	9-1-0781-85	81337	1
Hose assembly, potable water, QDISC, Cam-lock, 1-1/2-in x 20-ft, F x F	9-1-0781-94	81337	1
Hose assembly, black water, QDISC, Cam-lock, 3-in x 10-ft, F x F	9-1-0782-94	81337	1

3. Neatly coil hose assemblies around the exhaust fan. Secure in place with nylon cable ties. Ensure that hose assemblies are secured to the fan assembly to prevent their movement during transportation. Pack hoses and cables around the exhaust fan (Figure 3, Item 1) from bottom to top and strap (Figure 3, Item 5) into place as follows.

- a. Waste Hose Assembly, 3-inch x 10-foot (Figure 3, Item 3)
- b. Cold Water Hose Assembly, 1-1/2-inch x 20-foot (Figure 3, Item 4)
- c. Hot Water Heater Inlet Hose Assembly, 1-inch x 25-foot (Figure 3, Item 2)
- d. Cold Water Inlet Hose Assembly, 1-1/2-inch x 5-foot (Figure 3, Item 6)



Figure 3. Packing Exhaust Fan Components and Hoses.

END OF TASK

Securing M-80 Water Heater in FP-CBL



WARNING

The water heater is heavy, awkward and difficult to maneuver. To prevent injury, six persons are required to lift and move it.

1. Locate the M-80 Water Heater.
2. Using six persons, move the water heater inside the FP-CBL and position in front of the dryers, between the 5/16-inch threaded inserts (Figure 4, Item 2) in the floor.
3. Locate the following mounting hardware to secure the heater to the floor:

Table 11. Materials and Items Required to Secure M-80 Water Heater.

Component	P/N (CAGEC)	Qty
Anchor, M-80 Water Heater Tiedown	342423117 (0U5N7)	4
Screw, Cap, Hex Head, 5/16-18 X 3 In	MS 35307-344 (96906)	8
Washer, Lock, Internal Tooth, 5/16 In	MS 35333-75 (96906)	8
Washer, Plain, Flat, CRES, 5/16 In Id	MS 15795-812 (96906)	8

4. Place tiedown anchors (Figure 4, Item 5) over water heater skid (Figure 4, Item 1) as shown, aligning with threaded insert (Figure 4, Item 2) in the floor. Secure in place with screws and washers (Figure 4, Item 6).
5. Locate the stack and flue cap assembly. Using the remaining ratchet straps, secure the stack and flue cap assembly to the water heater (Figure 4, Item 4), by running the strap (Figure 4, Item 3), around the M-80 Water Heater tank and through the frame in two locations. Fold the loose ends of the strap and secure in place near the ratchet with nylon cable ties.

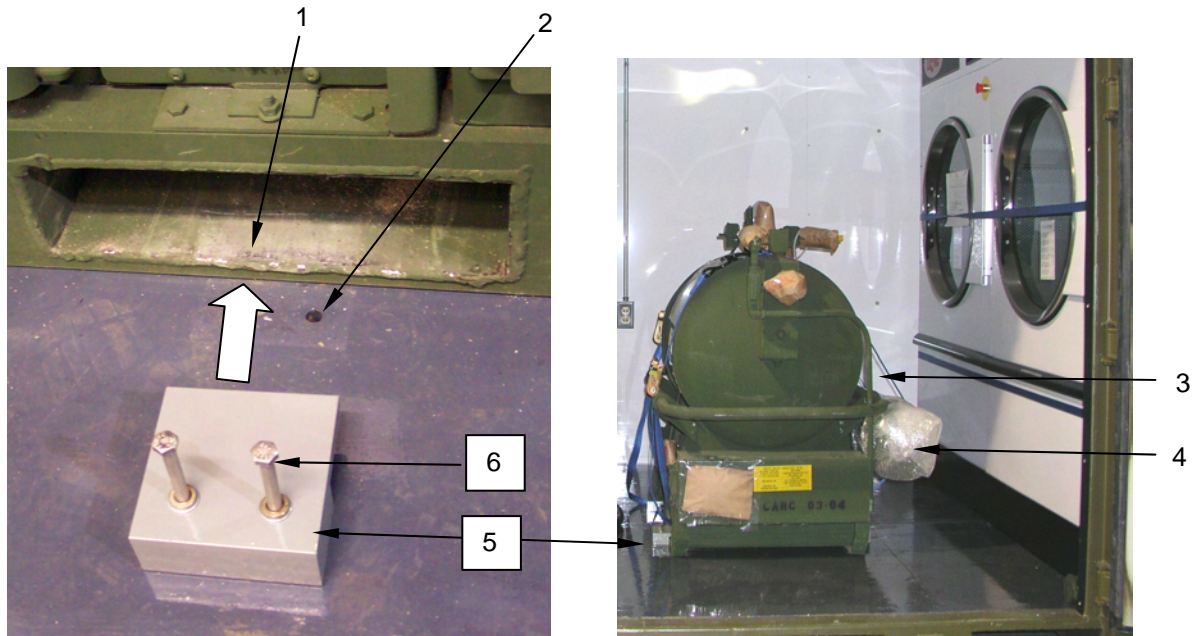


Figure 4. Securing M-80 Water Heater to Floor.

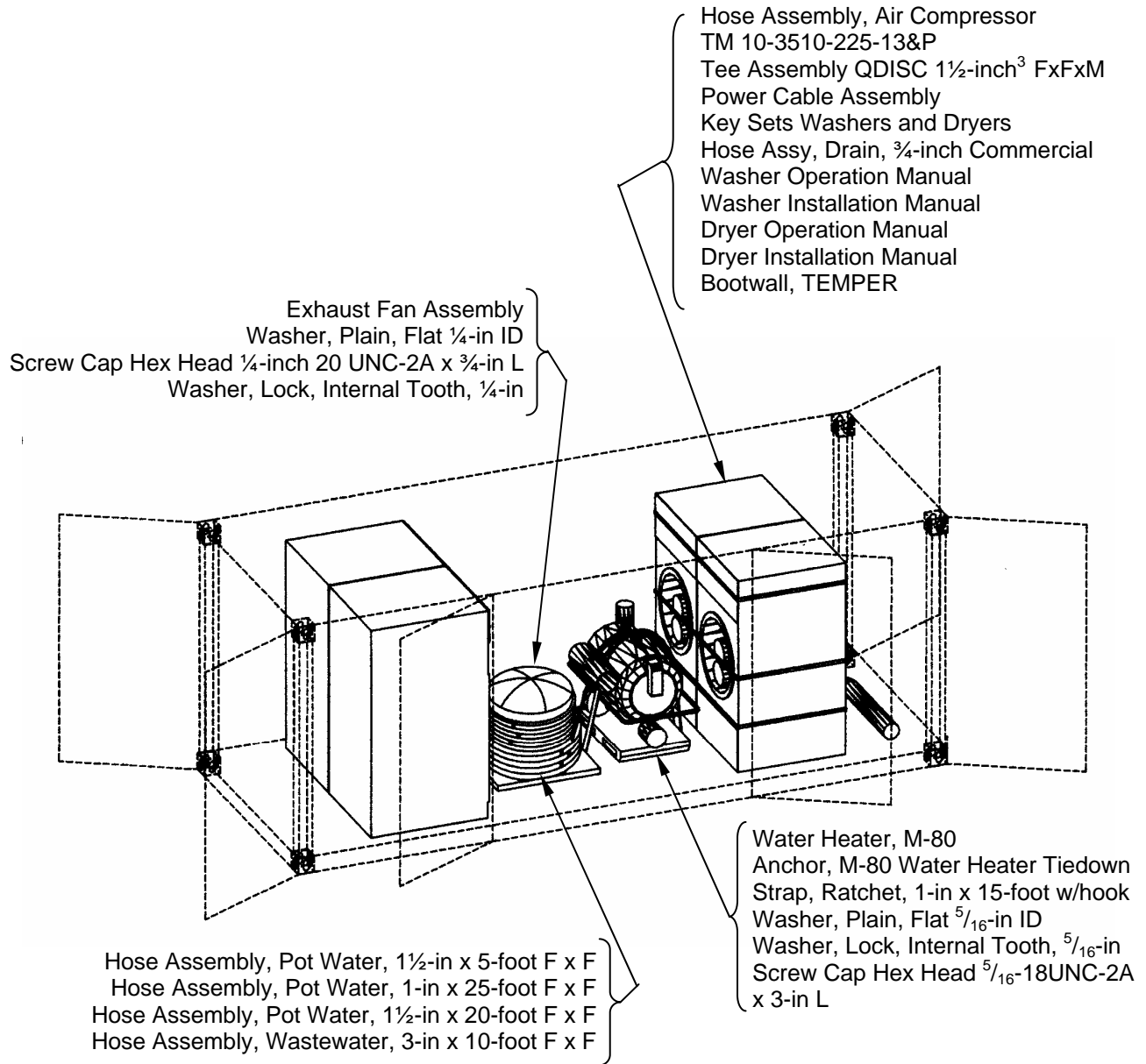


Figure 5. FP-CBL Complete Packing Layout.

END OF TASK

Close and Secure FP-CBL

1. Remove ramp (Figure 6, Item 3) from holes (Figure 6, Item 4). Store in TRICON 2B.
2. Unhook restraining chains (if present) of double entrance doors (Figure 6, Item 5 and Item 2). Close left-hand door (Figure 6, Item 5) and latch. Close right-hand door (Figure 6, Item 2) and latch.
3. Close left-hand double service door (Figure 6, Item 1) and latch. Close right-hand double service door (Figure 6, Item 6) and latch at both ends of the FP-CBL.

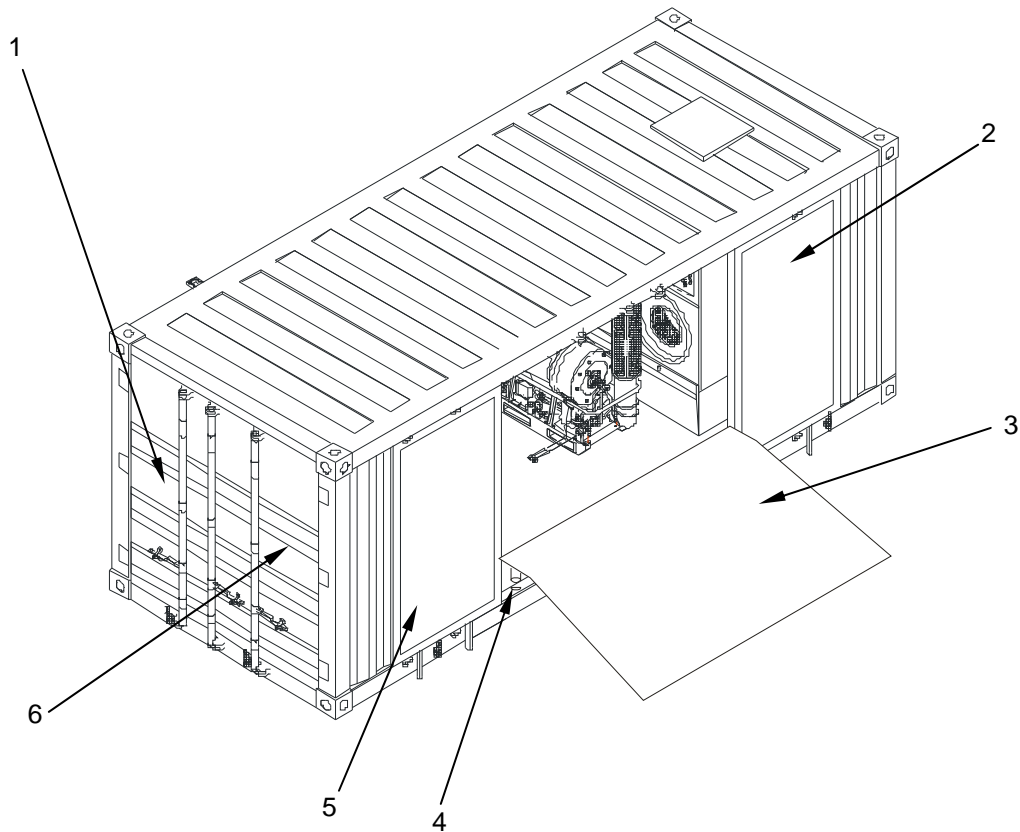


Figure 6. Closing and Securing FP-CBL.

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

TROUBLESHOOTING MASTER INDEX
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

CREW MAINTENANCE
TROUBLESHOOTING INDEX

GENERAL

The troubleshooting procedures contained in the chapter 4 work packages to follow contain tables listing the malfunctions, tests or inspections, and corrective actions required to return the FP-CBL to normal operation. Perform the steps in the order they appear in the tables.

DO NOT START THE TASK UNTIL:

1. You understand the task.
2. You understand what you are to do.
3. You understand what is needed to do the work.
4. You have the things you need.

TROUBLESHOOTING INDEX

The troubleshooting index lists common malfunctions that may occur during FP-CBL inspection and operation. Find the malfunction to be addressed and go to the indicated troubleshooting work package. The troubleshooting index cannot list all malfunctions that may occur, all tests or inspections needed to find the fault, nor all actions required to correct the fault. If the existing malfunction is not listed, or cannot be corrected through this troubleshooting index, notify the next higher level of maintenance.

Table 1. Troubleshooting Index.

Symptom	Work Package/Page No.
1. No electrical power to equipment.	0012-2
2. Waste tank does not drain properly.	0013-1
3. Reuse transfer tank overflows	0014-1
4. "Didn't fill within time" Error message on Washer Display	0015-1
5. "EMPTY" Error on Washer Display	0016-1
6. "Door" Error on Washer Display.	0017-1
7. "Rotation Sensor" Error on Washer Display	0018-1
8. "Speed Detection" Error on Washer Display	0019-1
9. Dryer will not start.	0020-1
10. Dryer drum doesn't turn.	0021-1
11. "Door Open" indicator on dryer	0022-1
12. Dryer squeals	0023-1
13. Increased drying time.	0024-1
14. Water in dryer or dryer leaking water.	0025-1

CHAPTER 4



TROUBLESHOOTING PROCEDURES
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. No Electrical Power to Equipment.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>No electrical power to equipment.</p>	<p align="center">  WARNING </p> <p>The equipment being tested or corrected operates at voltage and current that can cause serious injury or death.</p> <p>Check all electrical cables (Figure 1) for proper connection.</p>	<p align="center">  WARNING </p> <p>The equipment being tested or corrected operates at voltage and current that can cause serious injury or death.</p> <p>Check for power at cable connections. If no power is present, notify Force Provider power grid personnel.</p> <p>If further corrective action is required, notify service maintenance.</p>

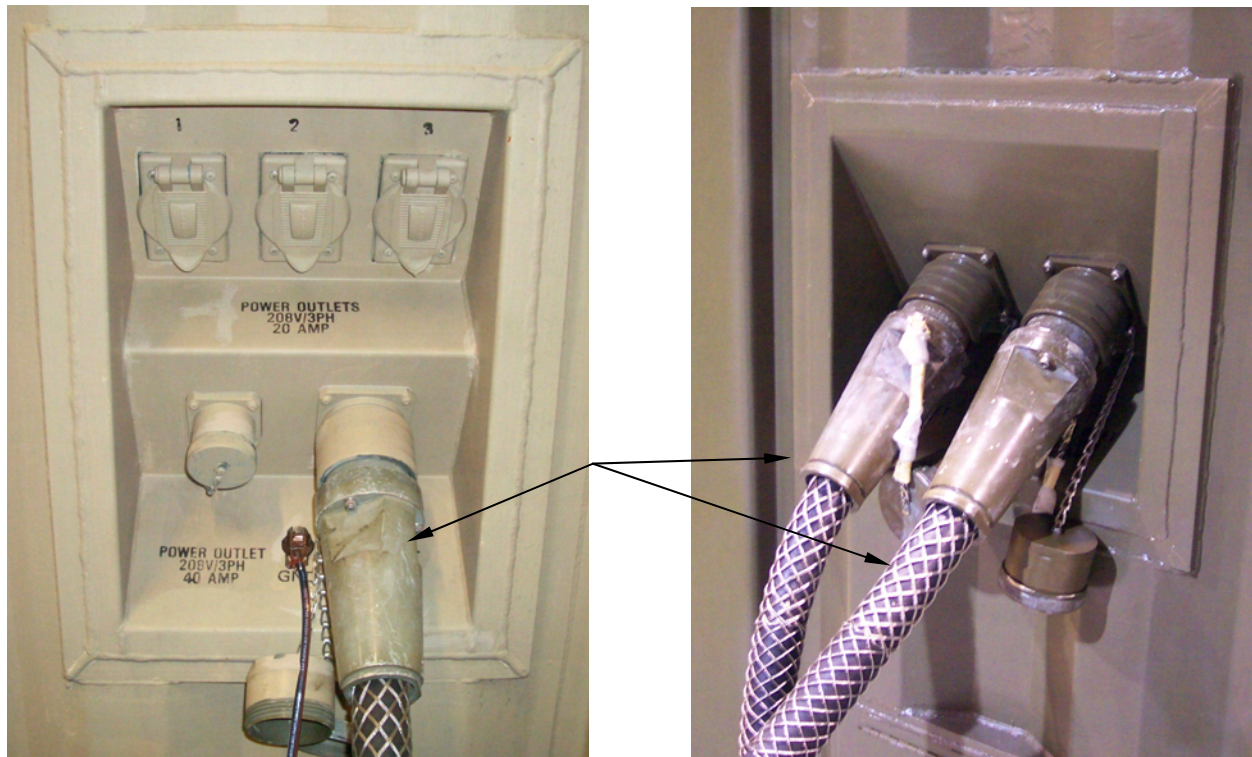


Figure 1. Electrical Cables.

END OF TASK


END OF WORK PACKAGE

CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Not Applicable

Table 1. Waste Tank Does Not Drain Properly.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>Waste tank does not drain properly.</p>	<div style="text-align: center;">  <p>WARNING</p> <p>Wear protective gloves, face shield, and apron when maintaining equipment, which may have been contaminated by graywater. Wash hands immediately after performing tasks, and shower if possible. Failure to observe safety precaution may result in serious illness or death.</p> </div> <p>Ensure pump is operating.</p> <p>Ensure pump plug (Figure 1, Item 2) is connected.</p> <p>Check circuit breaker No. 8 (Figure 1, Item 3).</p> <p>Check discharge hose (Figure 1, Item 4) connections.</p> <p>Check waste holding tank valve.</p> <p>Check waste holding tank.</p>	<p>Manually pump tank (Figure 1, Item 1).</p> <p>Reconnect pump plug.</p> <p>Reset circuit breaker and notify unit maintenance.</p> <p>Connect discharge hose.</p> <p>Open valve.</p> <p>Have waste holding tank emptied IAW unit SOP.</p> <p>If malfunction continues, notify service maintenance.</p>

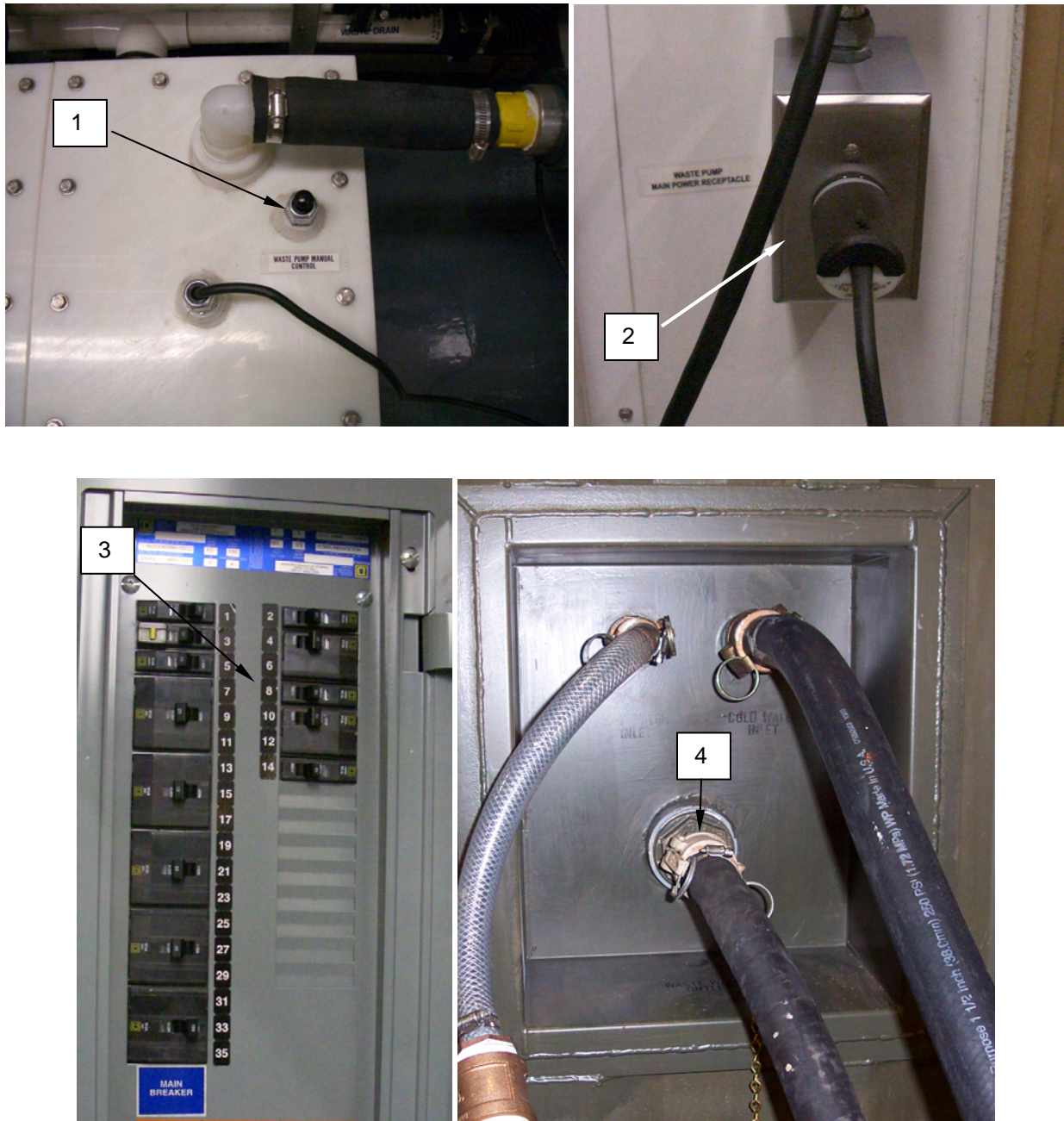


Figure 1. Waste Tank Does Not Properly Drain.

END OF TASK


END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Reuse Transfer Tank Overflows.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Reuse transfer tank overflows.	<div style="text-align: center;">  <p>WARNING</p> <p>Wear protective gloves, face shield, and apron when maintaining equipment, which may have been contaminated by graywater. Wash hands immediately after performing tasks, and shower if possible. Failure to observe safety precaution may result in serious illness or death.</p> <p>Ensure pump is operating.</p> <p>Ensure pump plug (Figure1, Item 2) is connected.</p> <p>Check circuit breaker No. 14 (Figure1, Item 3).</p> </div>	<p>Manually pump tank (Figure1, Item 1).</p> <p>Reconnect pump plug.</p> <p>Reset circuit breaker and notify unit maintenance.</p> <p>If malfunction continues, notify service maintenance.</p>

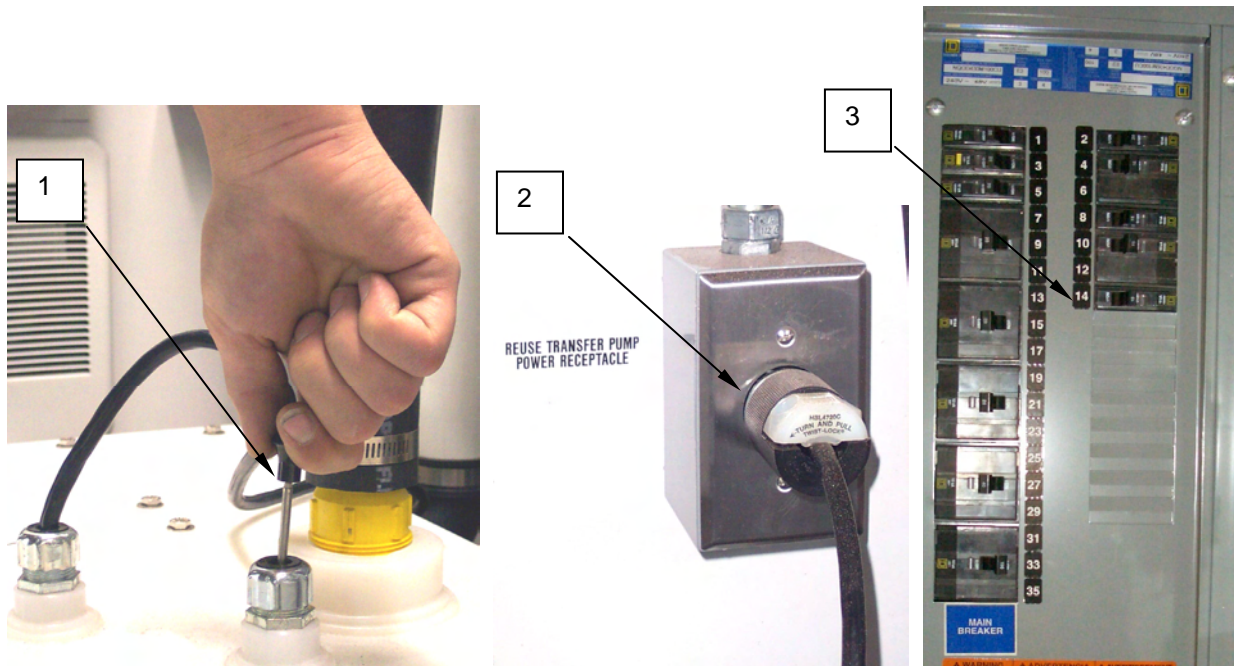


Figure 1. Reuse Transfer Tank Overflows.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. "Didn't fill within time" Error Message on Washer Display.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>"Didn't fill within time" Error message on Washer Display (Figure 1, Item 1)</p>	<p>Ensure hot and cold water supply valves (Figure 1, Item 2), located on supply hoses behind washer are in the open position (as shown).</p> <p>Ensure water supply valve is open.</p> <p>Ensure sufficient water source is available.</p>	<p>Open valves.</p> <p>Open water supply valve.</p> <p>Replenish water supply.</p> <p>If problem continues, notify service maintenance.</p>

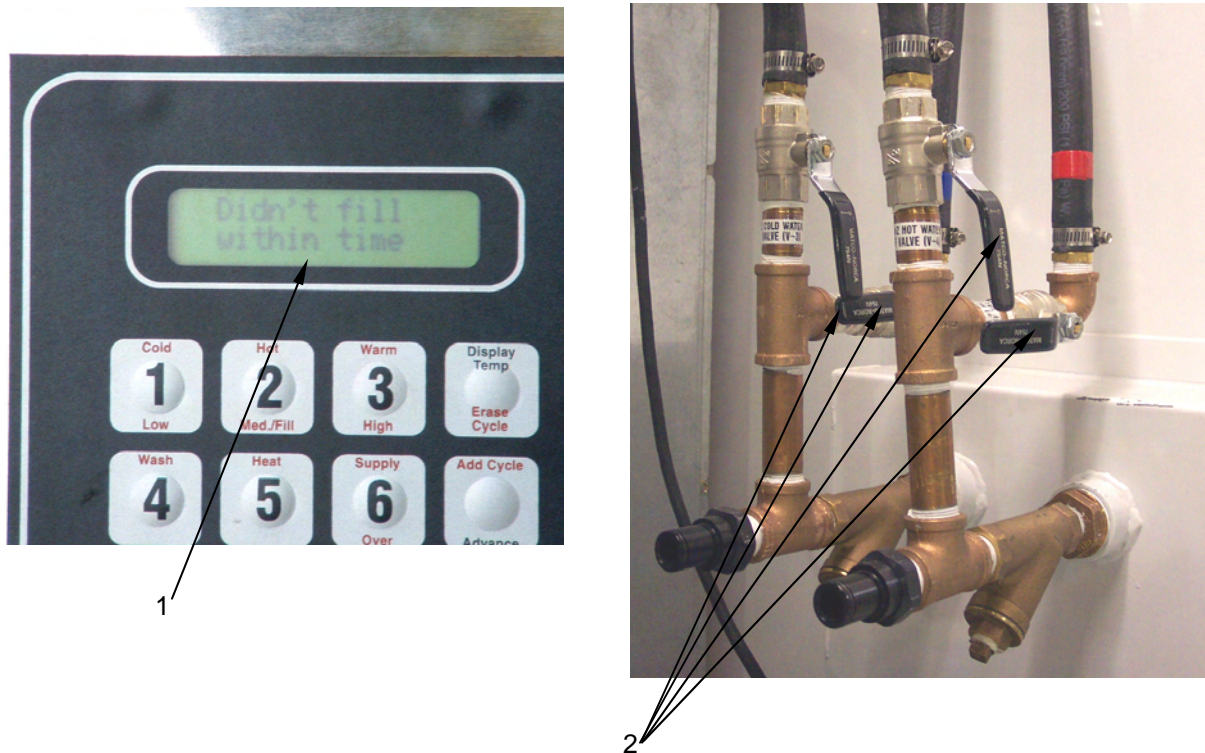


Figure 1. "Didn't fill within time" Error message on Washer Display.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Not Applicable

Table 1. "EMPTY" Error on Washer Display.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>"EMPTY" Error on Washer Display (Figure 1, Item 1)</p>	<p>Check that waste pump and reuse transfer pump is plugged in.</p> <p>Check that waste pump breaker and WTS transfer pump breaker have not tripped.</p> <p>Ensure pump float switch is operating correctly.</p> <p>Ensure valve setup is correct.</p>	<p>Reinsert plug (Figure 1, Item 2) into outlet.</p> <p>Reset circuit breaker No. 8 (Figure 1, Item 3) and circuit breaker No. 14 (Figure 1, Item 4).</p> <p>Manually operate float (Figure 1, Item 5) on waste tank to override.</p> <p>Refer to WP 0008 for correct valve setup.</p> <p>If problem is not corrected, notify service maintenance.</p>

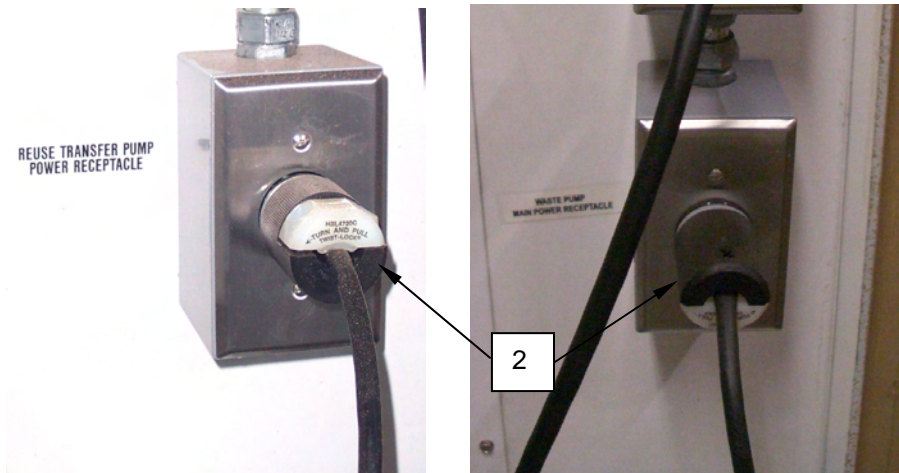


Figure 1. "EMPTY" Error on Washer Display (Sheet 1 of 2).

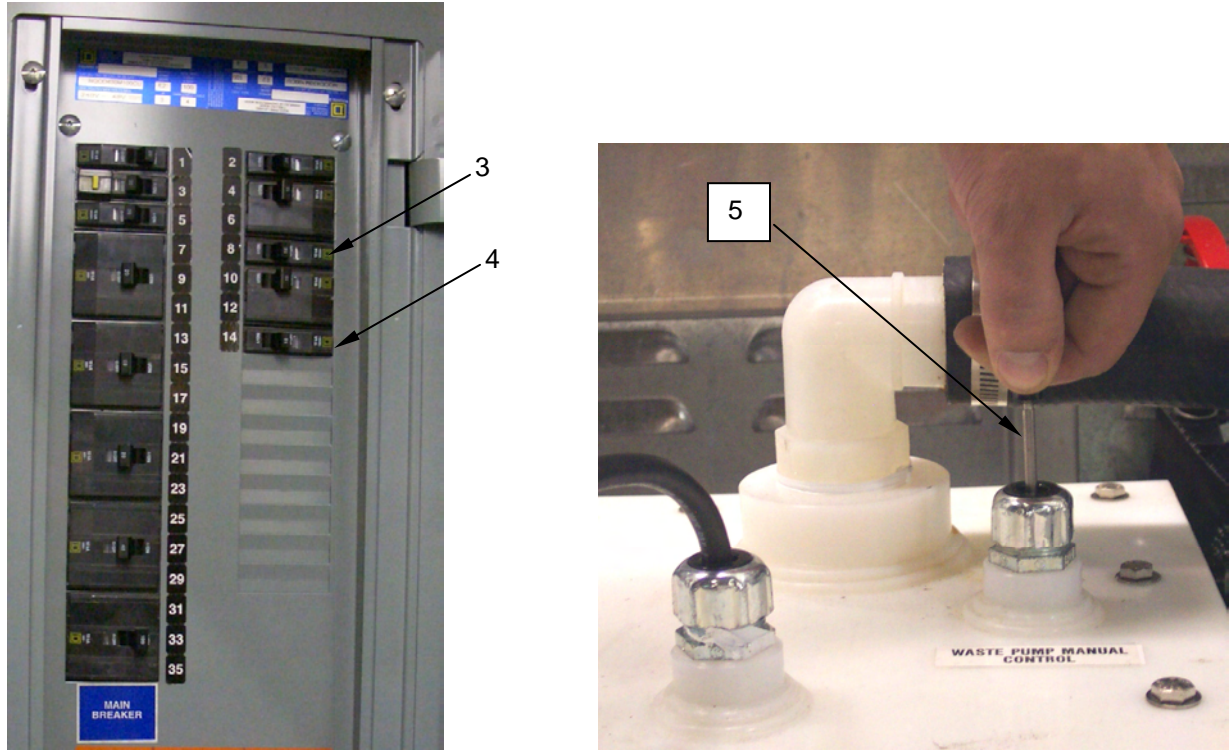


Figure 1. "EMPTY" Error on Washer Display (Sheet 2 of 2).

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Not Applicable

Table 1. "Door" Error on Washer Display.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
"Door" Error on Washer Display (Figure 1, Item 1).	Ensure door (Figure 1, Item 2) is closed and securely latched.	Open door and re-close securely. Notify service maintenance. if problem persists



Figure 1. "Door" Error on Washer Display.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Not Applicable

Table 1. "Rotation Sensor" Error on Washer Display.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
"Rotation Sensor" Error on Washer Display (Figure 1, Item 1)	Ensure washer drum (Figure 1, Item 2) is tumbling.	Notify service maintenance.



Figure 1. "Rotation Sensor" Error on Washer Display.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Not Applicable

Table 1. "Speed Detection" Error on Washer Display.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
"Speed Detection" Error on Washer Display (Figure 1, Item 1)	Ensure washer drum (Figure 1, Item 2) is tumbling.	Notify service maintenance.



Figure 1. "Speed Detection" Error on Washer Display.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Dryer will not start.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Dryer will not start.	Ensure Emergency Stop (Figure 1, Item 1) has been pulled out. Check dryer door (Figure 1, Item 4). Check lint panel (Figure 1, Item 3). Check dryer circuit breakers (Figure 1, Item 2).	Pull Emergency stop out to operating position Ensure dryer door is closed securely Ensure lint panel is securely latched. Reset circuit breakers. If malfunction continues, notify service maintenance.



Figure 1. Dryer will not start.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Dryer Drum Does Not Turn.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Dryer drum doesn't turn.	Ensure Emergency Stop (Figure 1, Item 1) has been pulled out. Check dryer door (Figure 1, Item 2). Check lint panel (Figure 1, Item 3).	Pull Emergency stop out to operating position Ensure dryer door is closed securely Ensure lint panel is securely latched. If malfunction continues, notify service maintenance.

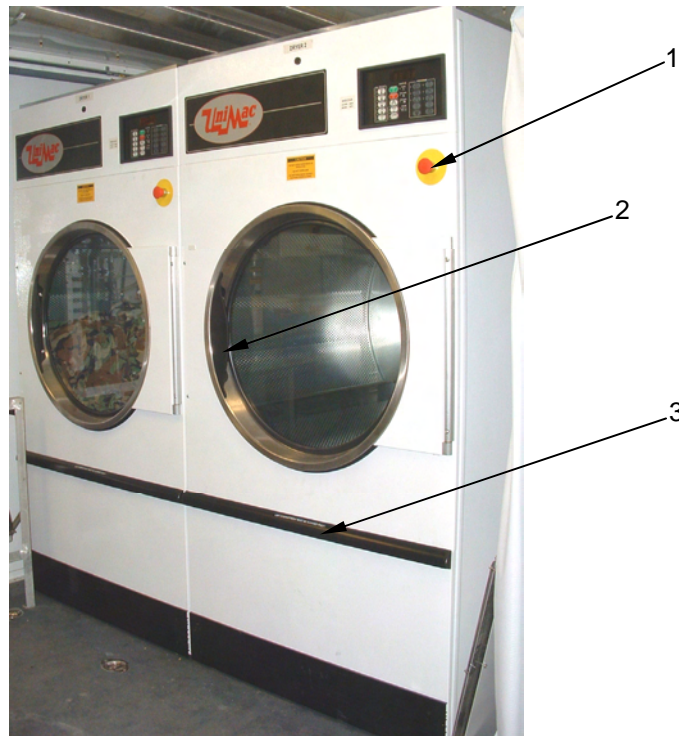


Figure 1. Dryer Drum Does Not Turn.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. "Door Open" indicator on dryer.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
"Door Open" indicator on dryer.	Ensure Emergency Stop (Figure 1, Item 1) has been pulled out. Check dryer door (Figure 1, Item 2). Check lint panel (Figure 1, Item 3).	Pull Emergency stop out to operating position Ensure dryer door is closed securely Ensure lint panel is securely latched. If malfunction continues, notify service maintenance.

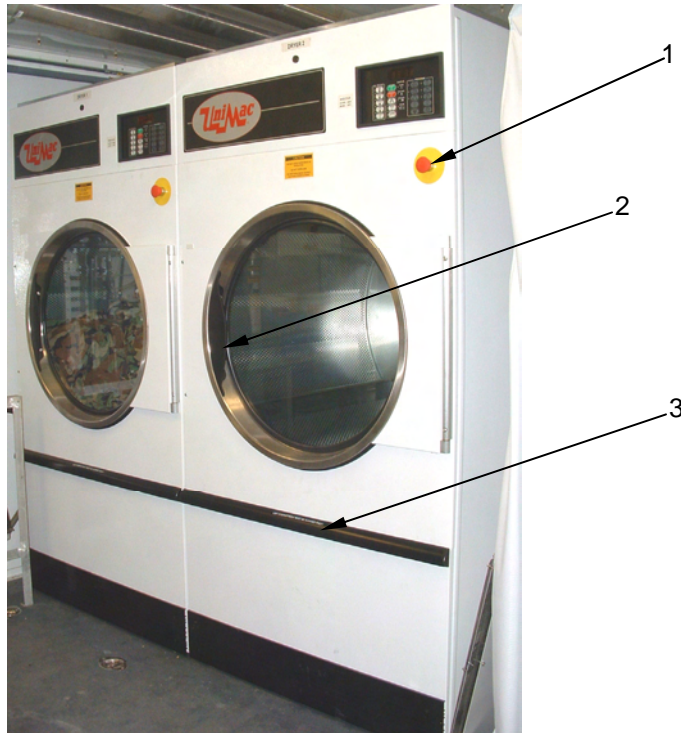


Figure 1. "Door Open" indicator on dryer.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Dryer squeals.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Dryer squeals.	Note if dryer squeals during initial startup of dryer, or all the time.	A cold dryer may squeal when first started due to slipping belts. This is normal. If malfunction continues, notify service maintenance.



Figure 1. Dryer Squeals.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Drying Time is Longer than Normal.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Drying time is longer than normal.	Inspect lint screen (Figure 1, Item 1). Check dryer vents (Figure 1, Item 2) for obstruction. Ensure laundry has been adequately spun out. Inspect dryer vent ducts (Figure 1, Item 3).	Clean lint screen IAW WP 0033. Clear obstructions IAW WP 0071. Run laundry through extra extract cycle No. 36, and notify service maintenance if there is a washer malfunction. Clean dryer vent ducts IAW WP 0071. If malfunction continues, notify service maintenance.

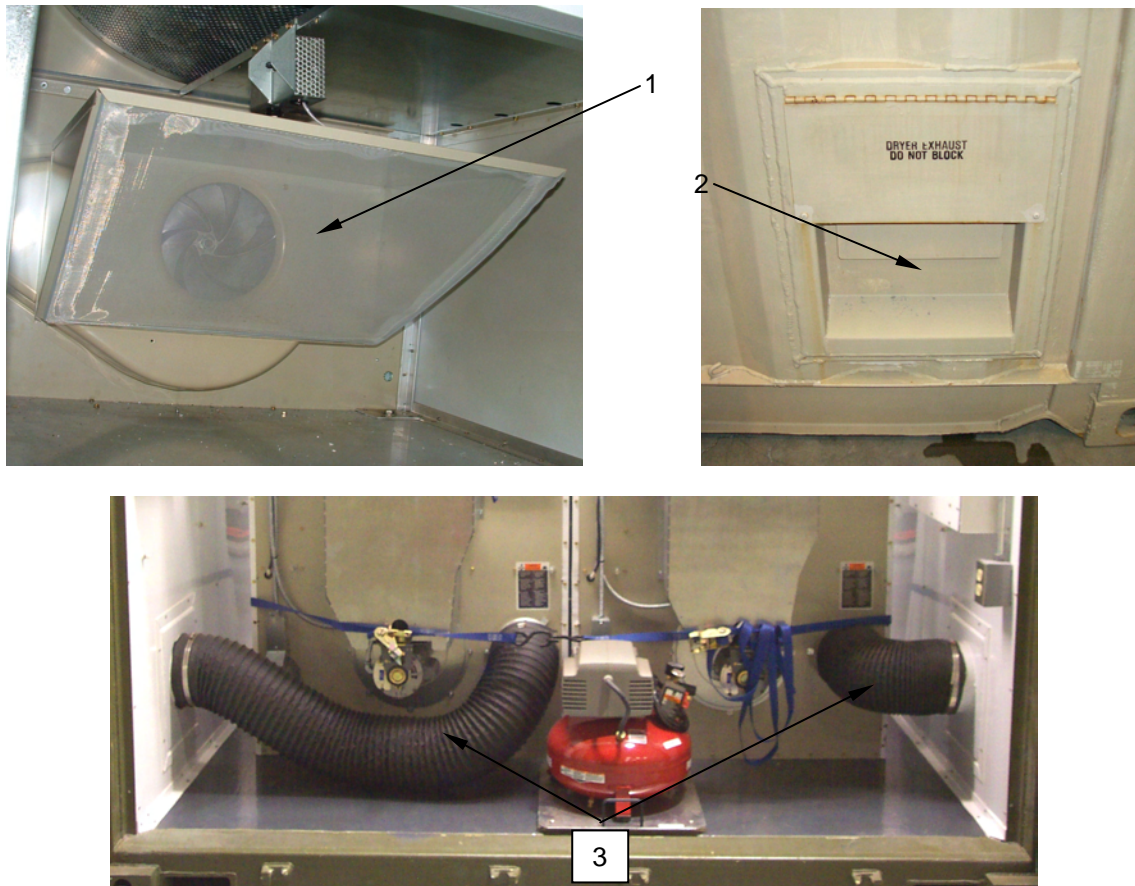


Figure 1. Drying Time is Longer than Normal.

END OF TASK

END OF WORK PACKAGE

**CREW MAINTENANCE
TROUBLESHOOTING PROCEDURES**

INITIAL SETUP:

Not Applicable

Table 1. Water in Dryer or Dryer Leaking Water.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
Water in dryer or dryer leaking water.	Ensure laundry has been adequately spun out. Ensure vents (Figure 1) are free from water entry.	Run laundry through extra extract cycle No. 36, and notify service maintenance if there is a washer malfunction. Clear vents. If malfunction continues, notify service maintenance.

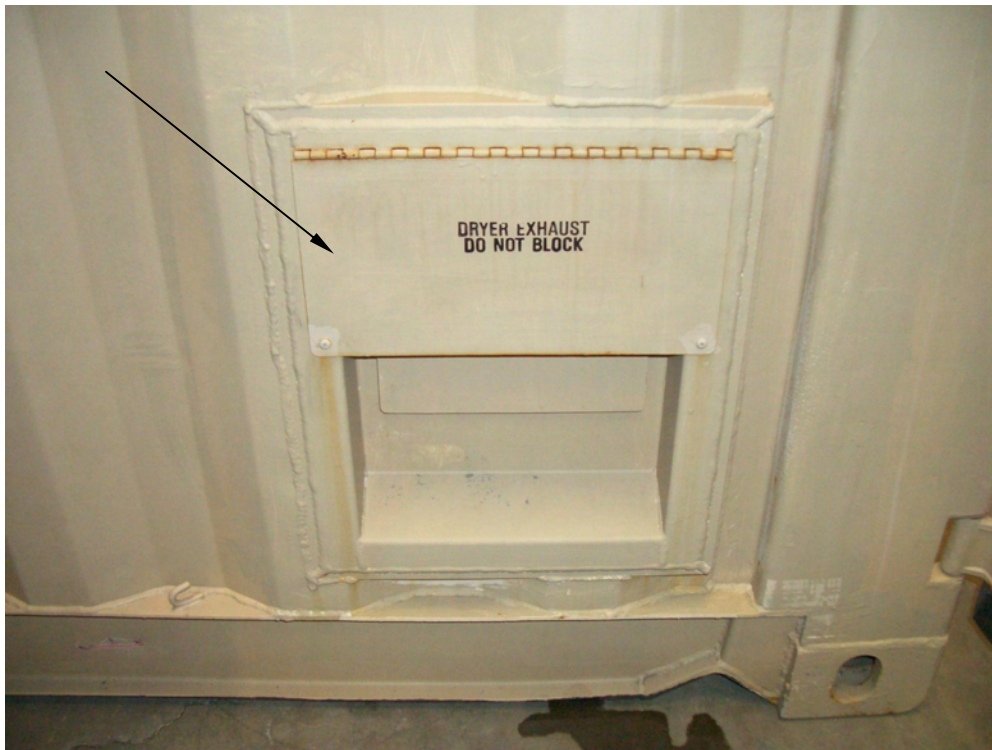


Figure 1. Water in Dryer or Dryer Leaking Water.

END OF TASK

END OF WORK PACKAGE

CHAPTER 5

PMCS MAINTENANCE INSTRUCTIONS
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

CREW MAINTENANCE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES INTRODUCTION

GENERAL

The following information describes PMCS procedures on the unit level. The PMCS table has been provided to ensure the Force Provider Containerized Batch Laundry (FP-CBL) is in proper operating condition, and ready for use.

INTRODUCTION

Preventive Maintenance Checks and Services (PMCS) are performed to keep the Force Provider Containerized Batch Laundry (FP-CBL) in good operating condition and ready for its primary mission. The checks are used to find, correct, and report problems. PMCS is performed every day the Force Provider Containerized Batch Laundry (FP-CBL) is in operation, and is done according to the PMCS table provided. Pay attention to **WARNING**, **CAUTION**, and **NOTE** statements. A **WARNING** indicates that someone could be hurt or killed. A **CAUTION** indicates that equipment could be damaged. A **NOTE** may make your maintenance or repair task easier.

Be sure to perform scheduled PMCS. Always perform PMCS in the same order so it becomes habit. With practice, you will quickly recognize problems with the equipment.

Use DA Form 2404, Equipment Inspection and Maintenance Worksheet, to record any discovered faults. Do not record faults that you fix!

PMCS PROCEDURES

Table 1 lists inspections and care required to keep your equipment in good operating condition. It is arranged so that you can perform before operation checks as you walk around the equipment.

Explanation of Table 1 Columns:

Item Number. Indicates the reference number. When completing DA Form 2404, Equipment Inspection and Maintenance Worksheet, include the item number for the item to check/service indicating a fault. Item numbers appear in the order you must perform the checks/services listed.

Interval. Indicates when you must perform the procedure in the procedure column.

- before** - perform before equipment operation
- during** - perform during equipment operation
- after** - perform after equipment has been operated
- weekly** - perform every week
- monthly** - perform each month
- hours** - perform at the noted hourly interval

Item to Check/Service. Indicates the item to be checked or serviced.

Procedure. Indicates the procedure you must perform on the item listed in Item to Check/Service column. You must perform the procedure at the time specified in the Interval column.

Not Fully Mission Capable If. Indicates faults which will prevent your equipment from performing its primary mission. If you perform procedures listed in Procedure column which show faults listed in this column, do not operate the equipment. Follow standard procedures for maintaining the equipment or reporting equipment failure.

Other Special Entries. Observe all special information and notes that appear in Table 1.

When a check/service procedure is required for both weekly and before intervals, it is not necessary to perform the procedure twice if the equipment is operated during the weekly period.

COMMON CHECKS AND CLEANING

WARNING



Do not attempt to perform ANY on-site service, however minor, without switching circuit breakers OFF, disconnecting the power cord, draining or relieving system pressure, or otherwise shutting down the equipment to be serviced. Tightening a hose clamp might not appear to demand shutting down the Force Provider Containerized Batch Laundry (FP-CBL), but the potential electrocution of the operator as well as electrical and fire damage caused by a split water hose is well worth shutting down the Force Provider Containerized Batch Laundry (FP-CBL) systems.

Cleaning

Always keep the equipment clean. Remove dirt, sand, and debris from all controls and hose connections.

Bolts, Nuts, and Screws

Check them for obvious looseness, missing, bent, or broken condition on equipment. If you find a bolt, nut, or screw you think is loose, tighten it or report it to your supervisor.

Hoses

Look for wear, damage, and leaks. Ensure clamps are tight. Wet spots show leaks, but a stain around a fitting or connector can also mean a leak. If a leak comes from a loose fitting or coupling, tighten it. If something is broken or worn out, report it to your supervisor.

LEAKAGE DEFINITION FOR PERFORMING PMCS

It is necessary for you to know how fluid leakage affects the status of the equipment. The following are the types/classes of leakage an operator needs to know to be able to determine the status of the water system. Learn these leakage definitions and remember - when in doubt, notify your supervisor.

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to fluid capacity in the system. When in doubt, notify your supervisor.

When operating with Class I, or II leaks, continue to check fluid levels as required in your PMCS.

Class III leaks, cease all operations and report immediately to your supervisor.

Class I - Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

Class II - Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked/inspected.

Class III - Leakage of fluid great enough to form drops that fall from items being checked/inspected.

END OF WORK PACKAGE

CREW MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

INITIAL SETUP:**Tools and Special Tools**

None required.

Personnel Required

Laundry and Shower Specialist 92S (1)

Materials/Parts

None required.

Equipment Condition

All equipment shall be serviceable and ready for use.

References

DA PAM 750-8
 DA Form 2404
 TM 55-8115-204-23&P
 TM 10-4630-206-13&P
 TM 10-4520-259-13&P

INTRODUCTION

Preventive Maintenance Checks and Services (PMCS) are performed to keep the Containerized Batch Laundry in good operating condition. The checks are used to find, correct, or report problems. Unit personnel are to do the PMCS jobs as shown in the PMCS table. PMCS are done every day the laundry 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 laundry, do **Before** PMCS.
- During use of the laundry, do **During** PMCS.
- After using the laundry, do **After** PMCS.
- Once a week, do **Weekly** PMCS if the laundry has been in use.
- Do **Monthly** PMCS once a month if the laundry has been in use.
- Do **Annual** PMCS once a year.

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 laundry not fully mission capable. Write up the faults not fixed on DA Form 2404 for field maintenance. For further information on how to use this form, see DA PAM 750-8.

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

INSPECTION AND COMMON CHECKS

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 fabric or frame components visible? Correct any faults or notify unit or direct support maintenance.



WARNING

Do not attempt to perform ANY on-site service, however minor, without switching circuit breakers OFF, disconnecting the power cord, draining or relieving system pressure, or otherwise shutting down the equipment to be serviced. Tightening a hose clamp might not appear to demand shutting down the FP-CBL, but the potential electrocution of the operator as well as electrical and fire damage caused by a split water hose is well worth shutting down the FP-CBL systems.

Always Keep the Equipment Clean

Remove dirt, sand, and debris from all water and electrical panel entries and connections.

Bolts, Nuts, and Screws

Check them for obvious looseness, missing, bent, or broken condition on equipment. If you find a bolt, nut, or screw you think is loose, tighten it or report it to your supervisor.

Hoses

Look for wear, damage, and leaks. Ensure clamps are tight. Wet spots indicate leaks, but a stain around a fitting or connector can also mean a leak. If a leak comes from a loose fitting or coupling, shut down the equipment and tighten it. If something is broken or worn out, report it to your supervisor.

Leakage Definition for Operator PMCS

It is necessary for you to know how fluid leakage affects the status of the equipment. The following are types/classes of leakage an operator needs to know to be able to determine the status of the water system. If you spot a leak and are unsure what class the leak is, notify your supervisor or Unit Maintenance.

CAUTION

Equipment operation is allowable with Class I and II leaks. Consideration must be given to fluid capacity in the system. When in doubt, check with your supervisor. When operating with Class I or II leaks, frequently check leak intensity. Report Class III leaks to your supervisor.

Class I - Leakage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

Class II - Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked or inspected.

Class III - Leakage of fluid great enough to form drops that fall from items being checked or inspected.

Lubrication Service Intervals

The Force Provider Containerized Batch Laundry (FP-CBL) components require the following lubrication service:

Refer to TM 55-8115-204-23&P General Cargo Container, for container lubrication requirements.

Refer to TM 10-4630-206-13&P Sewage Ejection Pump (SEP), for SEP lubrication requirements.

Refer to TM 10-4520-259-13&P M-80 Water Heater, for M-80 Water Heater lubrication requirements.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL).

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			TEMPER Components – refer to TM 10-8340-224-13	
			M-80 Water Heater – refer to TM 10-4520-259-13&P	
			Sewage Ejection Pump (SEP) – refer to TM 10-4630-206-13&P	
0	Before/ After	Container, Modified Cargo (Figure 1, Item 1) Folding Handgrips (Figure 1, Item 2)	Inspect FP-CBL Container for material damage, proper level and foundation. Ensure that all folding handgrips are present and in good working order.	Damage is present which might prevent operation of FP-CBL. Container is not leveled or placed on an infirm or unsafe foundation. Folding handgrips missing or broken.
1	Before/ After	Service Doors (Figure 1, Item 3)	1. Inspect service doors for material damage and ease of operation. 2. Ensure door latches function properly.	Damage is present which prevents normal operation of doors; Doors do not open or close fully; Doors do not latch or unlatch.
2	Before/ After	Ramp, Entry (Figure 1, Item 5)	Inspect entry ramp for material damage and corrosion.	Damage or corrosion is present which prevents use or operation of entry ramp.
3	Before/ After	Endwall, Modified Temper (Figure 1, Item 4)	Inspect modified TEMPER endwall for material damage.	Damage is present.

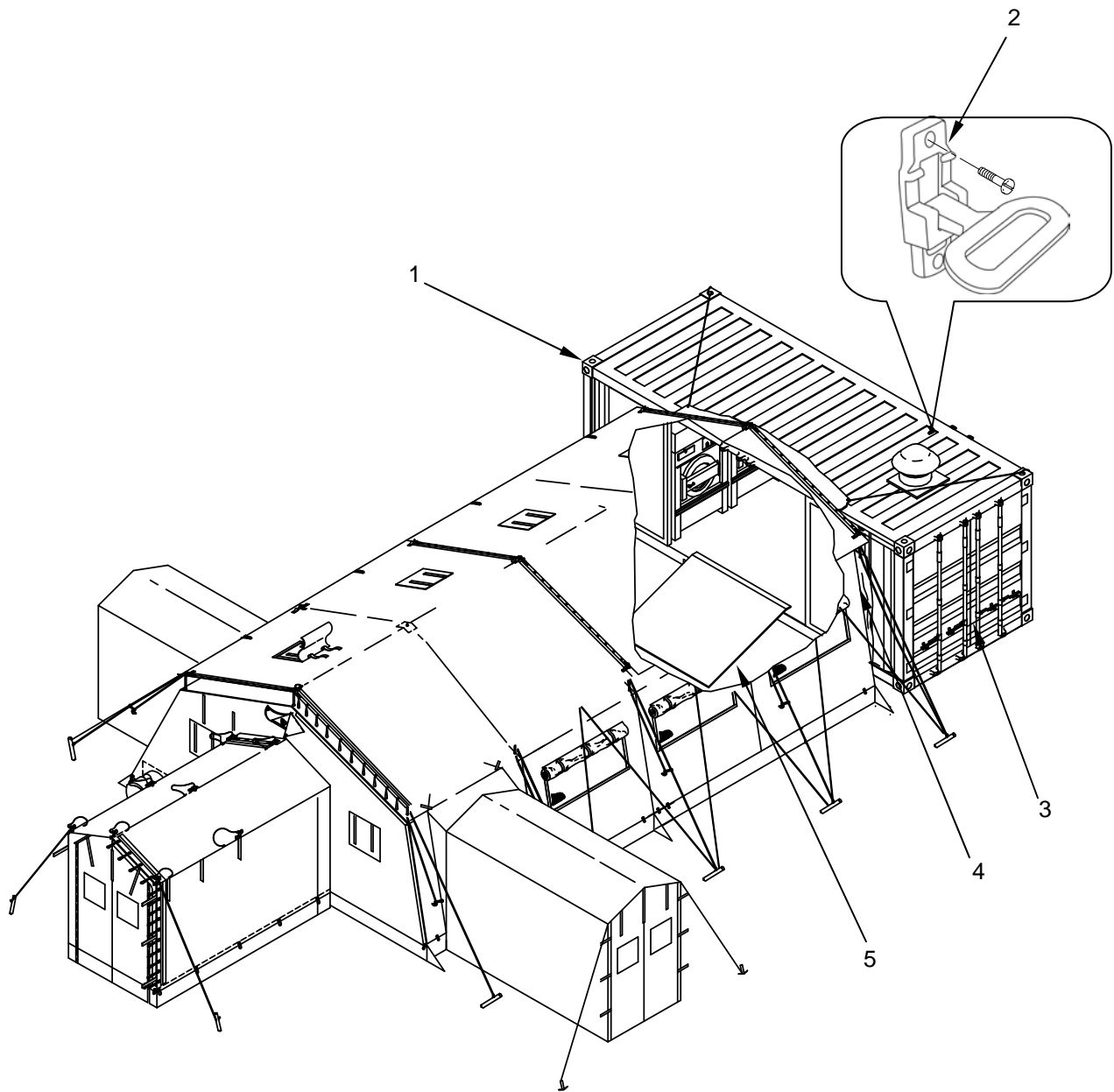


Figure 1. Before Operation PMCS.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before/ After	Light Fixture, Fluorescent (Figure 2, Item 1)	Ensure Fluorescent Light Fixtures operate. Inspect light fixture for material damage or missing components.	Bulbs unlit; damage to light fixture; missing components.
5	Before	Breakers, Circuit (Figure 2, Item 2)	Visually inspect circuit breakers for material damage or signs of burning.	Circuit breakers are damaged or inoperative.
6	Before	Panel, Power Inlet/Outlet (Washer End) (Figure 2, Item 3)	Inspect power inlet/outlet panel for material damage and corrosion.	Panel is damaged or corrosion present.
7	Before	Panel, Power Inlet (Dryer End) (Figure 2, Item 4)	Inspect power inlet panel for material damage and corrosion.	Panel is damaged or corrosion present.
8	Before	Receptacles, Power Input (Figure 2, Item 5)	Inspect receptacles for material damage or signs of burning.	Receptacles are damaged or inoperative.
9	Before	Receptacle, Power Output (Figure 2, Item 6)	Inspect receptacle for material damage or signs of burning.	Receptacle is damaged or inoperative.
10	Before Monthly	Receptacles (Figure 2, Item 7)	Inspect receptacles for material damage or signs of burning.	Receptacles are damaged or inoperative.
11	Before After	Exhaust Fan (Figure 2, Item 8)	Inspect fan for material damage and cleanliness.	Fan is damaged, preventing operation; fan is dirty or clogged.
12	Before Monthly	Switch, Wall (Figure 2, Item 9)	Inspect wall switches for material damage or signs of burning.	Switches are damaged or inoperative.

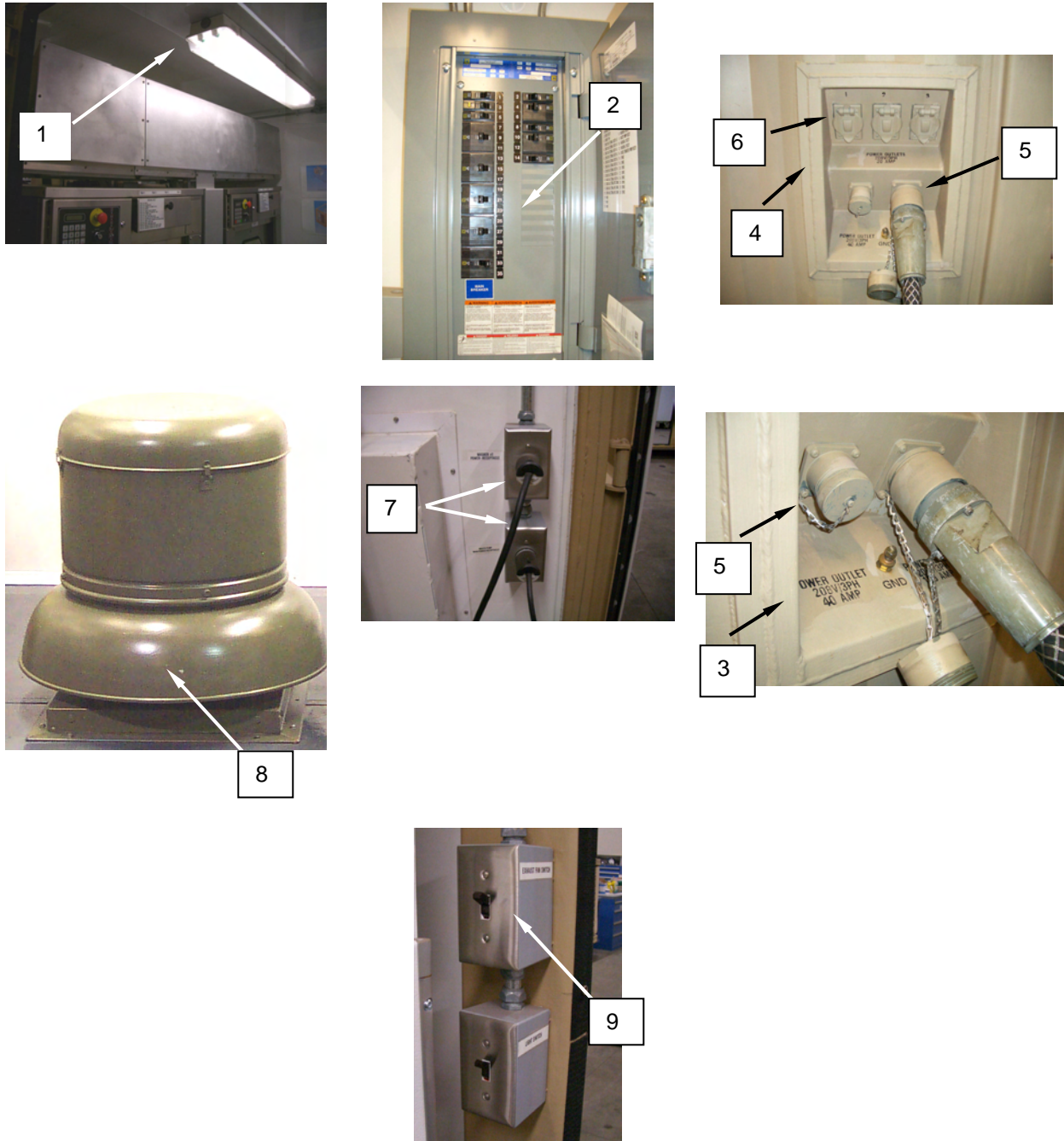


Figure 2. Before Operation PMCS for Electrical.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	Before/ After	Plumbing (Figure 3, Item 1)	Inspect all valves, pipes, and pipe fittings for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.
14	Before/ After	Panel, Water Inlet/Waste Water outlet (Figure 3, Item 2)	Inspect water inlet/waste water outlet panel for leakage and material damage.	Class III leakage is present; material damage is observed.
15	Before/ After	Hoses, Internal and External (Figure 3, Item 3)	Inspect all internal and external hoses for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.
16	Before/ After	Hoses, QD (Figure 3, Item 4)	Inspect all QD hoses for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.
17	Before/ After	Tanks, Drainage (Figure 3, Item 5)	Inspect all drainage tanks for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.

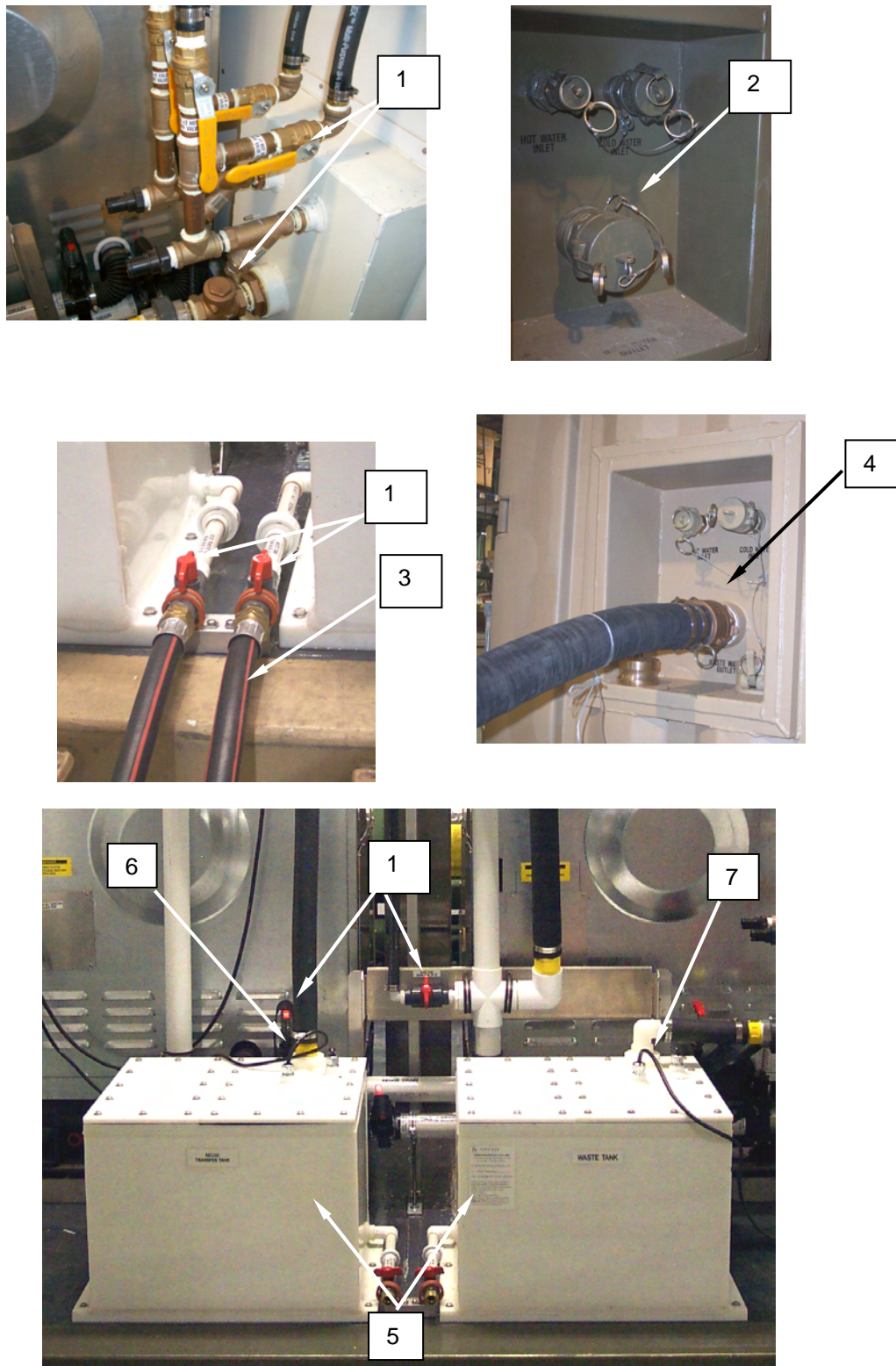


Figure 3. Before Operation PMCS for Plumbing.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
18	Before/ After	Washer/ Extractor, Laundry (Figure 4, Item 1)	Inspect washer for material damage, corrosion, and leakage. Ensure mounting is secure. Ensure emergency stop is undamaged.	Washer damaged or corrosion is present. Class III leakage is present. Washer not securely mounted. Emergency stop visibly damaged.
19	Before/ After	Assembly, Door Lock (Figure 4, Item 3)	Inspect door lock for material damage. Test door lock by latching door, initiating wash cycle, and attempt to open door. Do not force door. Shut washer down with emergency stop if door opens during wash cycle. If door lock operates properly, test is complete. Press stop button on keypad to reset washer.	Door lock is damaged. Door opens during wash cycle.
20	Before/ After	Controls, Washer (Figure 4, Item 2)	Inspect washer controls for material damage.	Washer control is damaged.

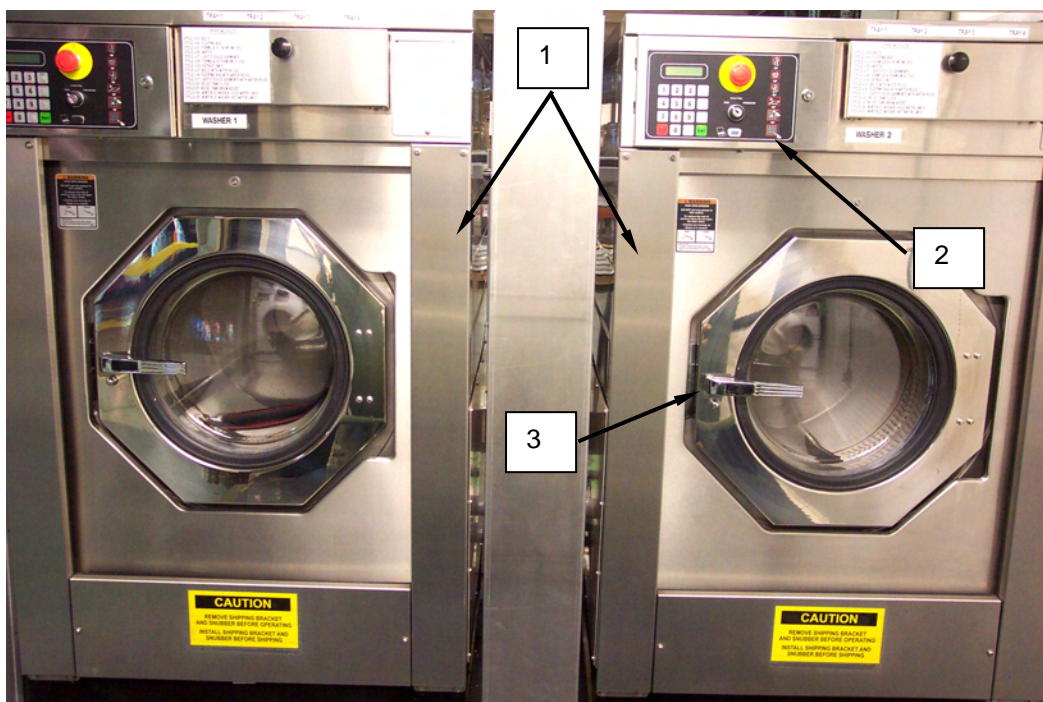


Figure 4. Before Operation PMCS for Washer.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
21	Before/ After	Dryer (Figure 5, Item 1)	Inspect dryer for material damage and corrosion.	Dryer damaged or corrosion is present. Emergency stop visibly damaged.
22	Before/ After	Controls, Dryer (Figure 5, Item 2)	Inspect dryer controls for material damage and corrosion.	Dryer control is damaged or corrosion is present.
23	Before/ After	Stop Button, Dryer Emergency (Figure 5, Item 3)	Inspect dryer emergency stop button for damage.	Dryer emergency stop button is damaged.
24	Before/ After	Switch, Airflow (Figure 6, Item 1)	Inspect airflow switch for cleanliness and obstructions.	Switch diaphragm dirty or obstructed.
25	Before/ After	Assembly, Loading Door Catch (Figure 6, Item 2)	Inspect door catch for material damage and wear. Ensure door shuts securely, without slamming.	Door catch inoperative or difficult to engage.
26	Before/ After	Screen, Lint (Figure 6, Item 3)	1. Inspect lint screen for lint or obstructions. 2. Inspect lint screen for tears or material damage.	Lint screen obstructed. Lint screen damaged.
27	Before/ After	Vent, Dryer (Figure 6, Item 5)	Inspect dryer vent for lint or obstructions.	Dryer vent obstructed.
28	Before/ After	Duct (Figure 6, Item 4)	Inspect ducts for tears, material damage, or loose connections.	Dryer ducts damaged. Loose connections to dryer or vent.



Figure 5. Before Operation PMCS for Dryer.

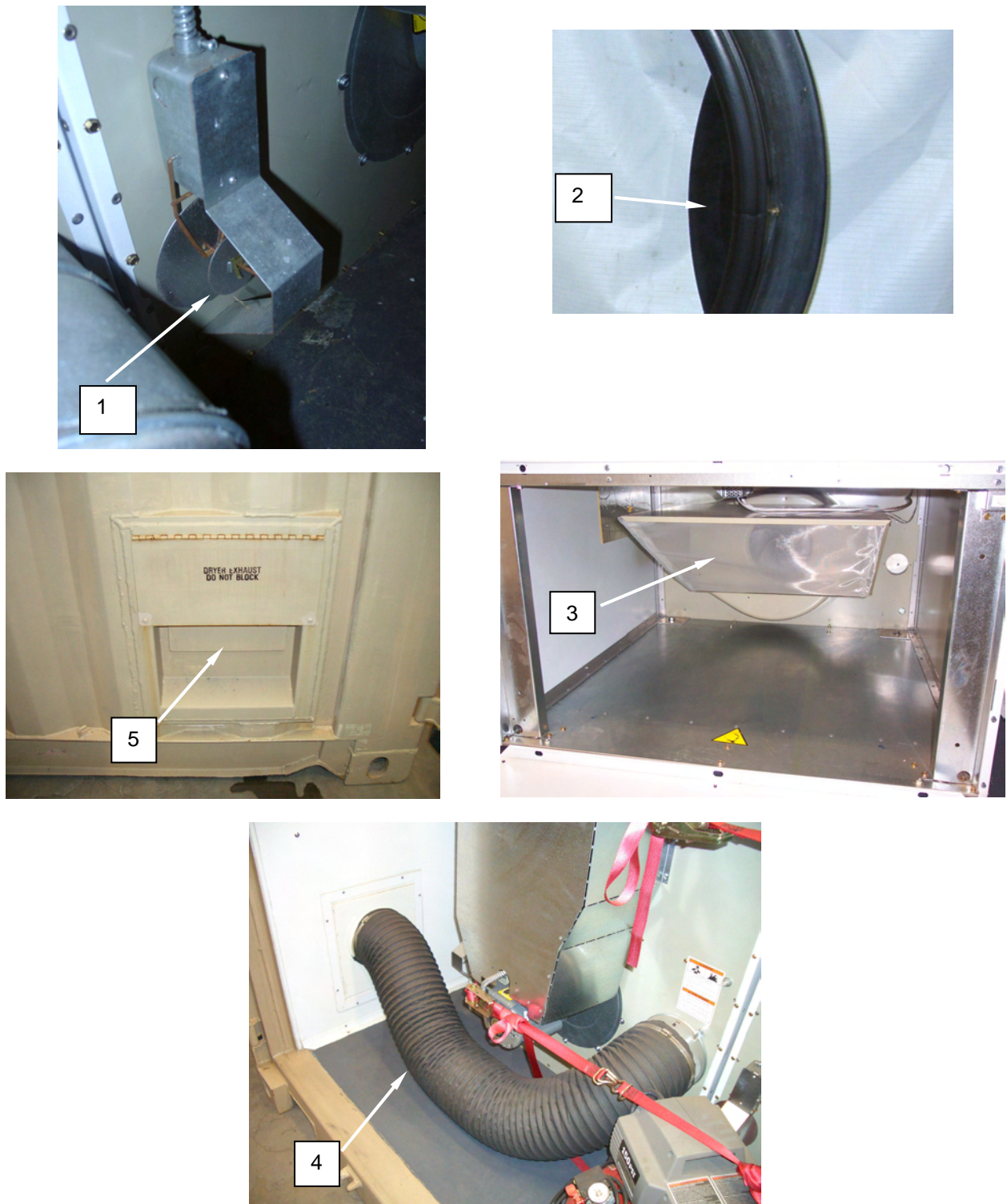


Figure 6. Before Operation PMCS for Dryer Components.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
29	Before/ After	Compressor, Air (Figure 7, Item 1)	Inspect Air Compressor for material damage and corrosion.	Air Compressor damaged or corrosion is present.
30	Before/ After	Cables, Power (Figure 7, Item 2)	Inspect power cables for cuts, abrasions, corrosion or any other damage.	Cable cut or damaged in such a way as to prevent proper electrical connection or that presents a safety hazard.
31	Before/ After	Cable, Power Output Tee (Figure 7, Item 3)	Inspect power output tee cable for cuts, abrasions, corrosion or any other damage.	Cable cut or damaged in such a way as to prevent proper electrical connection or that presents a safety hazard.

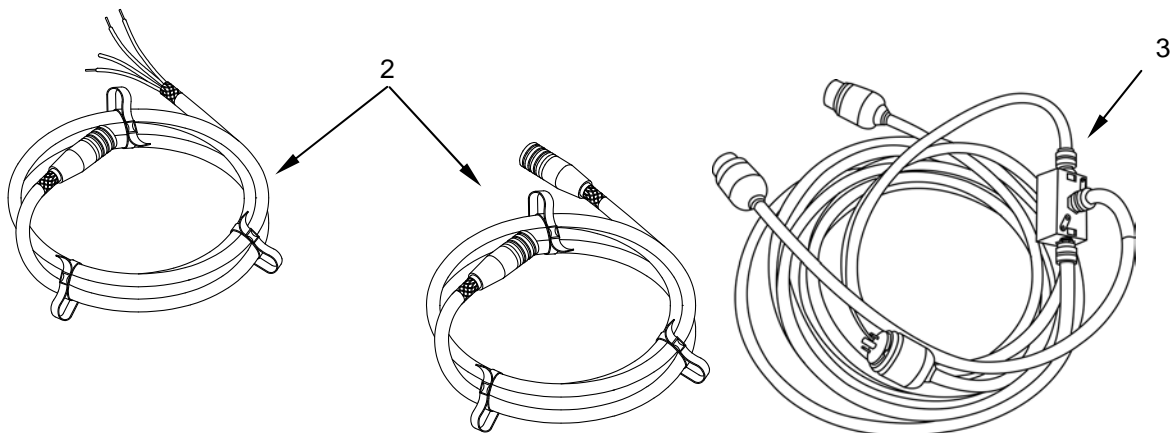


Figure 7. Before/After PMCS for Air Compressor, Power Output Tee Cable, and Power Cables.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
32	During	Plumbing (Figure 8, Item 1)	Inspect all valves, pipes, and pipe fittings for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.
33	During	Hoses, Internal and External (Figure 8, Item 3)	Inspect all internal and external hoses for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.
34	During	Hoses, QD (Figure 8, Item 2)	Inspect all QD hoses for leakage and damage such as cracks.	Class III leakage is present; material damage is observed.

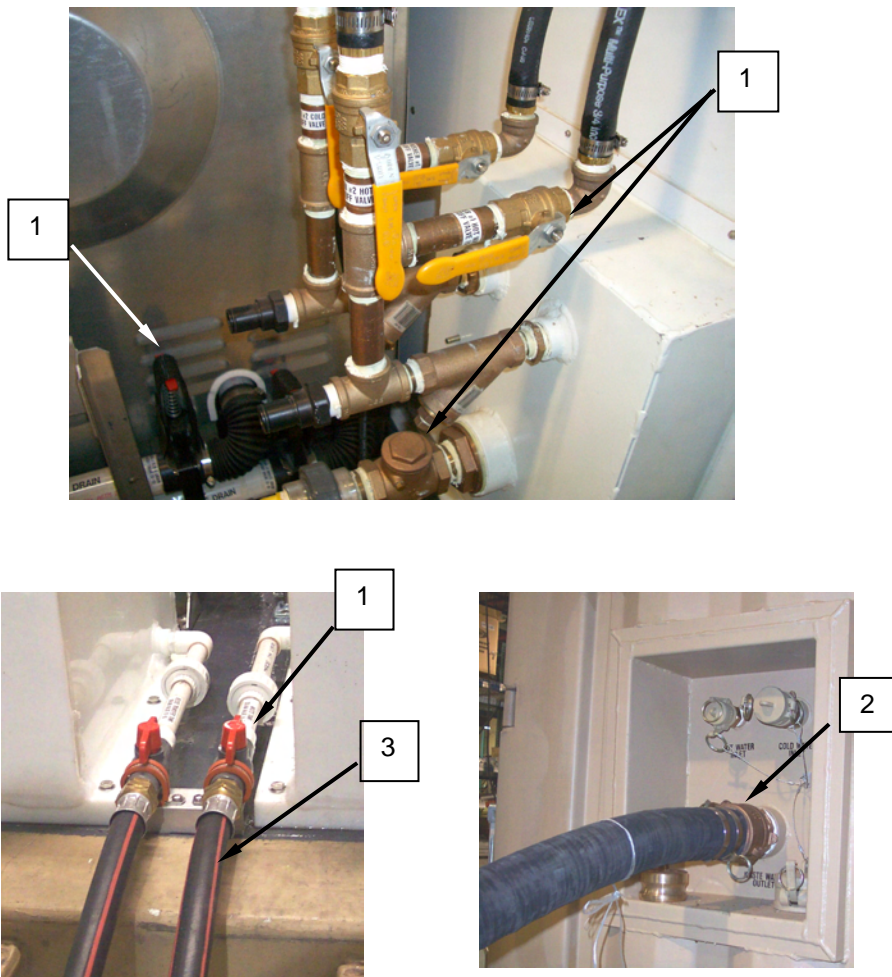


Figure 8. During Operation PMCS for Plumbing.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
35	During	Screen, Lint (Figure 9, Item 1)	1. Inspect lint screen for lint or obstructions. 2. Service. Remove lint or obstructions.	Lint screen obstructed.



Figure 9. During Operation PMCS for Lint Screen.

Table 1. Preventive Maintenance Checks and Services for Force Provider Containerized Batch Laundry (FP-CBL) - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
36	During	Light Fixture, Fluorescent (Figure 10, Item 1)	Ensure fluorescent light fixtures operate. Inspect light fixture for material damage or missing components.	Bulbs unlit; damage to light fixture; missing components.

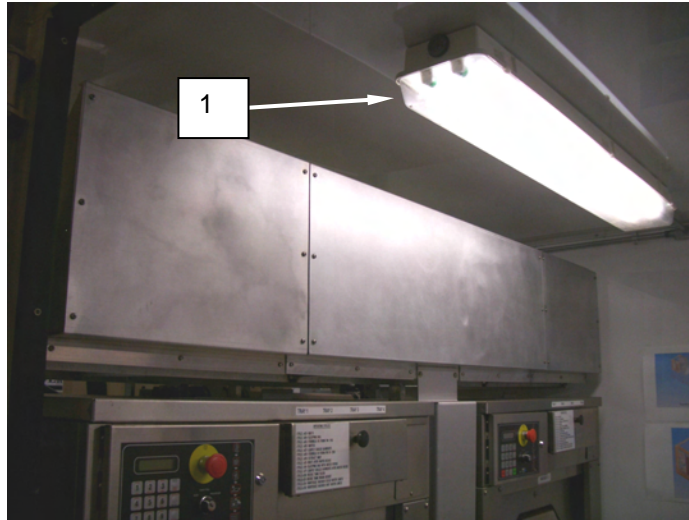


Figure 10. During Operation PMCS for Fluorescent Light Fixtures.

END OF TASK

END OF WORK PACKAGE

CHAPTER 6

OPERATOR MAINTENANCE
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

CREW MAINTENANCE

INTRODUCTION

SCOPE

This chapter contains information necessary to maintain the Force Provider Containerized Batch Laundry (FP-CBL), on the operator maintenance level, in accordance with the Maintenance Allocation Chart (MAC) for the equipment. It includes the following:

1. Procedures for processing a new or used Force Provider Containerized Batch Laundry (FP-CBL) upon receipt.
2. As required inspections and maintenance procedures performed prior to packing, or after use.
3. Repair and/or replacement procedures for components of the Force Provider Containerized Batch Laundry (FP-CBL) authorized for maintenance at the operator level.

Common Tools and Equipment

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment or Table of Distribution and Allowances (MTOE/TDA) applicable to your unit.

Special Tools, TMDE, and Support Equipment

Tools and equipment that must be fabricated are listed within their respective maintenance work package.

Repair Parts

Repair parts are listed and illustrated in WP 0086 through WP 0096 of this manual.

END OF WORK PACKAGE

CREW MAINTENANCE
SERVICE UPON RECEIPT

INITIAL SETUP:**Tools and Special Tools**

None required.

Personnel Required

Laundry and Textile Specialist 92S (1)

Materials/Parts

None required.

ReferencesTM 10-5419-206-13
WP 0005

SITING REQUIREMENTS

Information about initial positioning of the FP-CBL ISO Container, as well as assembly and preparation for use of the Force Provider Laundry Subsystem, including FP-CBL utility connections, are contained in WP 0025 00 of TM 10-5419-206-13.

CHECKING UNPACKED EQUIPMENT

Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD form 361, Transportation Discrepancy Report. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with applicable service instructions (e.g., for Army instructions, see DA PAM 750-8). Check to see whether the equipment has been modified."

PRELIMINARY SERVICING OF EQUIPMENT

Once system is set up, perform operator PMCS as described in WP 0026.

PRELIMINARY CHECKS AND ADJUSTMENTS OF EQUIPMENT

Components must be positioned where indicated by staking (Refer to WP 0022 of TM 10-5419-206-13).

Lay out utilities in the order described in WP 0005.

END OF WORK PACKAGE

CREW MAINTENANCE
WASHER AND DRYERS
SERVICE

INITIAL SETUP:**Tools and Special Tools**

None required.

Personnel Required

Laundry and Textile Specialist 92S (1)

Materials/Parts

Rag, Wiping (WP 0101, Item 44)
Detergent, Laundry, Low-Phosphate (Type I),
50 lb (WP 0101, Item 24)

Equipment Condition

FP-CBL set up

SERVICE

1. Wipe external surfaces of washers and dryers with a mild water and detergent solution.
2. Ensure that washer soap trays are cleaned after use.
3. Keep area behind washers and dryers clean and free of debris.

SERVICE - CONTINUED



Figure 1. Servicing the Washers and Dryers.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE

ENTRY RAMP
REPLACE

INITIAL SETUP:

Tools and Special Tools

None required.

Personnel Required

Laundry and Textile Specialist 92S (2)

Materials/Parts

None required.

Equipment Condition

FP-CBL set up.

REPLACE

**WARNING**

Entry ramp is extremely heavy. To avoid serious injury, always use four personnel to lift, move, and maneuver the entry ramp into and out of its proper position.

1. Remove the entry ramp (Figure 1, Item 1) from the personnel door sill (Figure 1, Item 2).
2. Install the entry ramp (Figure 1, Item 1) onto the personnel door sill (Figure 1, Item 2). Ensure that the pins (Figure 1, Item 4) are correctly aligned with the holes (Figure 1, Item 3) in the door sill.

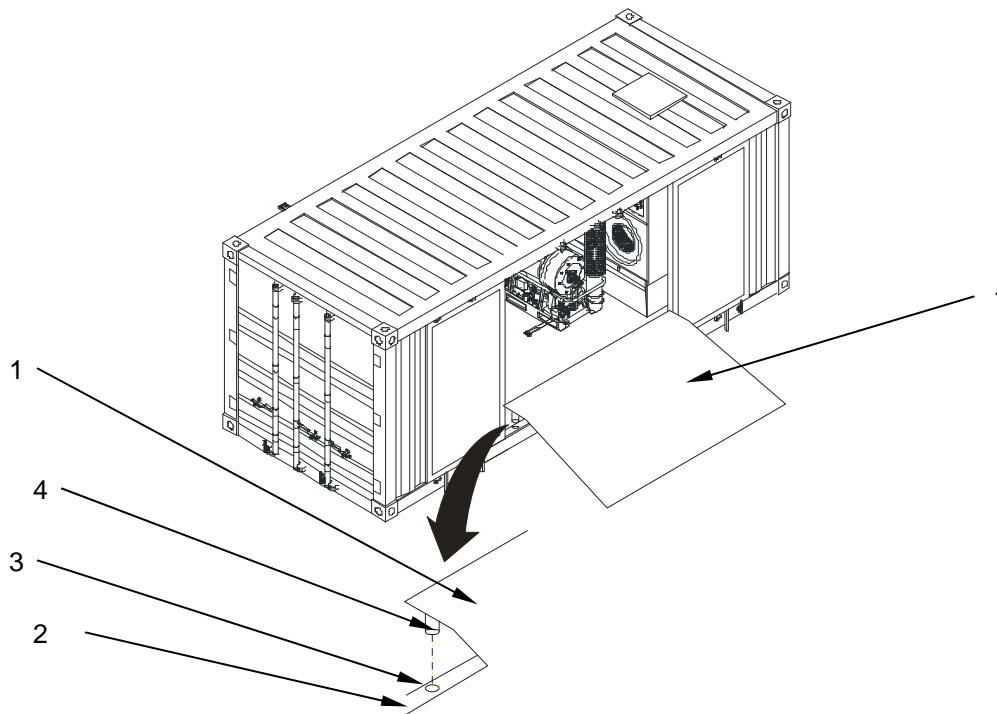


Figure 1. Replace the Ramp.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**MODIFIED TEMPER ENDWALL
REPLACE****INITIAL SETUP:****Tools and Special Tools**

None required

Personnel Required

Laundry and Textile Specialist 92S (2)

Materials/Parts

None required

Equipment Condition

FP-CBL set up

REPLACE

1. Enter the TEMPER to remove floor tie tapes from base purlins. Remove liner tie tapes from eave purlins.
2. Remove 12-inch steel pins (Figure 1, Item 6) securing the lower end of the bootwall to the ground.
3. Have two soldiers access the top of container using the folding hand grips.
4. Untie bootwall end flap cords (Figure 1, Item 3) from ISO fittings (Figure 1, Item 2).
5. Separate hook-and-pile fastener of bootwall end flap (Figure 1, Item 8) from top of FP-CBL (Figure 1, Item 1). Separate hook-and-pile fasteners (Figure 1, Item 4) of modified end section (Figure 1, Item 5) and double entrance doorframe Figure 1, Item 7).
6. Remove damaged modified end section (Figure 1, Item 5) from the tent.
7. Position new modified end section over double entrance doorframe of FP-CBL.
8. Mate and secure hook-and-pile fasteners (Figure 1, Item 4) of modified end section (Figure 1, Item 5) and double entrance doorframe Figure 1, Item 7).
9. Mate and secure hook-and-pile fastener of bootwall end flap (Figure 1, Item 8) from top of FP-CBL (Figure 1, Item 1).
10. Connect replacement endwall to TEMPER tent.
11. Tie bootwall end flap cords (Figure 1, Item 3) on ISO fittings (Figure 1, Item 2).
12. Install 12-inch steel pins (Figure 1, Item 6) to secure the lower end of the bootwall to the ground.
13. Install liner tie tapes from eave purlins. Enter the TEMPER and install floor tie tapes to base purlins.

REPLACE - CONTINUED

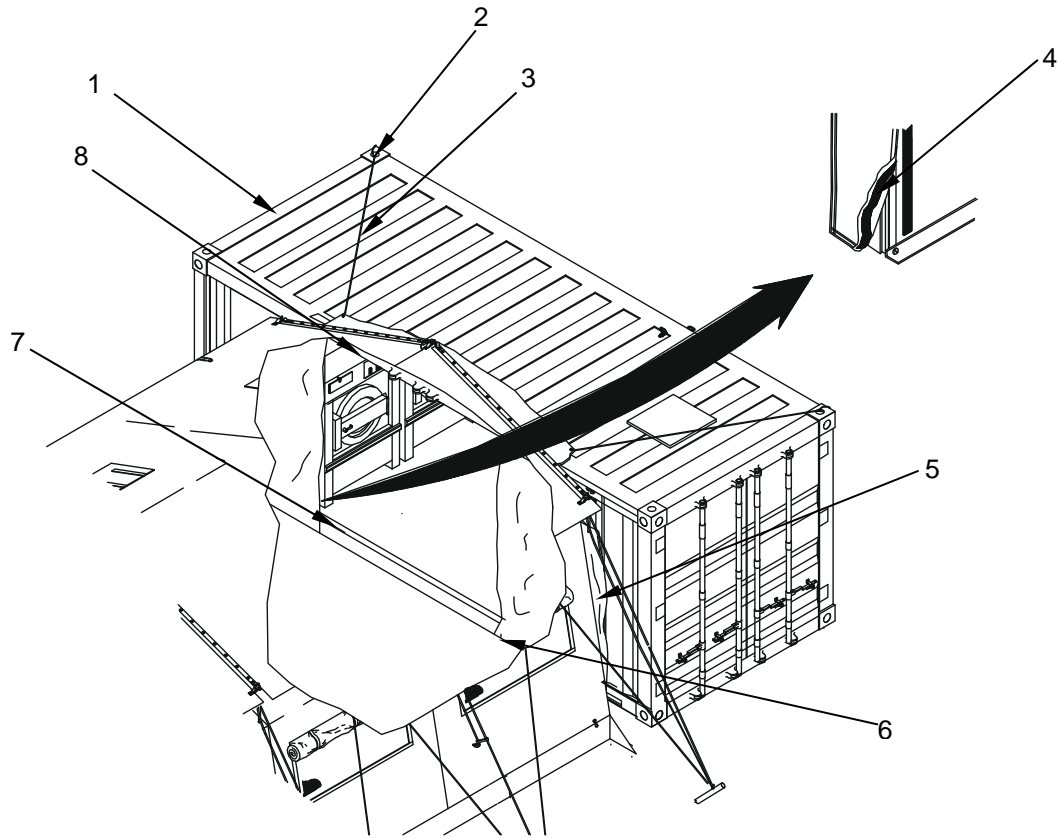


Figure 1. Replacing Modified End section.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**LINT SCREEN
SERVICE, REPLACE****INITIAL SETUP:****Tools and Special Tools**

None required

Personnel Required

Laundry and Textile Specialist 92S (1)

Materials/Parts

None required

Equipment Condition

Dryer power shut down at both dryer circuit breaker panels

SERVICE**Clean Dryer Lint Screens**

1. Open the lint compartment access door (Figure 1, Item 1).
2. Remove lint screen (Figure 1, Item 3) from tray (Figure 1, Item 2).
3. Remove lint from the screen (Figure 1, Item 3) dispose of lint using an approved container.
4. Reinstall screen (Figure 1, Item 3) into tray (Figure 1, Item 2).
5. Close the access door (Figure 1, Item 1).
6. Place dryer circuit breakers in the ON position and monitor for normal operation.



Figure 1. Clean Dryer Lint Screens.

END OF TASK

REPLACE

1. Open the lint compartment access door (Figure 2, Item 1).
2. Remove lint screen (Figure 2, Item 3) from tray (Figure 2, Item 2).
3. Install replacement screen (Figure 2, Item 3) into tray (Figure 2, Item 2).
4. Close the access door (Figure 2, Item 1).
5. Reset circuit breaker and monitor for normal operation.

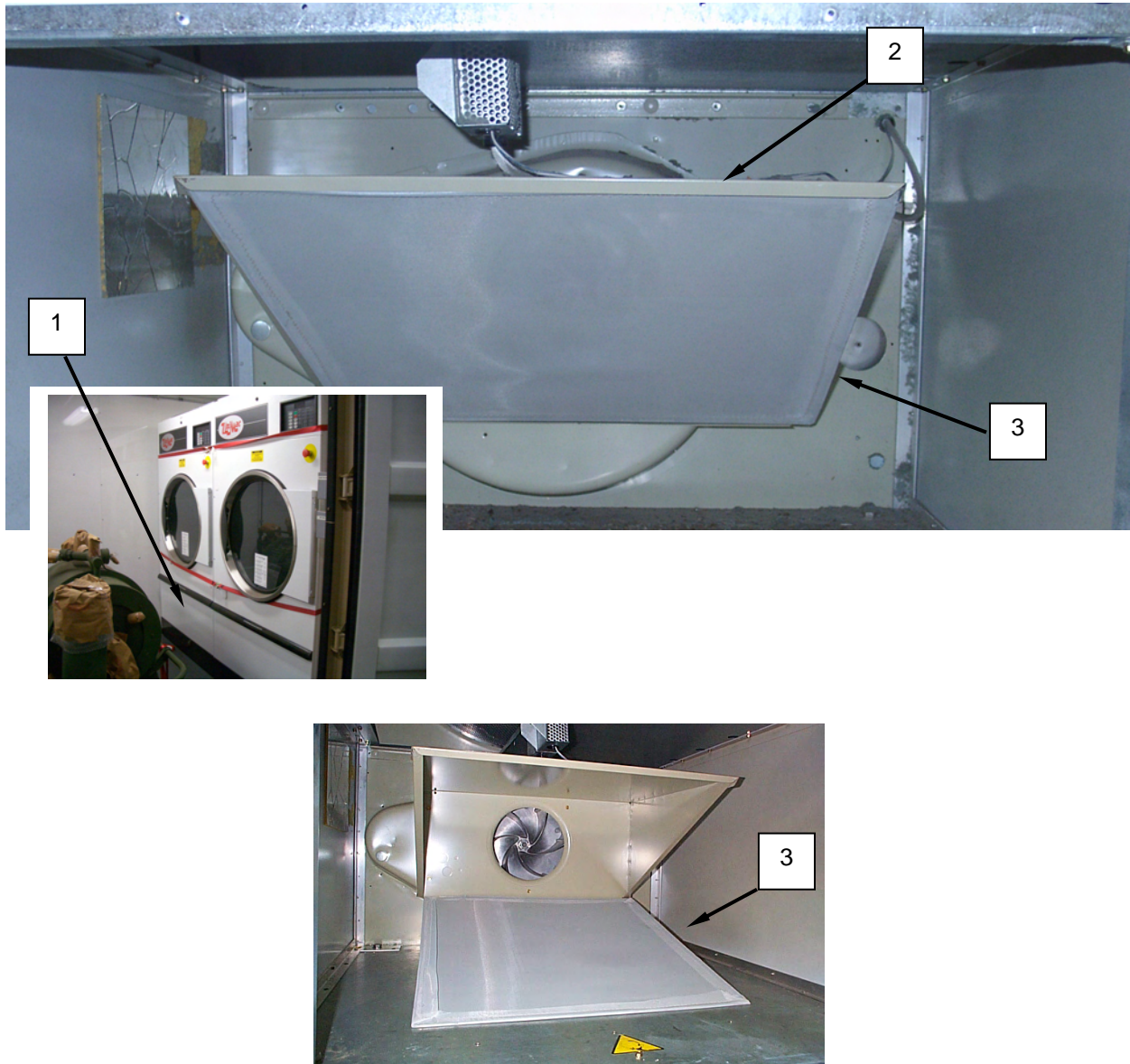


Figure 2. Replace the Dryer Lint Screen.

END OF TASK

END OF WORK PACKAGE

CREW MAINTENANCE**DRYER DUCT
REPAIR**

INITIAL SETUP:**Tools and Special Tools**

None required

Personnel Required

Laundry and Textile Specialist 92S (1)

Materials/Parts

Duct Tape (WP 0101, Item 61)

Equipment ConditionFP-CBL set up

REPAIR

To patch a hole in a dryer duct, wrap the area around the duct with at least two layers of tape, covering the hole or tear on dryer duct (Figure 1, Item 1). Ensure that the tape overlaps the damaged area by at least 2 inches on either side.

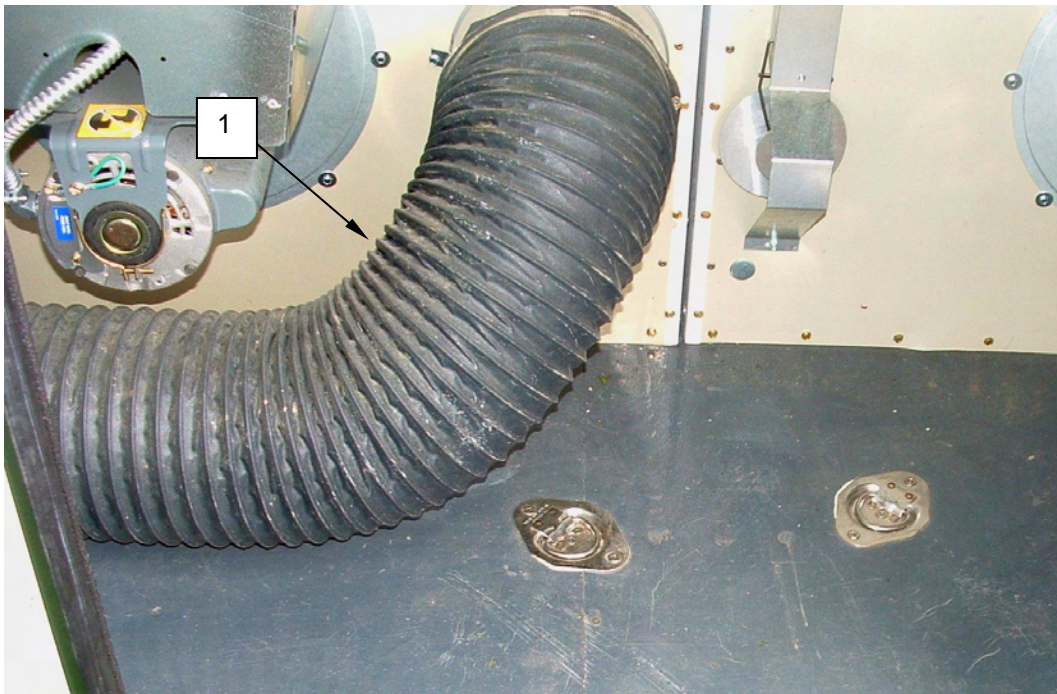


Figure 1. Repair Dryer Duct.

END OF TASK**END OF WORK PACKAGE**

CREW MAINTENANCE**AIR COMPRESSOR
SERVICE**

INITIAL SETUP:**Tools and Special Tools**

None required

Personnel Required

Laundry and Textile Specialist 92S (1)

Materials/Parts

None required

Equipment ConditionFP-CBL set up

SERVICE**Drain Water from Air Compressor Tank**

1. Loosen petcock valve at bottom of tank (Figure 1, Item 1).
2. Bleed water from tank.
3. Tighten petcock valve.

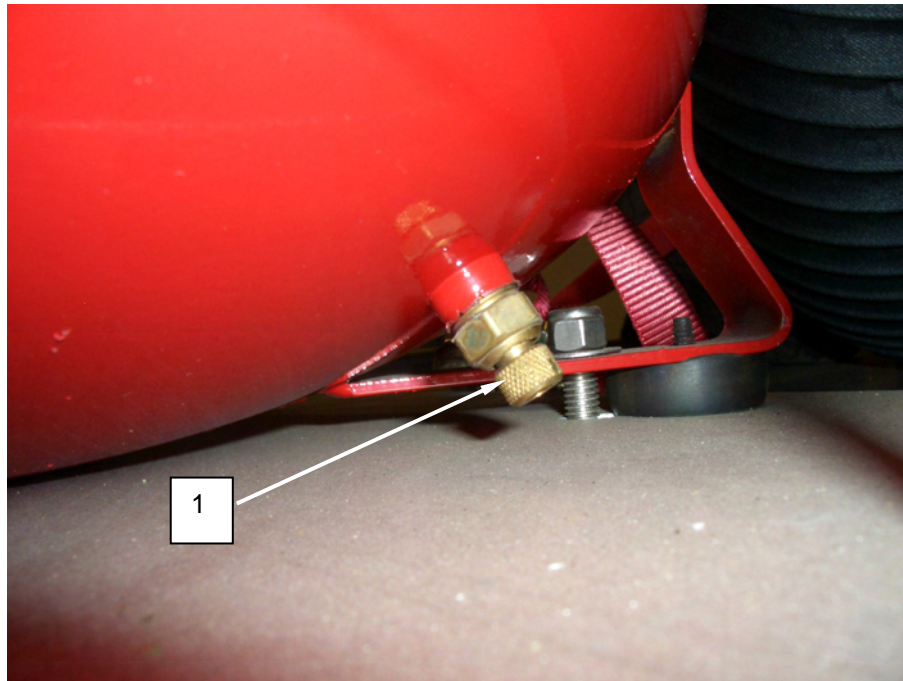


Figure 1. Drain Air Compressor.

END OF TASK**END OF WORK PACKAGE**

CHAPTER 7

SERVICE MAINTENANCE
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

SERVICE MAINTENANCE**INTRODUCTION**

SCOPE

This chapter contains information necessary to maintain the Force Provider Containerized Batch Laundry (FP-CBL), on the service maintenance level, in accordance with the Maintenance Allocation Chart (MAC) for the equipment. It includes the following:

1. Procedures for processing a new or used Force Provider Containerized Batch Laundry (FP-CBL) upon receipt.
2. Assembly of components prior to packing.
3. Preventive maintenance procedures to ensure continued serviceability of all components.
4. As required inspections and maintenance procedures performed prior to packing, or after use.
5. Detailed packing procedures.
6. Repair methods and repair (or replacement) procedures for all components of the Force Provider Containerized Batch Laundry (FP-CBL).

Common Tools and Equipment

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment or Table of Distribution and Allowances (MTOE/TDA) applicable to your unit.

Special Tools, TMDE, and Support Equipment

Not applicable.

Repair Parts

Repair parts are listed and illustrated in WP 0086 through WP 0096 of this manual.

END OF WORK PACKAGE

SERVICE MAINTENANCE**SUPPLY WATER INLET AND WASTE WATER OUTLET PANELS
SERVICE, REPAIR****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)
Laundry and Textile Specialist 92S (1)

Materials/Parts

Cleaning Compound, Solvent-Detergent
(WP 0101, Item 24)
Rag, Wiping (WP 0101, Item 44)
Tape, Anti-seize, ½-inch Wide x 260 inches long
(WP 0101, Item 60)

Equipment Condition

FP-CBL shutdown and drained
All circuit breakers and switches to
OFF position.
All QDC hoses disconnected from water service
panel.

SERVICE**Clean Water Panel Fittings**

1. Disconnect hoses from water panels (Figure 1, Item 1).
2. Clean corrosion from fittings (Figure 1, Item 2).
3. Reconnect hoses.

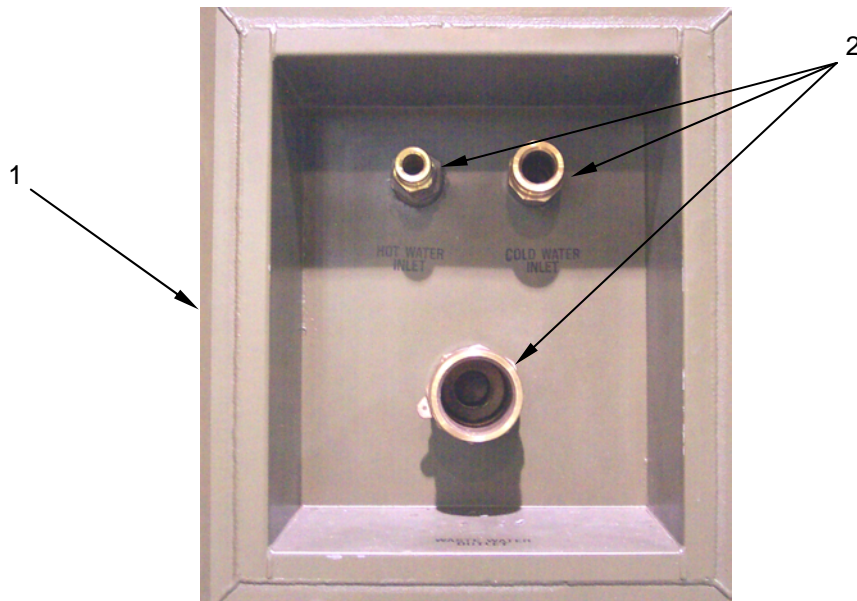


Figure 1. Water Inlet Supply And Waste Water Outlet Panel Fittings.

END OF TASK

REPAIR**NOTE**

Repair of the water service panel consists of replacing fittings housed in the panel. If the panel itself is unserviceable or missing, notify your supervisor and/or direct support.

1. Identify the fitting or fittings (Figure 2, Item 1) that require replacement.
2. Unscrew the fitting.
3. Wrap the threads on the replacement fitting clockwise with anti-seize tape.
4. Install the replacement fitting.

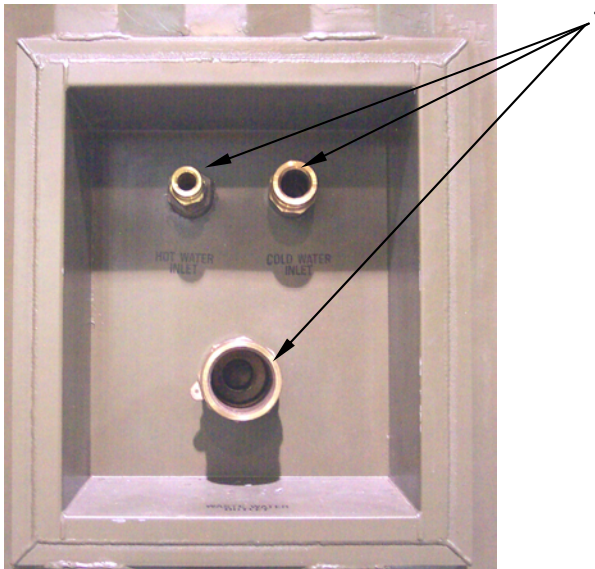


Figure 2. Repair the Water Service Panel Fittings.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**FOLDING HANDGRIP
SERVICE, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**Lubricating Oil, General Purpose
(WP 0101, Item 38)Laundry and Textile Specialist 92S (1)

SERVICE**Lubricate the Folding Handgrip Hinge****WARNING**

Ensure that lubricating oil is applied only to the hinge joint of the folding handgrip. Getting lubricating oil on the handgrip/step portion of the folding handgrip will create a slip hazard and may result in severe injury to personnel.

1. Clean any corrosion that may have formed on the folding handgrip.
2. Lubricate the hinge point (Figure 1, Item 1) of each folding hand grip with oil.

SERVICE - CONTINUED

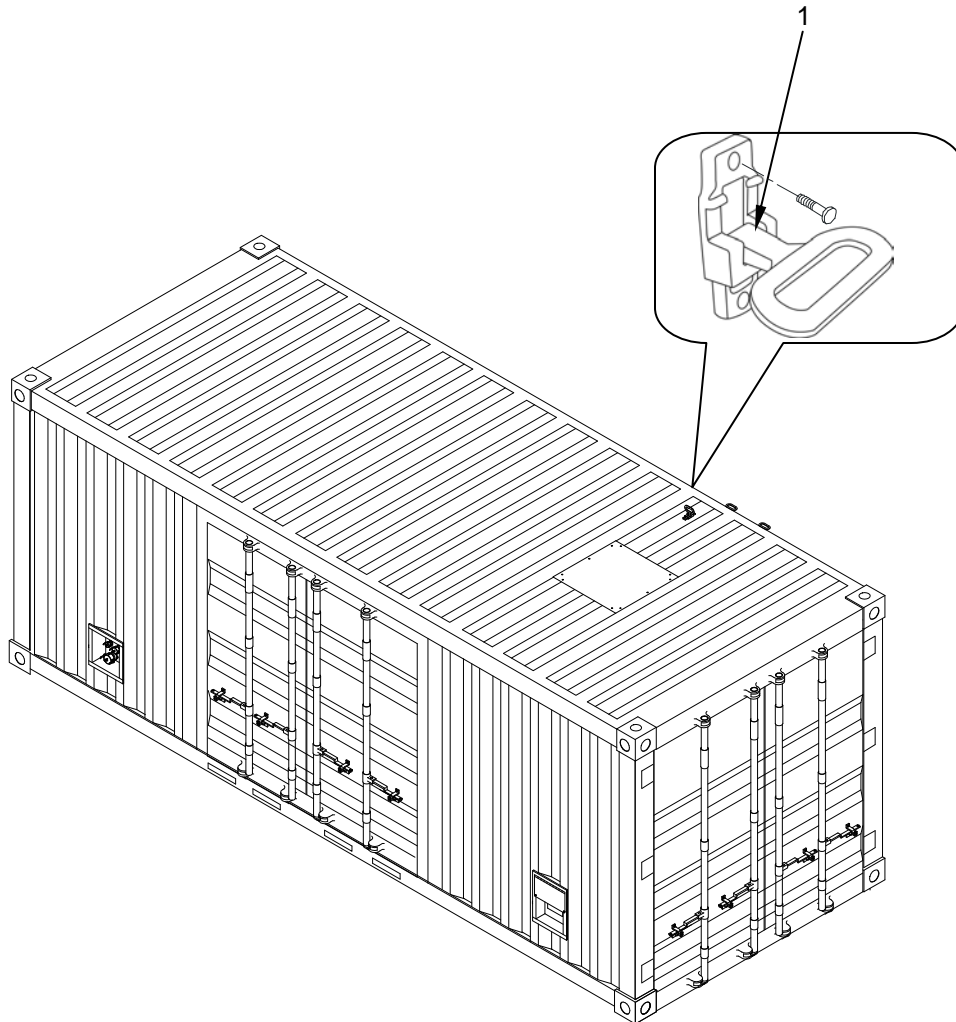


Figure 1. Lubricating the Folding Handgrip.

END OF TASK

REPLACE

1. To replace the folding handgrip (Figure 2, Item 1), remove the two bolts (Figure 2, Item 2) that secure the folding handgrip to the container.
2. Ensuring proper handgrip orientation, place a new folding handgrip in position on the container sidewall.
3. Install the two bolts that secure the folding handgrip to the container and tighten securely.

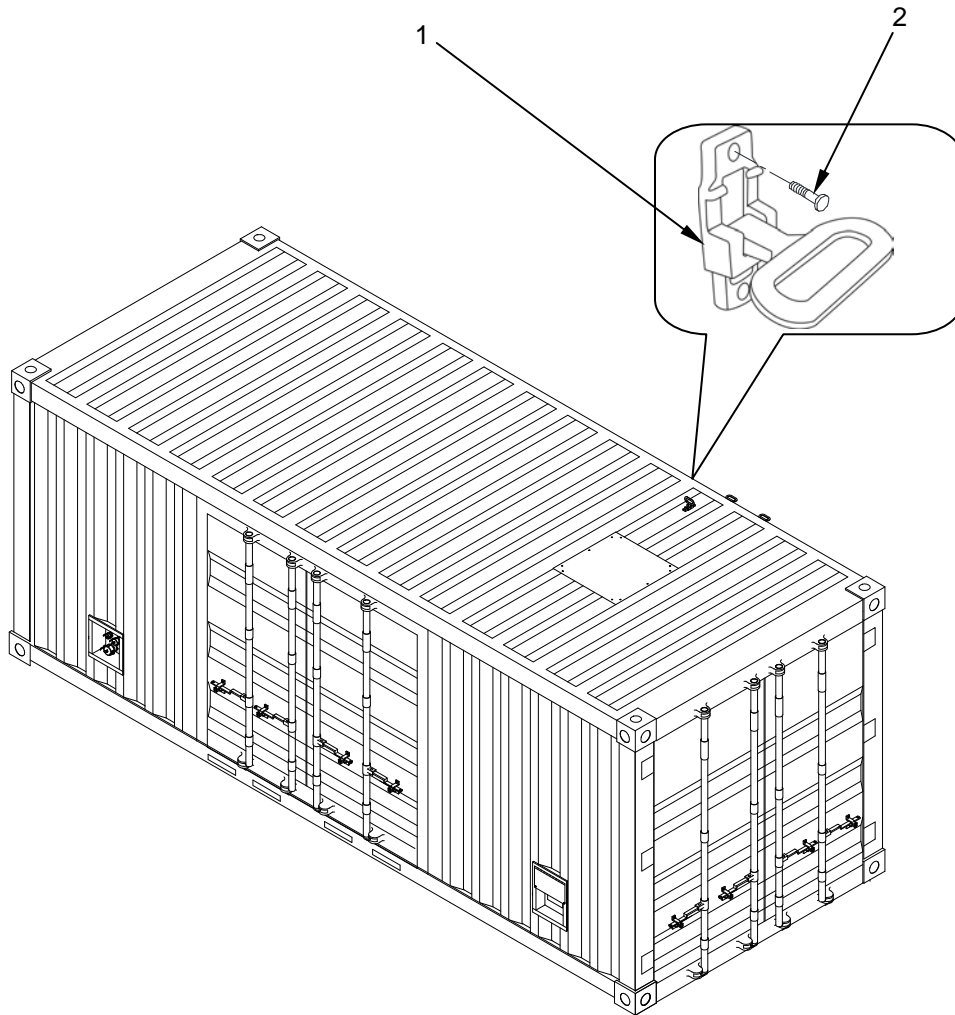


Figure 2. Replacing the Folding Handgrip.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
**POWER INLET/OUTLET (WASHER END) PANEL
 POWER INLET (DRYER END) PANEL
 SERVICE, REPAIR**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment
 Repairer 63J (1)

Materials/Parts

Cleaner, Solvent (WP 0101, Item 10)
 Rag, Wiping (WP 0101, Item 44)
 Sealant, RTV (WP 0101, Item 47)
 Tape, Antiseize, 1/2 in Wide X 260 in Long (WP
 0101, Item 60)
 Tape, Electrical Insulation (WP 0101, Item 62)
 Markers, Wire (WP 0101, Item 64)

Equipment Condition

FP-CBL set up
 All external power cables disconnected.
 All circuit breakers in OFF position

SERVICE**Clean Power Panel**

1. Disconnect power cables from power panels.
2. Using solvent and rags, clean corrosion from power panel and components.
3. Reconnect power cables.

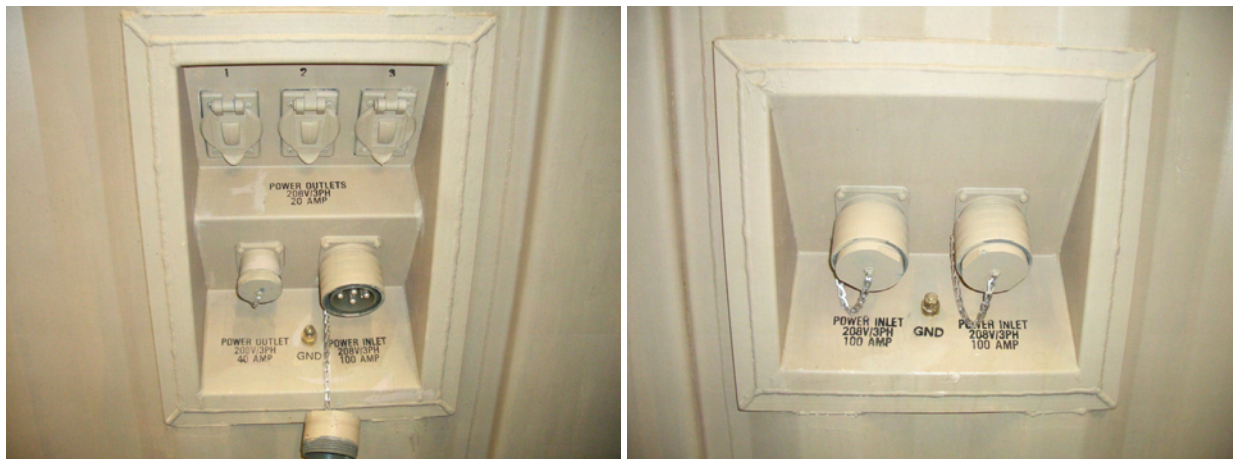


Figure 1. Power Inlet/Outlet Panel (Washer End) and Power Outlet Panel (Dryer End).

END OF TASK

REPAIR**NOTE**

Repair of the power inlet/outlet panels consists of replacing components housed in the panel. If the panel itself is unserviceable and unsuitable for the installation of the electrical components, notify your supervisor and/or field maintenance.

1. Identify damaged receptacles, binding post, terminals, or threaded studs that require replacement.
2. Install the replacement receptacles, binding post, terminals, or threaded stud.

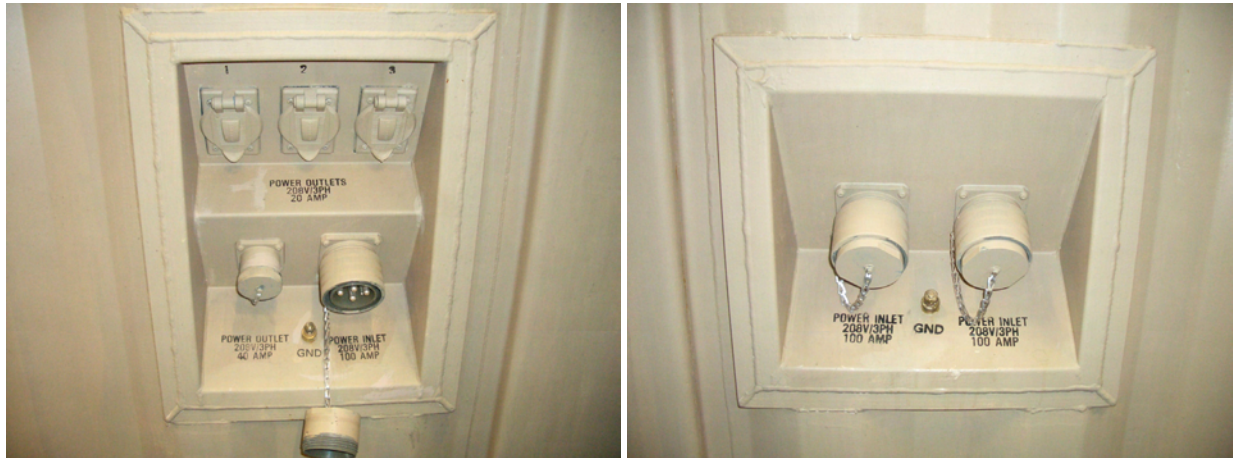


Figure 2. Power Inlet/Outlet Panel (Washer End) and Power Outlet Panel (Dryer End).

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**LIGHT FIXTURE, FLOURESCENT
SERVICE, REPAIR****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics
(WP 0099, Item 3)

Materials/Parts

Tape, Electrical Insulation, 3/4-inch Width
(WP 0101, Item 62)
Markers, Wire (WP 0101, Item 64)
Rag, Wiping (WP 0101, Item 44)
Detergent, Cleaning (WP 0101, Item 24)
Wire Nuts (WP 0101, Item 65)

Personnel Required

Interior Electrician 21R (1) or
Prime Power Production Specialist 21P (1) or
Quartermaster and Chemical Equipment Repairer
63J (1) or
Qualified Civil Electricians (1)

Equipment Condition

FP-CBL set up
Set all circuit breakers to OFF

SERVICE**Clean Fluorescent Light Fixture Lens Cover**

1. Unclip the six retaining clips (Figure 1, Item 2) and remove plastic lens cover (Figure 1, Item 1).
2. Clean the plastic lens cover with warm water and mild detergent.
3. Install the plastic lens cover (Figure 1, Item 1), and secure with six retaining clips (Figure 1, Item 2).

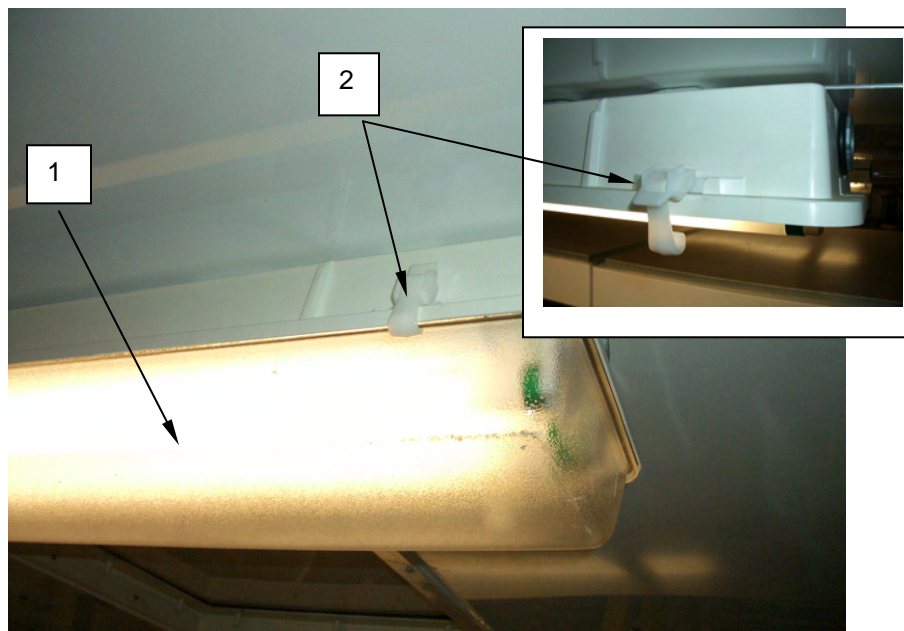


Figure 1. Cleaning the Fluorescent Light Fixture Lens Cover.

END OF TASK

REPAIR**Replace Fluorescent Light Bulbs****WARNING**

Always secure and tag circuit breakers and switches OFF before attempting any electrical repairs. Remember that the FP-CBL is a wet environment, and capable of posing a shock hazard even when personnel are not in direct contact with metal parts.

1. Unclip the six retaining clips (Figure 2, Item 2) and remove plastic lens cover (Figure 2, Item 1). Replace any damaged or missing retaining clips.
2. Support fluorescent bulb (Figure 2, Item 3) at each end and twist to disengage from fixture sockets.
3. Remove old bulb and replace with a new fluorescent bulb of equal size and wattage.
4. Insert new bulb (Figure 2, Item 3) in sockets and twist to lock.
5. Turn circuit breakers back on and check for normal operation.
6. Install the plastic lens cover (Figure 2, Item 1), and secure with the six retaining clips (Figure 2, Item 2).

REPAIR - CONTINUED

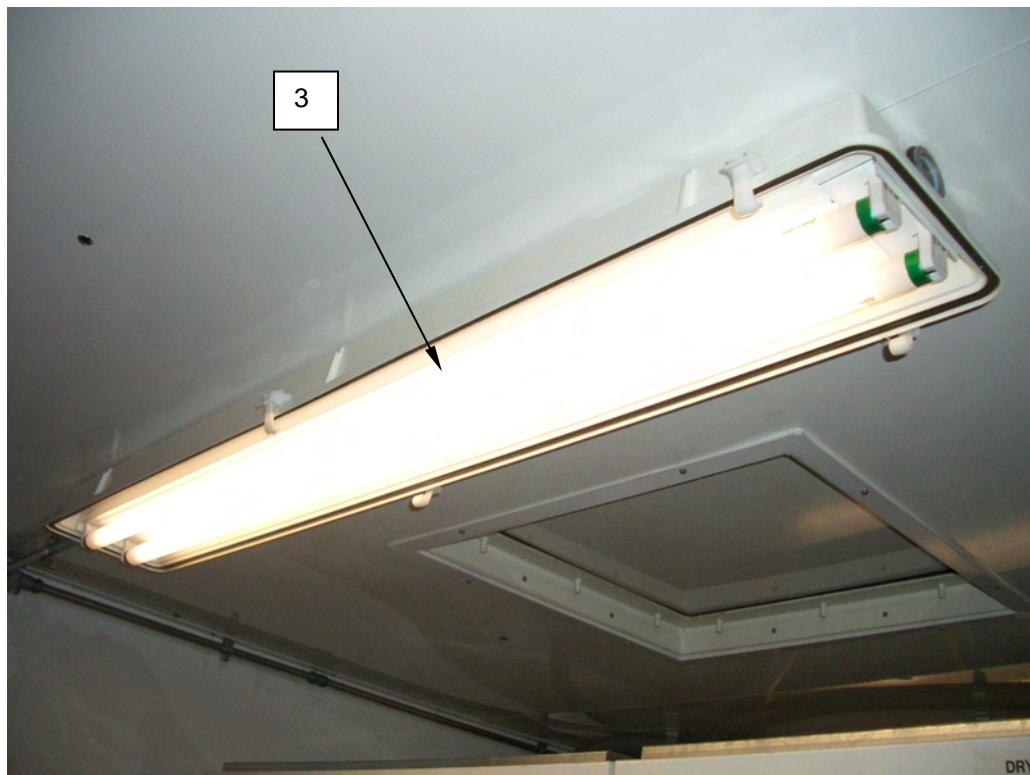
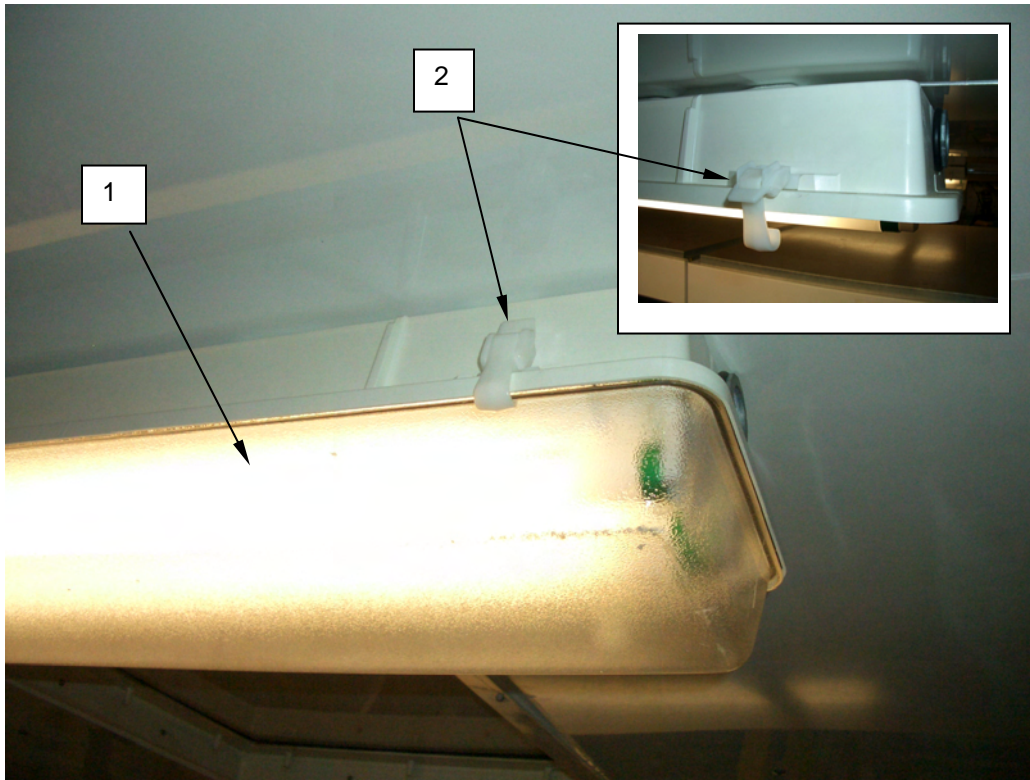


Figure 2. Replacing Fluorescent Light Bulbs.

END OF TASK

REPAIR - CONTINUED**Replace Ballast****WARNING**

Always secure and tag circuit breakers and switches OFF before attempting any electrical repairs. Remember that the FP-CBL is a wet environment, and capable of posing a shock hazard even when personnel are not in direct contact with metal parts.

1. Remove plastic lens cover and fluorescent bulbs IAW previous procedure.
2. Verify power is disconnected by ensuring circuit breaker switch #1 is OFF.
3. Using pliers, squeeze and remove the ballast cover clip (Figure 3, Item 1) while supporting ballast cover plate (Figure 3, Item 2).
4. Lower and remove ballast cover plate (Figure 3, Item 2).
5. Tag and disconnect wiring from ballast (Figure 3, Item 4).
6. Remove screw (Figure 3, Item 3) retaining ballast and remove ballast.
7. Install replacement ballast (Figure 3, Item 4) and retain with screw (Figure 3, Item 3) removed earlier.
8. Wire ballast (Figure 3, Item 4) as tagged.
9. Install ballast cover plate (Figure 3, Item 2) and retain with metal clip (Figure 3, Item 1).
10. Install fluorescent bulbs and lens cover as described in previous section.
11. Switch circuit breaker #1 ON.
12. Operate and verify normal operation.
13. Install lens cover.

REPAIR - CONTINUED

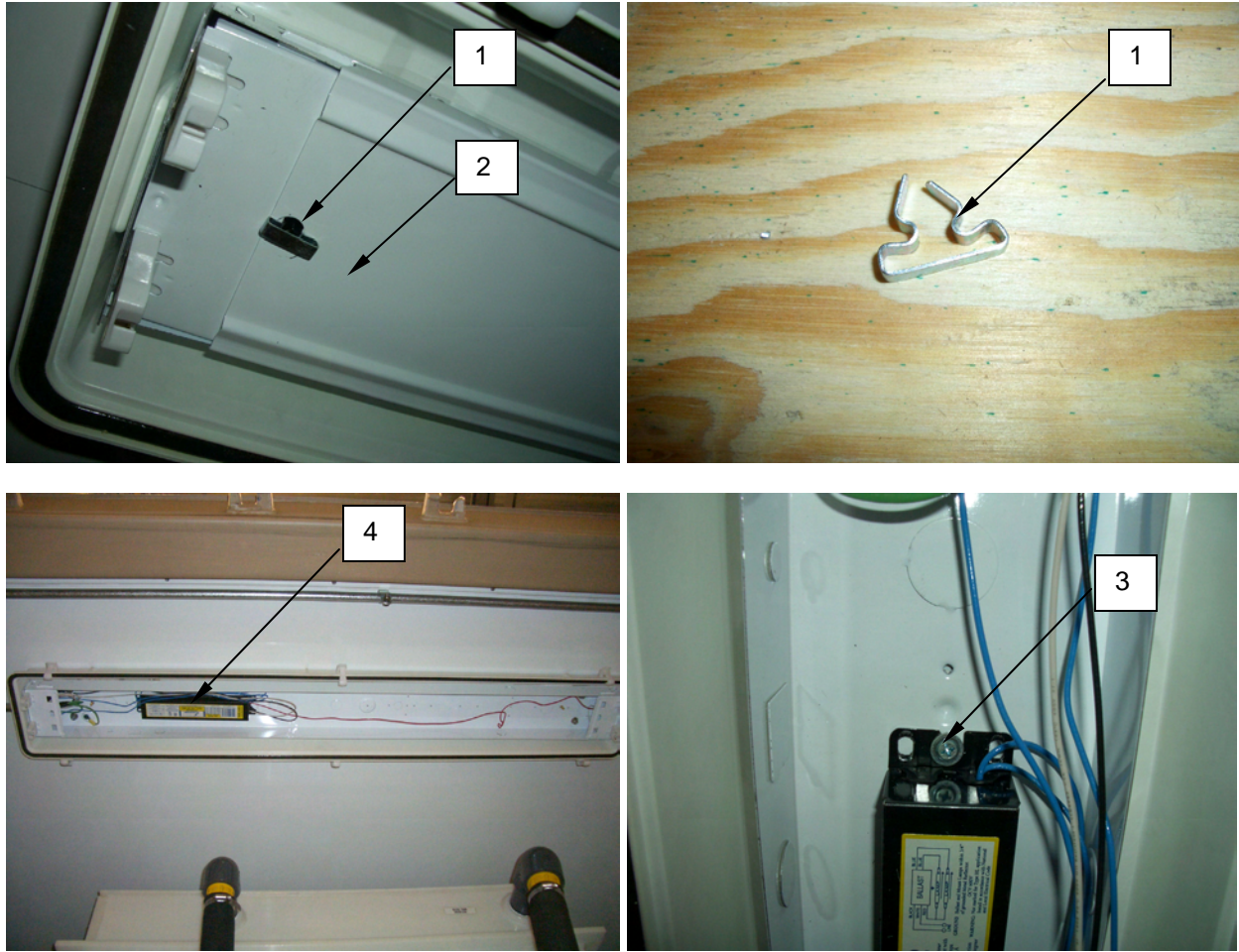


Figure 3. Replacing Ballast.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**CIRCUIT BREAKER
TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**Tape, Electrical Insulation, 3/4-in Width
(WP 0101, Item 62)
Markers, Wire (WP 0101, Item 64)**Equipment Condition**FP-CBL set up.

TEST**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Switch the main circuit breaker (Figure 1, Item 1) and the dryer circuit breaker (Figure 1, Item 4) to OFF.
2. Disconnect all power cables to the FP-CBL.
3. Remove screws retaining circuit breaker box cover (Figure 1, Item 5) (Main circuit breaker panel only).
4. Remove the circuit breaker box cover (Figure 1, Item 5) (Main circuit breaker panel only).
5. Remove screws retaining the circuit breaker panel cover (Figure 1, Item 3).
6. Remove the circuit breaker panel cover (Figure 1, Item 3).
7. Disconnect wires from each side of breaker. Leaving wires connected to circuit breaker could give resistance when placed in the ON position.
8. In turn, use a multi-meter set to read resistance (Ohms) to check for continuity at circuit breakers. Do this by placing a test lead at opposite terminals of each breaker tested. Three phase breakers require each leg to be tested separately.
9. If continuity is present with circuit breaker in OFF position, replace circuit breaker.
10. Switch circuit breaker to ON.
11. Test for continuity as described in step 7. If no continuity is present, replace circuit breaker.
12. Reinstall circuit breaker panel cover.
13. Reconnect power and monitor for normal operation.



END OF TASK

Figure 1. Test Circuit Breakers.

REPLACE**Replace Circuit Breaker on Main Breaker Panel****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Switch all circuit breakers in main breaker panel and dryer breaker panel to OFF.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from exterior power input panels of FP-CBL.
4. Remove screws (Figure 2, Item 1) retaining the circuit breaker box cover (Figure 2, Item 2) and remove the circuit breaker box cover.
5. Remove the screws (Figure 2, Item 3) retaining the circuit breaker panel cover (Figure 2, Item 4) and lift the circuit breaker panel cover from circuit breaker box.
6. Tag and disconnect wires (Figure 2, Item 6) from the circuit breaker (Figure 2, Item 7) to be replaced.
7. Remove screw (Figure 2, Item 5) retaining the side of the circuit breaker opposite the wire connection and remove defective circuit breaker by grasping and pulling out.

CAUTION

Replace damaged or malfunctioning circuit breakers with new ones of equal amperage only. Installing a circuit breaker of higher amperage poses a severe risk of fire in the FP-CBL.

8. Install new circuit breaker (Figure 2, Item 7) by inserting and pushing into position. Install the screw (Figure 2, Item 5) retaining the breaker on the side opposite from the wire connection. Tighten securely.
9. Connect wires (Figure 2, Item 6) to circuit breaker as tagged earlier. Tighten securely.
10. Install circuit breaker panel cover (Figure 2, Item 4) and retain with screws (Figure 2, Item 3).
11. Install circuit breaker box cover (Figure 2, Item 2) and retain with screws (Figure 2, Item 1).
12. Re-connect all power cables to exterior power input panels of FP-CBL.
13. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
14. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

REPLACE - CONTINUED

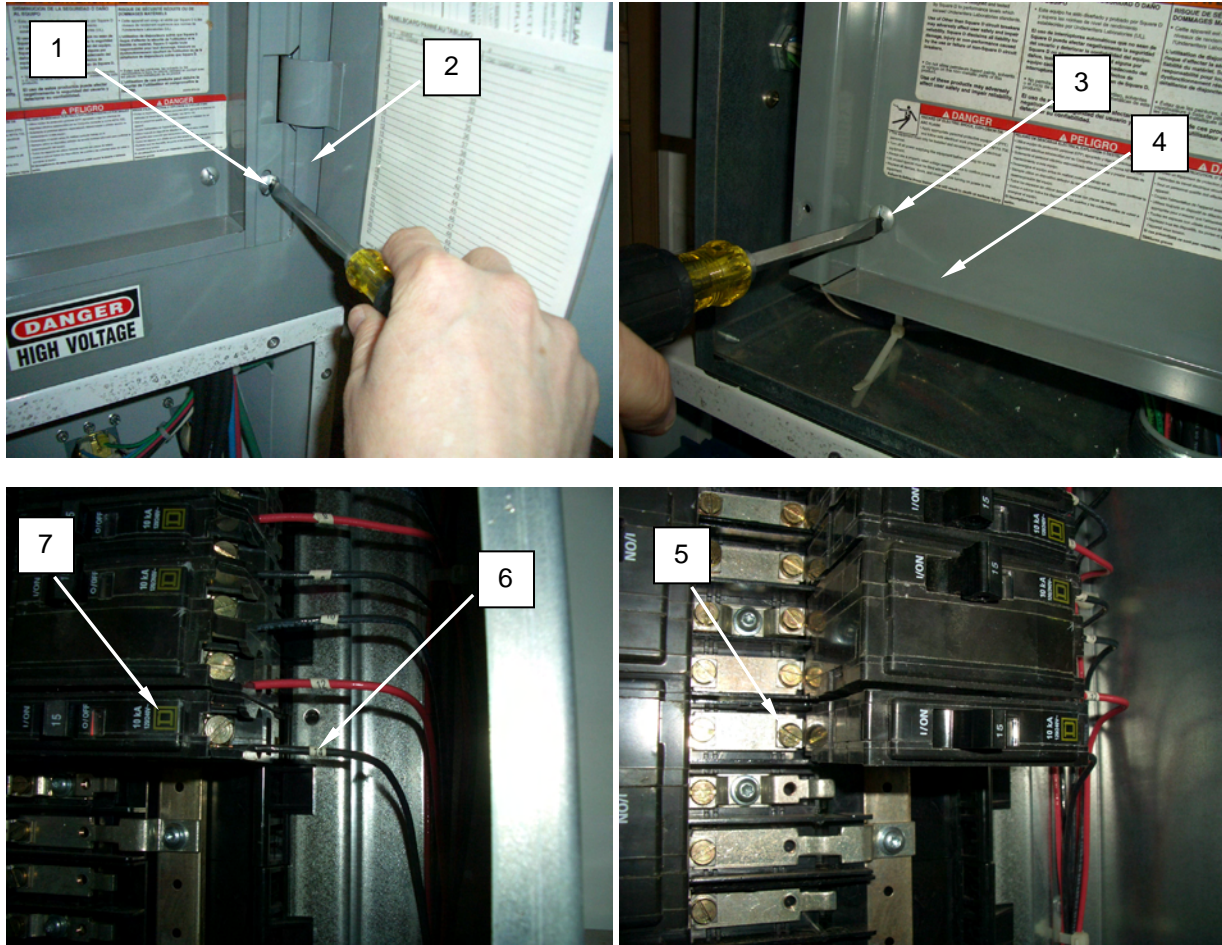


Figure 2. Replace Circuit Breaker in Main Breaker Panel.

END OF TASK

REPLACE - CONTINUED**Replace Circuit Breaker on Dryer Breaker Panel****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Switch all circuit breakers in dryer breaker panel and main breaker panel to OFF.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from exterior power input panels of FP-CBL.
4. Remove screws (Figure 3, Item 2) retaining the circuit breaker box cover (Figure 3, Item 1) and remove the circuit breaker box cover.
5. Tag all wires (Figure 3, Item 3) on the upper and lower portion of the circuit breaker (Figure 3, Item 6) to be replaced.
6. Loosen the socket head screws (Figure 3, Item 5) that secures the retaining plate (Figure 3, Item 4) holding each wire and pull each wire from behind the retaining plate.
7. Remove the four screws (Figure 3, Item 7) securing the breaker to the breaker panel. Remove defective circuit breaker by grasping and pulling out.

CAUTION

Replace damaged or malfunctioning circuit breakers with new ones of equal amperage only. Installing a circuit breaker of higher amperage poses a severe risk of fire in the FP-CBL.

8. Install new circuit breaker (Figure 3, Item 6) by inserting and pushing into position. Install the four screws (Figure 3, Item 7) securing the breaker to the breaker panel. Tighten securely.
9. Connect wires (Figure 3, Item 3) to circuit breaker as tagged earlier. Tighten each socket head screw (Figure 3, Item 5) securely.
10. Install circuit breaker box cover (Figure 3, Item 1) and retain with screws (Figure 3, Item 2).
11. Re-connect all power cables to exterior power input panels of FP-CBL.
12. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
13. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

REPLACE - CONTINUED

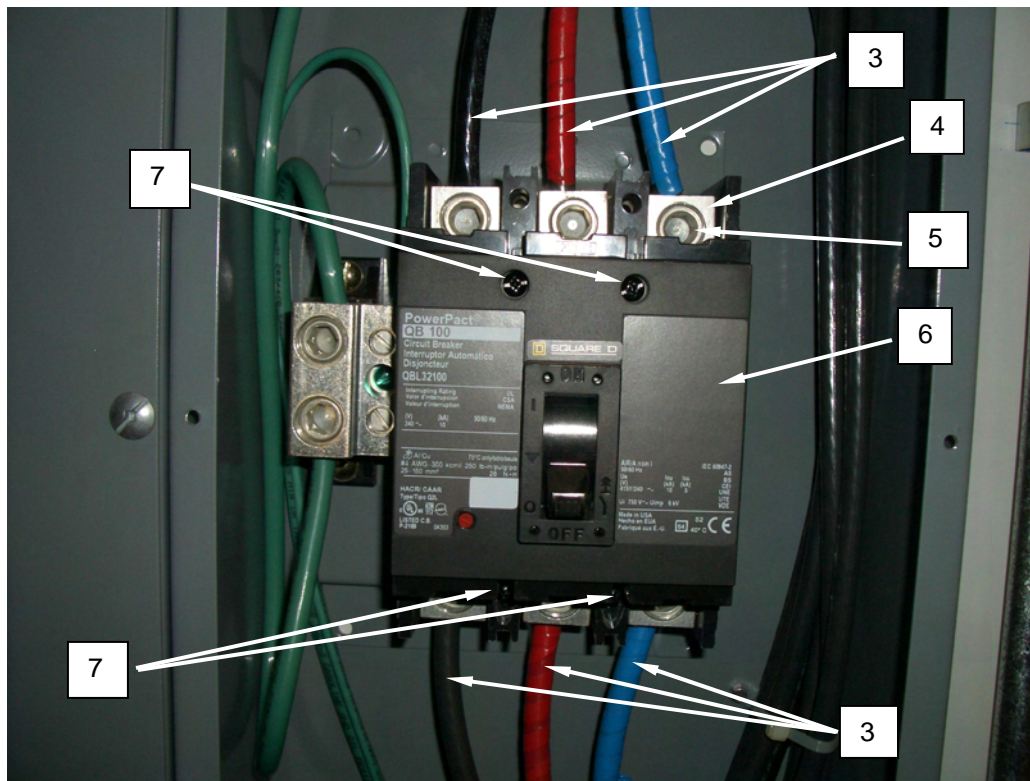
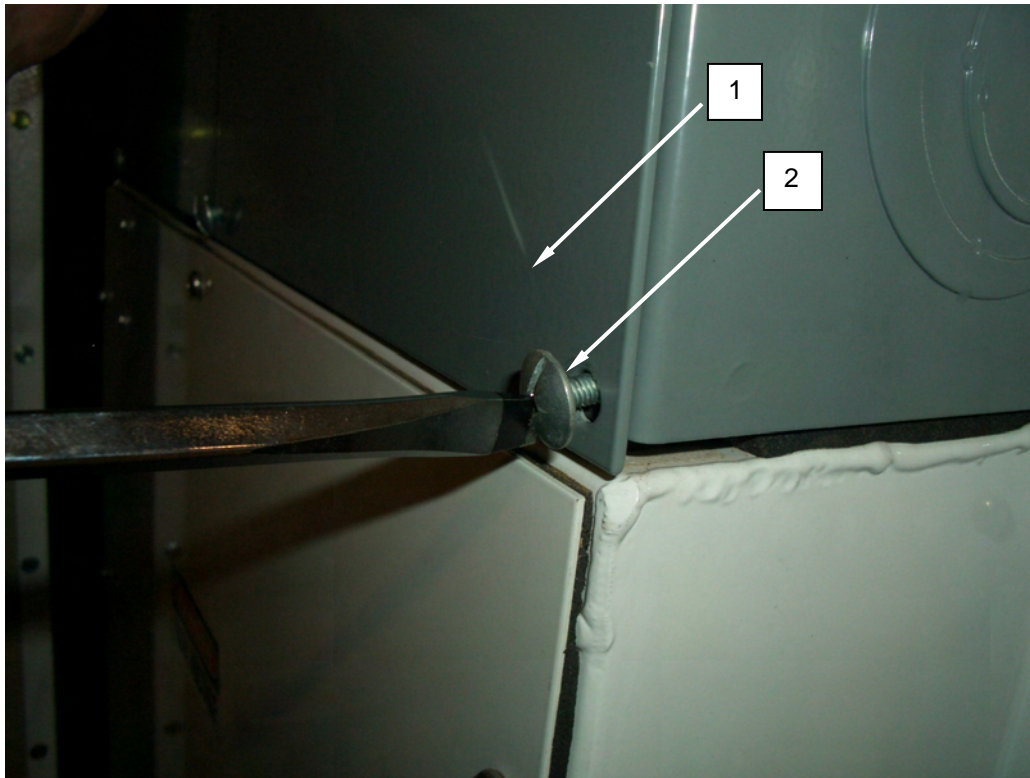


Figure 3. Replacing Dryer Circuit Breaker.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

POWER INPUT RECEPTACLES
TEST, REPLACE

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)

Materials/Parts

Tape, Electrical Insulation, 3/4-in Width (WP 0101, Item 62)
Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up and power connected for TEST only.
All circuit breakers and switches to OFF position.

TEST

WARNING



This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

NOTE

The procedure is identical for both the main power input receptacle and the dryer power input receptacles. The main power input receptacle is illustrated throughout these procedures.

1. Turn off all circuit breakers on the main breaker panel and dryer breaker panel.
2. Disconnect all power input cables (Figure 1, Item 3) from the receptacles (Figure 1, Item 2) on the FP-CBL power panels (Figure 1, Item 1).
3. Remove the panel cover (Figure 1, Item 4) on the interior of the container.
4. At the rear of the power panel (Figure 1, Item 1), unscrew the retainer (Figure 1, Item 5) by grasping with pliers or wrench on the flat sections. Pull the receptacle (Figure 1, Item 2) out of the sleeve.
5. Remove screws retaining the circuit breaker box cover (Figure 1, Item 6) (Main Circuit Breaker Panel only).
6. Remove the circuit breaker box cover (Figure 1, Item 7) (Main Circuit Breaker Panel only).
7. Remove screws (Figure 1, Item 8) retaining the circuit breaker panel cover (Figure 1, Item 9).
8. Remove the circuit breaker panel cover (Figure 1, Item 9).

TEST - CONTINUED

9. Use a multimeter to check for zero resistance between each prong (Figure 1, Item 12) and the corresponding wire connection (Figure 1, Item 10) on the main circuit breaker (Figure 1, Item 11). If testing a dryer power input receptacle use a multimeter to check for zero resistance between each prong on the dryer power input receptacle and the corresponding wire connection on the corresponding dryer circuit breaker.
10. Check for secure connection and ensure that the wiring is in good condition. Ensure that there are no shorts between prongs.
11. Replace a receptacle (Figure 1, Item 2) or wiring that is shown to be defective in any way.
12. If the receptacle meets that continuity and shorts check, re-install the receptacle (Figure 1, Item 2), and secure with retainer (Figure 1, Item 5).
13. Install the panel cover (Figure 1, Item 4) on the interior of the FP-CBL.
14. Reinstall circuit breaker panel cover (Figure 1, Item 9) and circuit breaker box cover (Figure 1, Item 7).
15. Re-connect all power cables (Figure 1, Item 3) to exterior of FP-CBL and verify normal operation.

TEST - CONTINUED

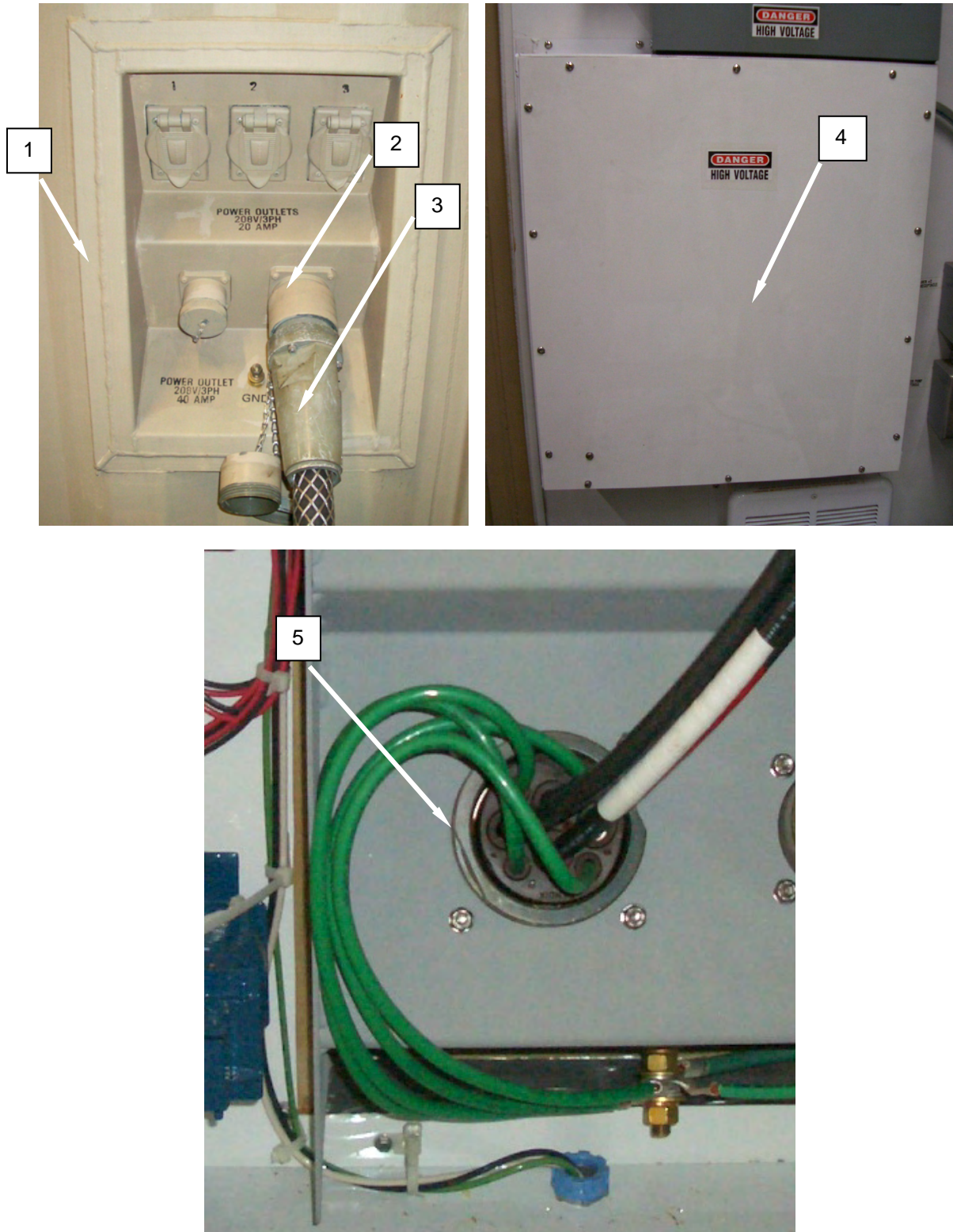


Figure 1. Testing the Power Input Receptacle (Sheet 1 of 2).

TEST - CONTINUED

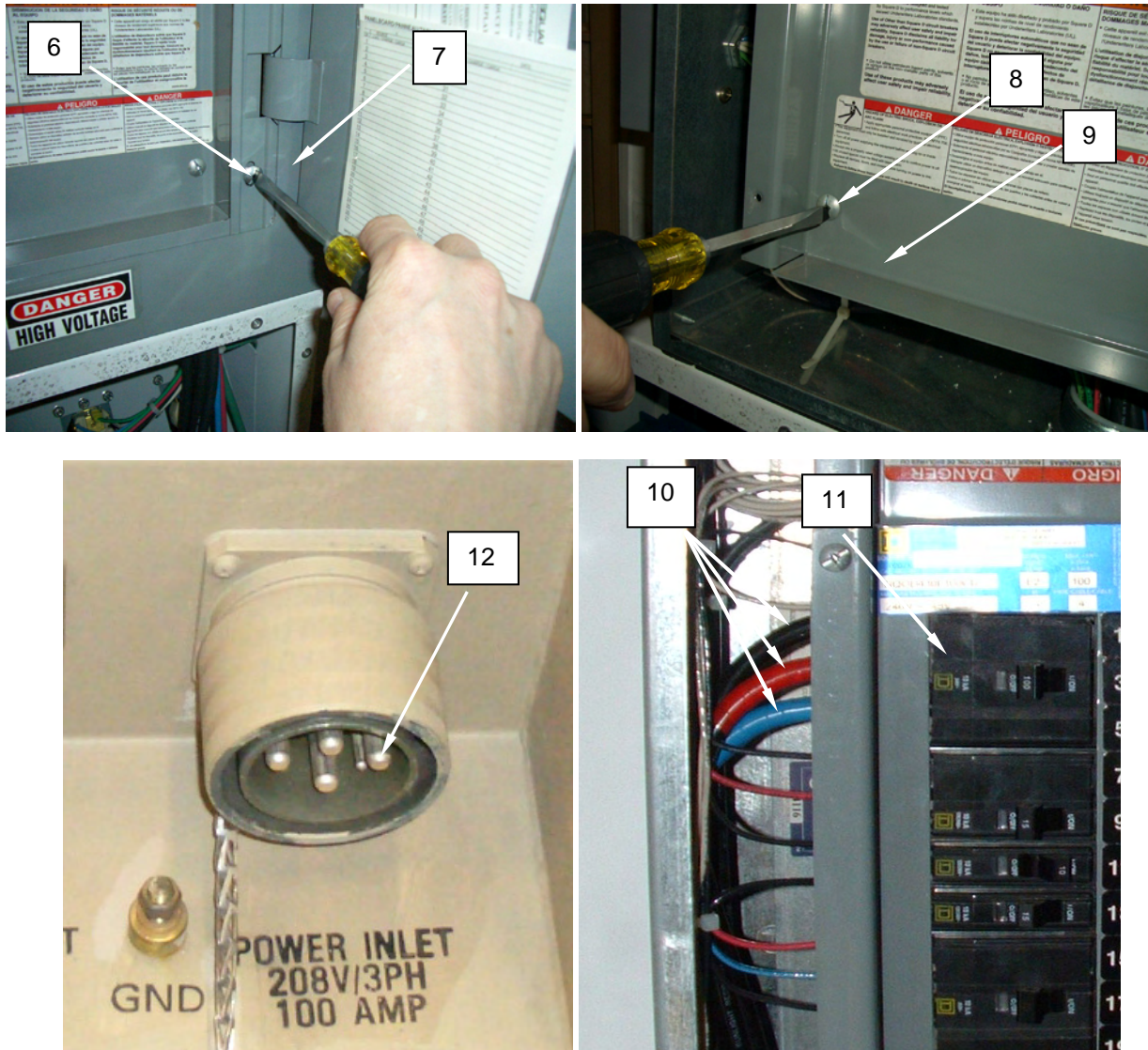


Figure 1. Testing the Power Input Receptacle (Sheet 2 of 2).

END OF TASK

REPLACE**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Place all circuit breakers in the main breaker panel and dryer breaker panel to the OFF position. Disconnect all power cables from both exterior FP-CBL power panels (Figure 2, Item 1).
2. Remove screws and lockwashers that secure the interior power panel access cover (Figure 2, Item 3) at the rear of the power panel. Remove panel and set aside.
3. To replace the power input connector (Figure 2, Item 2), tag all wires.
4. Trace wires leading from the connector back to their junction point and disconnect wires. Clip any tie wraps as necessary.
5. Unscrew the retainer (Figure 2, Item 6) and pull the connector body out of the sleeve. Remove the defective connector body (Figure 2, Item 4).
6. Remove the screws, nuts, and lockwashers (Figure 2, Item 5) that secure the power input connector. Remove the outer body (Figure 2, Item 2) of the power input connector from the power entry panel from the outside of the FP-CBL.
7. Install a new power input connector in position on the power entry panel from the outside of the FP-CBL and secure with screws, nuts, and lockwashers (Figure 2, Item 5).
8. Connect all wires from power input connector to their connection points as tagged earlier. Install new tie wraps as necessary to replace those removed earlier.
9. Install the interior power panel access cover (Figure 2, Item 3) at the rear of the power panel with screws and lockwashers removed earlier. Tighten securely.
10. Reconnect all exterior power cables and verify normal operation.

REPLACE - CONTINUED

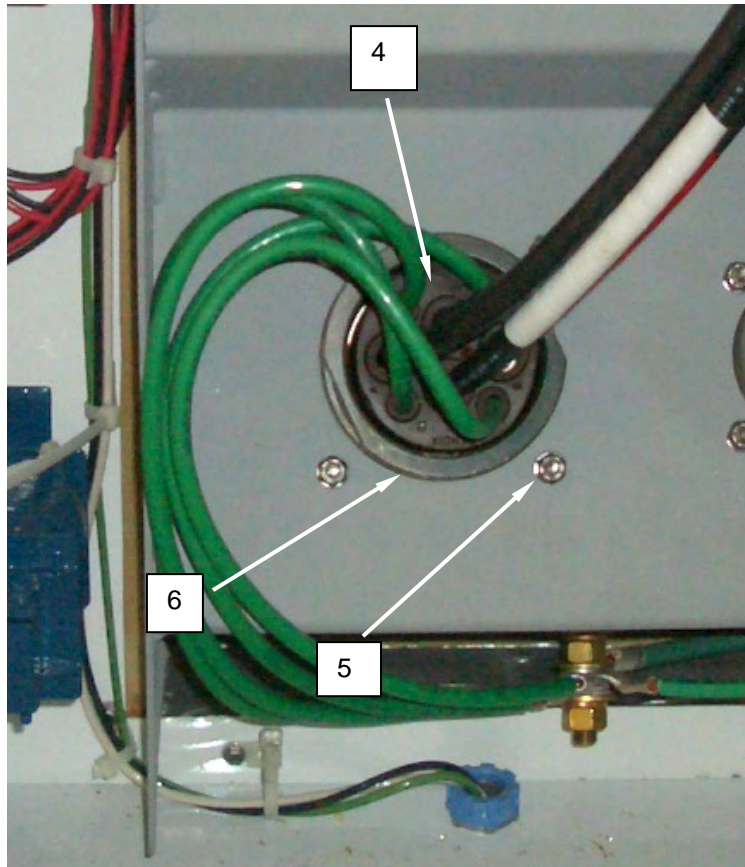
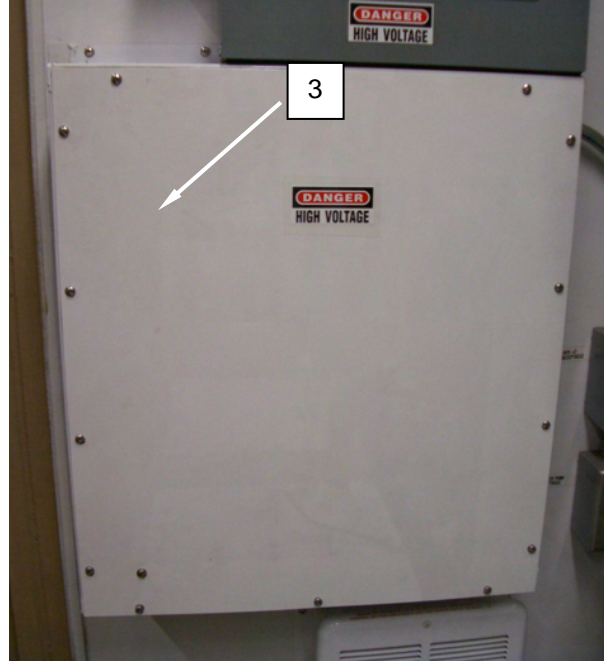
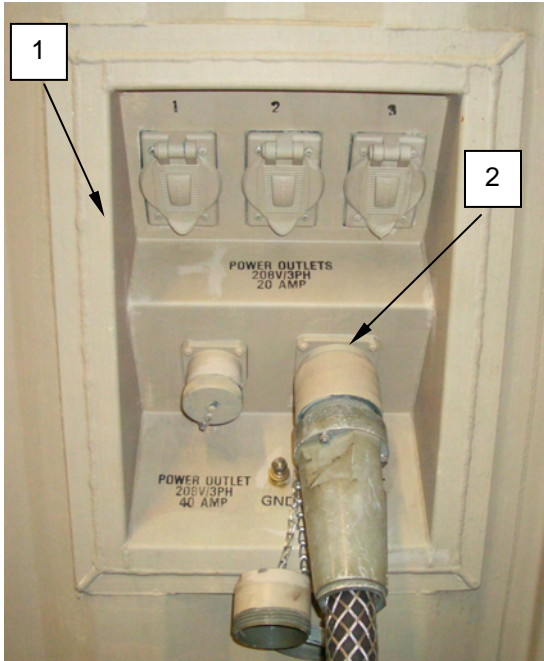


Figure 2. Replacing the Power Input Connector.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**LINE REACTOR
INSPECT, TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Tape, Electrical Insulation, 3/4-in Width
(WP 0101, Item 62)
Wire Markers (WP 0101, Item 64)

Equipment Condition

All circuit breakers in the OFF position.
Disconnect all cables from exterior of FP-CBL.

INSPECT**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Place all circuit breakers on main breaker panel and dryer breaker panel in the OFF position.
2. Disconnect all power cables from exterior of FP-CBL.
3. Remove screws retaining power input panel interior cover (Figure 1, Item 1) and remove cover. Set aside.
4. Inspect line reactor (Figure 1, Item 2) for loose connections, signs of burning, or material damage.
5. Install power input panel interior cover and retain with screws set aside earlier.
6. Connect power cables and monitor for normal system operation.

INSPECT - CONTINUED

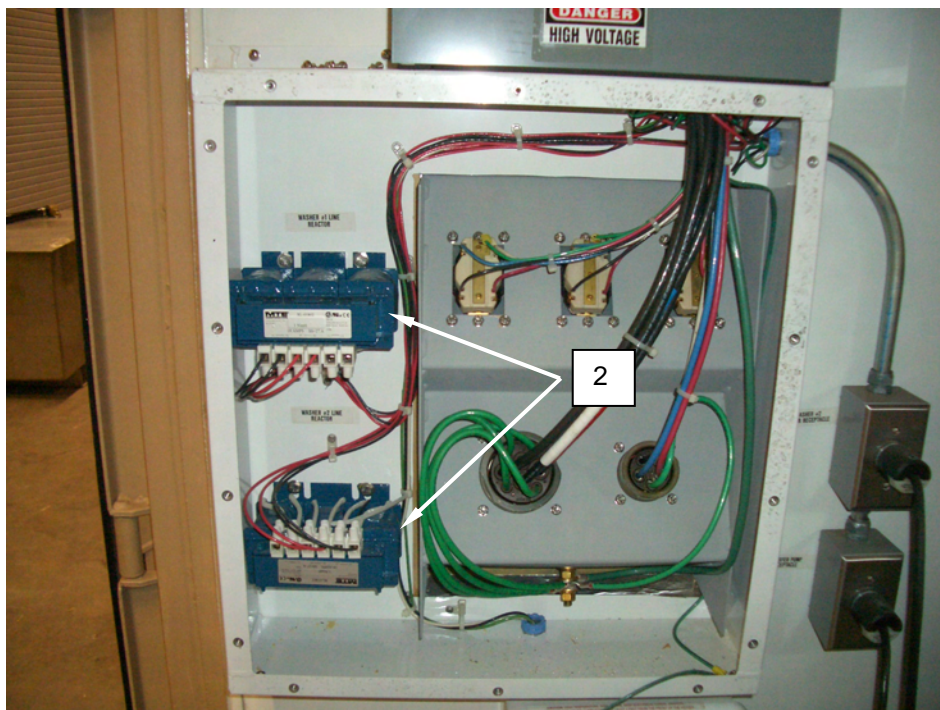
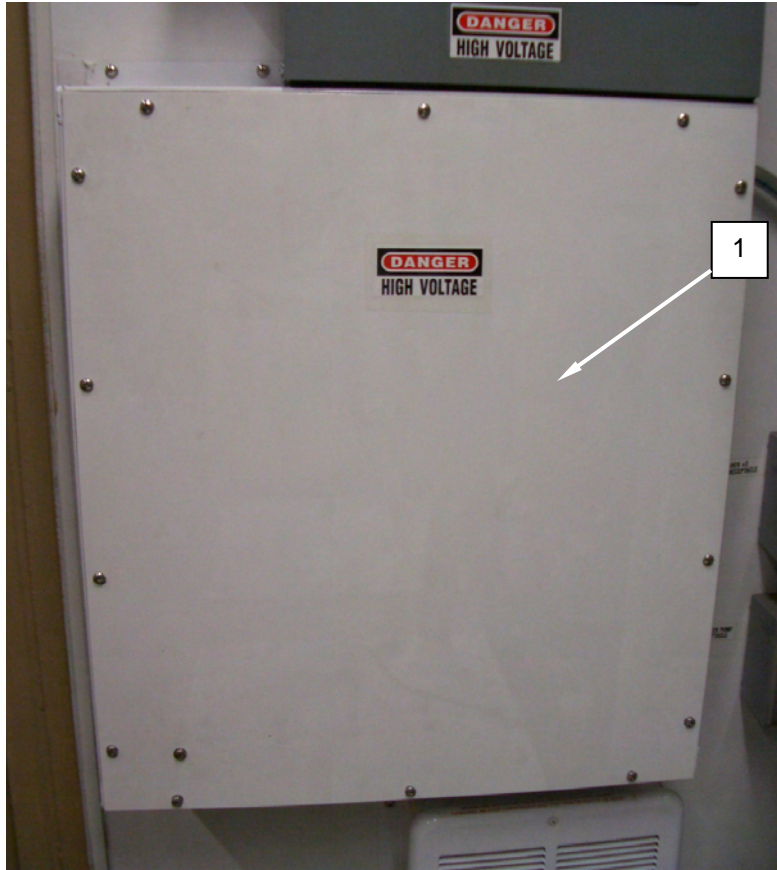


Figure 1. Inspect the Line Reactors.

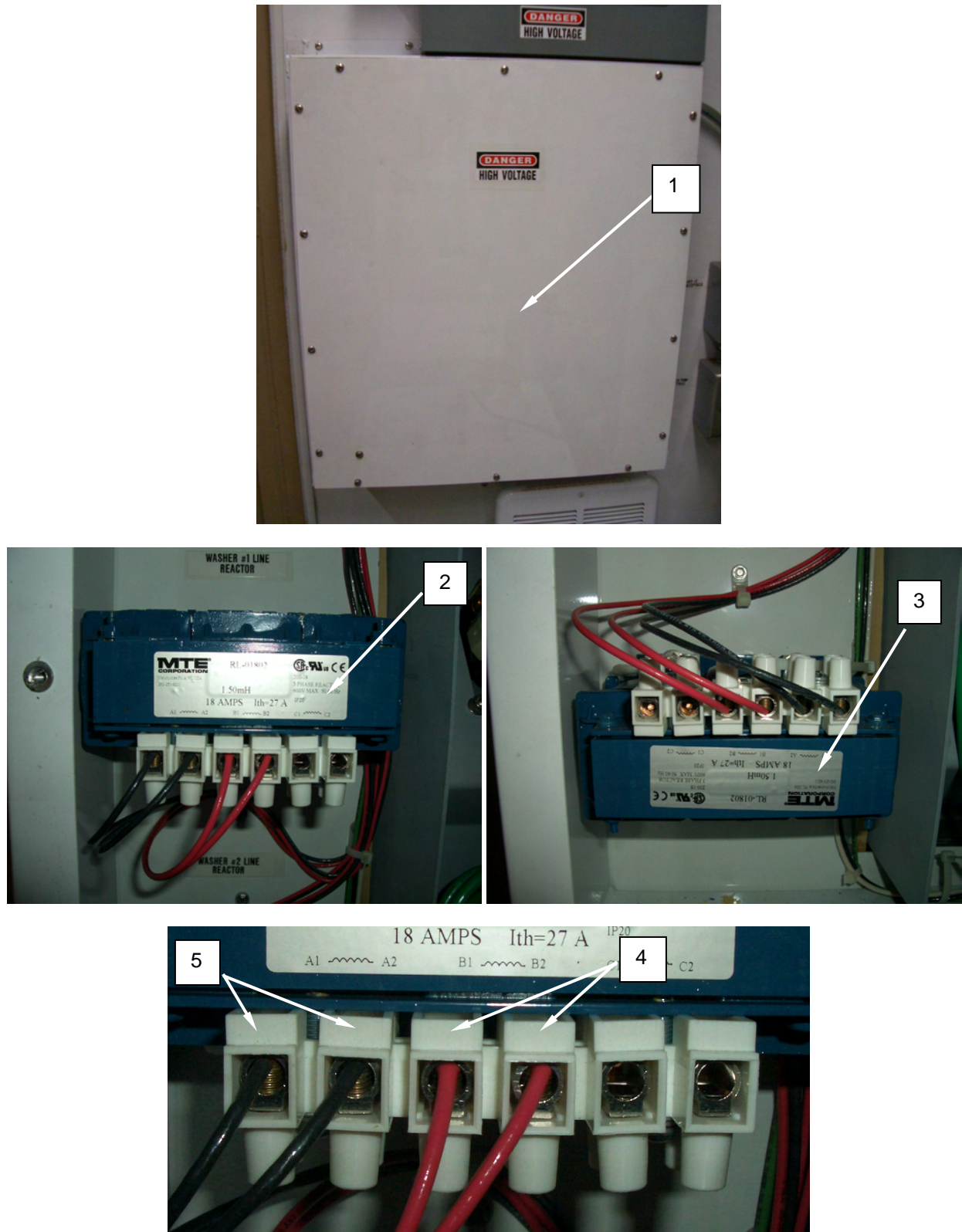
END OF TASK

TEST**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Remove screws retaining power input panel interior access cover (Figure 2, Item 1) and set aside.
2. Switch the main breaker to the ON position as well as breakers 4 and 6 when testing the Washer #1 line reactor (Figure 2, Item 2), or breakers 10 and 12 when testing the Washer #2 line reactor (Figure 2, Item 3).
3. Use a voltmeter to test for 208 VAC at reactor output terminals labeled B1 and B2 (Figure 2, Item 4).
4. Use a voltmeter to check for 208 VAC at reactor input terminals labeled A1 and A2 (Figure 2, Item 5).
5. Replace an open or shorted reactor IAW the section of this work package entitled REPLACE.
6. Place all circuit breakers in the OFF position and disconnect all power cables from the exterior of the FP-CBL.
7. Use an ohmmeter to test for a short to ground from both the reactor output terminals labeled B1 and B2 (Figure 2, Item 4) and the reactor input terminals labeled A1 and A2 (Figure 2, Item 5).
8. Install power input panel interior access cover (Figure 2, Item 1) and retain with screws set aside earlier.
9. Connect power and monitor for normal operation.

TEST - CONTINUED



END OF TASK

REPLACE**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

WARNING

Line reactors weigh approximately 5 pounds each and should be supported adequately to avoid pinching fingers. Failure to observe safety precautions may result in injury to personnel.

1. Place all circuit breakers in the OFF position.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only.
3. Disconnect all power cables from exterior power input panels of FP-CBL.
4. Remove screws retaining power input panel interior access cover (Figure 3, Item 1) and set aside.
5. Tag and disconnect wiring (Figure 3, Item 3) from the line reactor (Figure 3, Item 2) being replaced.

CAUTION

Support the line reactor when removing the mounting hardware to prevent this component from falling and damaging other components within the panel.

6. Remove screws and washers retaining the line reactor (Figure 3, Item 2), and remove the line reactor.
7. Install the replacement line reactor (Figure 3, Item 2) and retain with screws and washers.
8. Connect wiring (Figure 3, Item 3) to the replacement line reactor (Figure 3, Item 2) as tagged earlier.
9. Install power input panel interior access cover (Figure 3, Item 1) and retain with screws set aside earlier.
10. Re-connect all power cables to exterior power input panels of FP-CBL.
11. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
12. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

REPLACE - CONTINUED

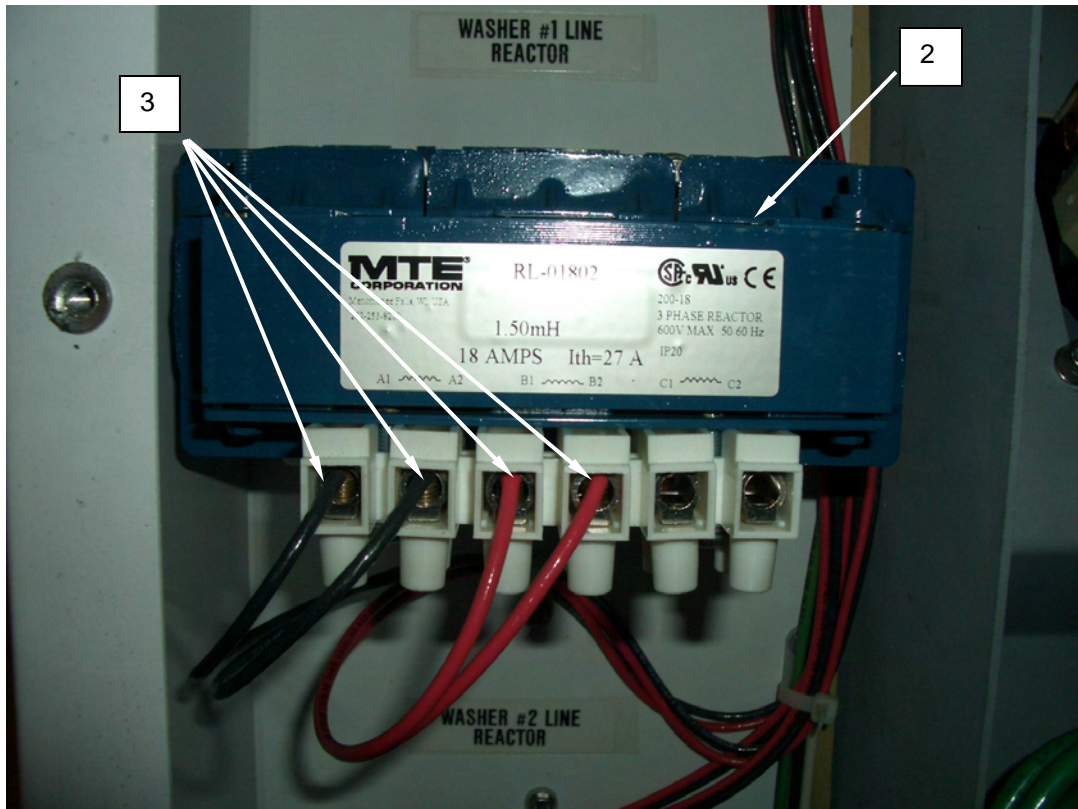
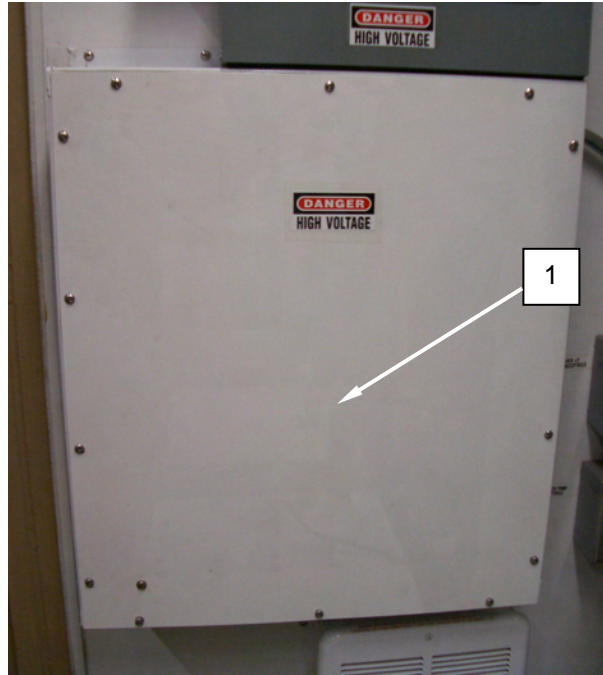


Figure 3. Replace the Line Reactors.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
POWER OUTPUT RECEPTACLES
TEST, REPLACE

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Tape, Electrical Insulation, 3/4-in Width
(WP 0101, Item 62)
Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up.
Main breaker set to OFF position.

TEST**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Place all circuit breakers in the main breaker panel and dryer breaker panel to the OFF position.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from exterior power input panels of FP-CBL (Figure 1, Item 1).
4. Remove screws retaining the main circuit breaker box cover (Figure 1, Item 2) and remove the circuit breaker box cover. Set aside.
5. Remove screws retaining the circuit breaker panel cover (Figure 1, Item 3) and remove the circuit breaker panel cover. Set aside.
6. Loosen the screws and remove the interior power panel access cover (Figure 1, Item 4) at the rear of the power panel. Set aside.

NOTE

When viewed from the interior of the power panel, receptacle no. 1 is at the far right, receptacle no. 2 is in the center, and receptacle no. 3 is on the left.

7. To test receptacle no. 1 (Figure 1, Item 7) of the 208V, 3 Phase, 20 A power outlets, use a multimeter and test for continuity between each screw terminal on receptacle no. 1 and the corresponding wire connection on output circuit breakers 19, 21, and 23 (Figure 1, Item 9). If there is no continuity between any screw terminal and designated circuit breaker, check the integrity of each connection. If all connections are secure, replace the receptacle as detailed later in this work package.

TEST – CONTINUED

8. To test receptacle no. 2 (Figure 1, Item 6) of the 208V, 3 Phase, 20 A power outlets, use a multimeter and test for continuity between each screw terminal on receptacle no. 2 and the corresponding wire connection on output circuit breakers 13, 15, and 17 (Figure 1, Item 10). If there is no continuity between any screw terminal and designated circuit breaker, check the integrity of each connection. If all connections are secure, replace the receptacle as detailed later in this work package.
9. To test receptacle no. 3 (Figure 1, Item 5) of the 208V, 3 Phase, 20 A power outlets, use a multimeter and test for continuity between each screw terminal on receptacle no. 3 and the corresponding wire connection on output circuit breakers 7, 9, and 11 (Figure 1, Item 11). If there is no continuity between any screw terminal and designated circuit breaker, check the integrity of each connection. If all connections are secure, replace the receptacle as detailed later in this work package.
10. Use a multimeter and test each receptacle for any shorts between the terminal screws. If a short is measured between any of the screw terminals replace the receptacle as detailed later in this work package.

NOTE

When viewed from the interior of the power panel, the 208V, 3 Phase, 40 A, MS connector is on the bottom right of the power panel.

11. To test the 208V, 3 Phase, 40 A MS connector (Figure 1, Item 12), unscrew the retainer (Figure 1, Item 14) and pull the connector body out of the sleeve. Use a multimeter to test for continuity between each terminal (Figure 1, Item 13) of the MS connector and the corresponding wire connection on circuit breakers 25, 27 and 29 (Figure 1, Item 8). If there is no continuity between a terminal and the designated circuit breaker, check the integrity of each connection. If all connections are secure, replace the receptacle as detailed later in this work package.
12. Use a multimeter to check for any shorts between the terminals. If a short is measured between any of the terminals replace the receptacle as detailed later in this work package.
13. If the MS connector is determined to be in serviceable condition reinstall the connector (Figure 1, Item 12), secure with retainer (Figure 1, Item 14).
14. If all power output receptacles are determined to be serviceable, install the interior power panel access cover (Figure 1, Item 4) set aside earlier.
15. Reinstall circuit breaker panel cover (Figure 2, Item 3) and circuit breaker box cover (Figure 2, Item 2) set aside earlier.
16. Re-connect all power cables to exterior power input panels of FP-CBL.
17. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
18. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

TEST - CONTINUED

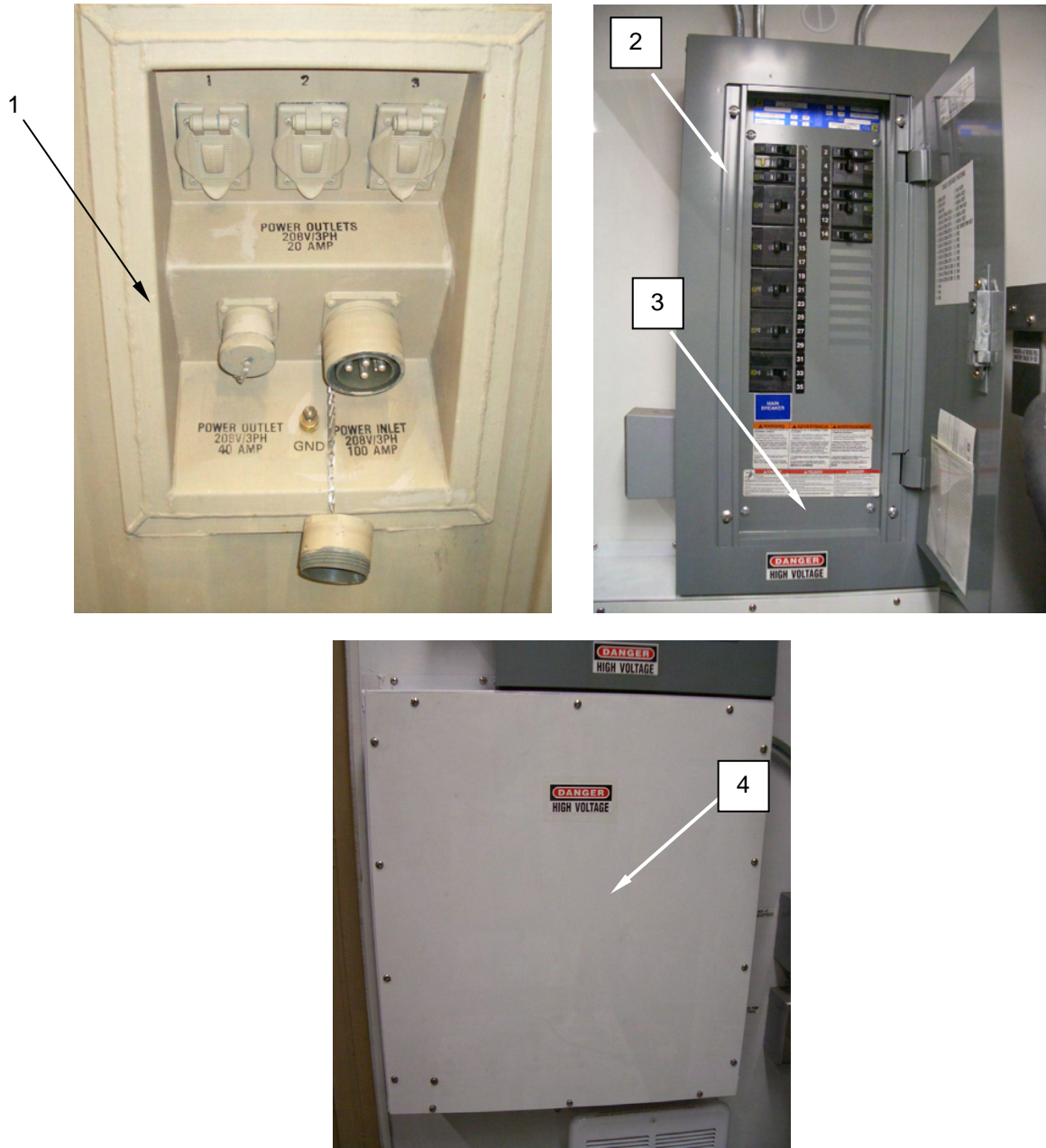


Figure 1. Test the Power Output Receptacle (Sheet 1 of 3).

TEST – CONTINUED

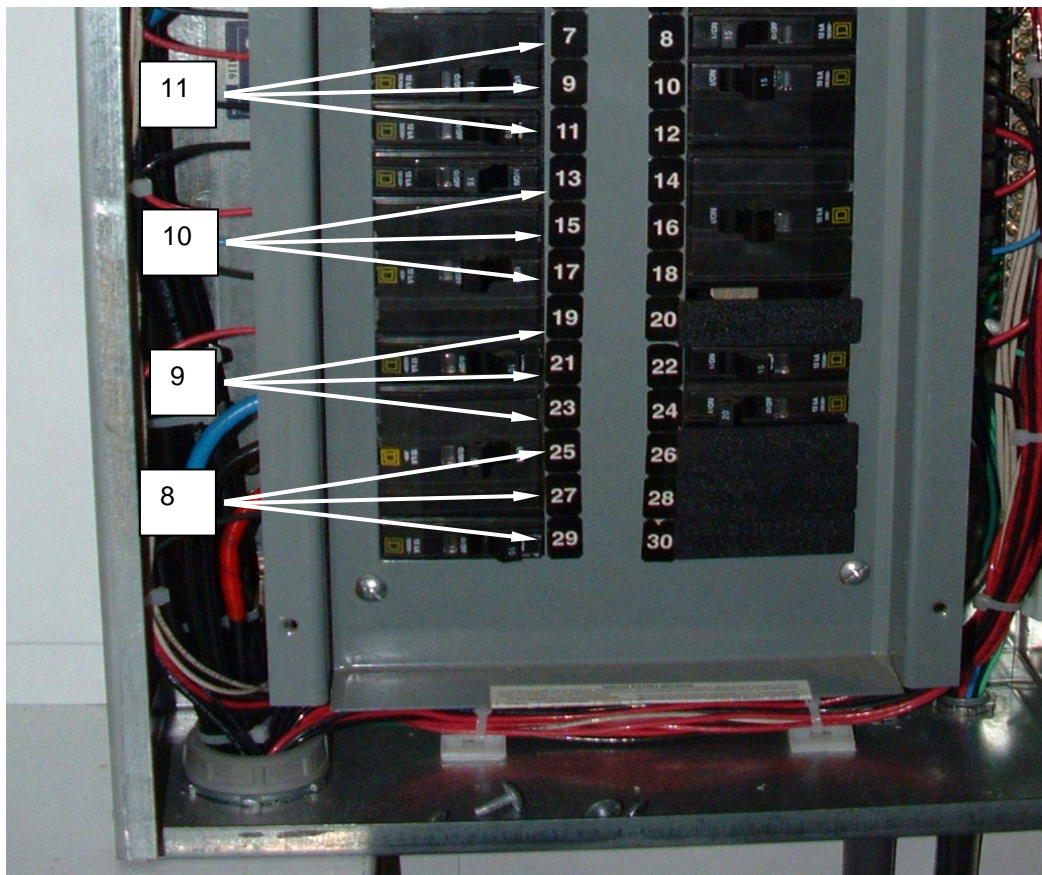
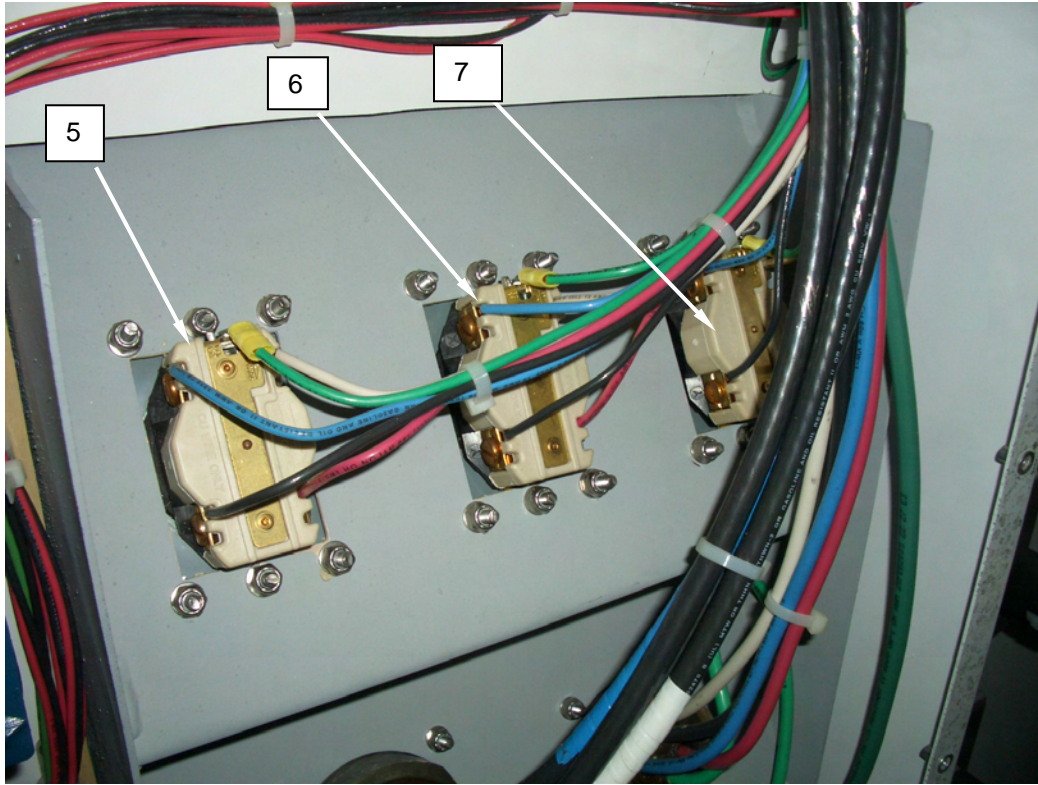


Figure 1. Test the Power Output Receptacle (Sheet 2 of 3).

TEST - CONTINUED

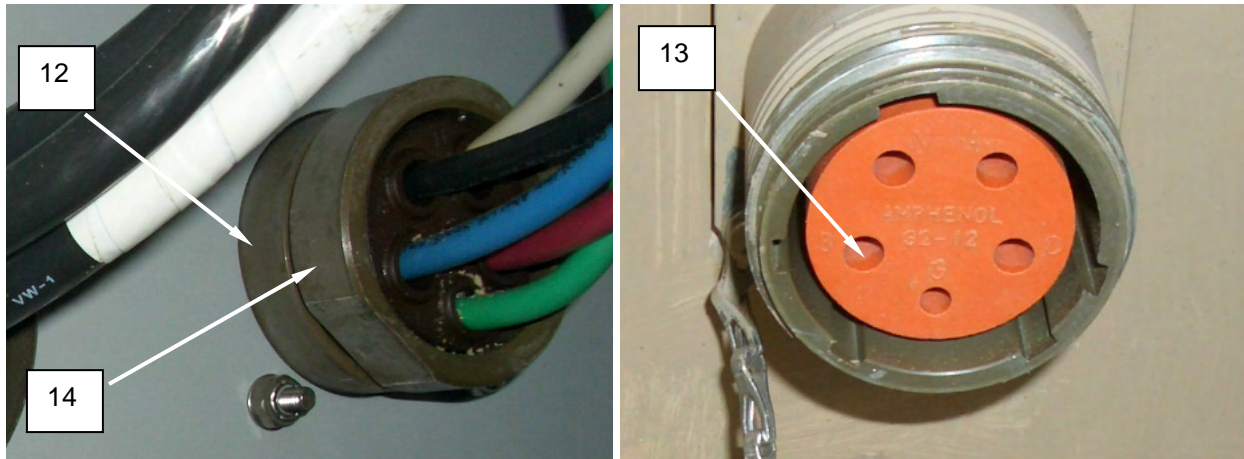


Figure 1. Test the Power Output Receptacle (Sheet 3 of 3).

END OF TASK

REPLACE**Replacing 208V, 3 Phase, 20 A Power Outlet Receptacle****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Place all circuit breakers in the main breaker panel and dryer breaker panel to the OFF position.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from both exterior FP-CBL power panels (Figure 2, Item 1).
4. Remove screws and lockwashers that secure the interior power panel access cover (Figure 2, Item 2) at the rear of the power panel. Remove panel and set aside.

NOTE

When viewed from the interior of the power panel, receptacle no. 1 is at the far right, receptacle no. 2 is in the center, and receptacle no. 3 is on the left.

5. Tag all wires on the receptacle to be replaced.
6. To replace receptacle no. 1 (Figure 2, Item 4), receptacle no. 2 (Figure 2, Item 3), or receptacle no. 3 (Figure 2, Item 7) of the 208V, 3 Phase, 20 A power outlets, loosen the terminal screws (Figure 2, Item 6) on the receptacle and remove the wires.
7. Remove the screws, nuts, and lockwashers (Figure 2, Item 5) that secure the receptacle being replaced and set aside. Pull the defective receptacle from the power entry panel from the outside of the FP-CBL.
8. Install a new receptacle in position and secure with screws, nuts, and lockwashers (Figure 2, Item 5) set aside earlier.
9. Reattach wires as tagged earlier and secure with terminal screws (Figure 2, Item 6). Tighten securely.
10. Install the interior power panel access cover (Figure 2, Item 2) at the rear of the power panel with screws and lockwashers removed earlier. Tighten securely.
11. Re-connect all power cables to exterior power input panels of FP-CBL.
12. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
13. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

REPLACE - CONTINUED

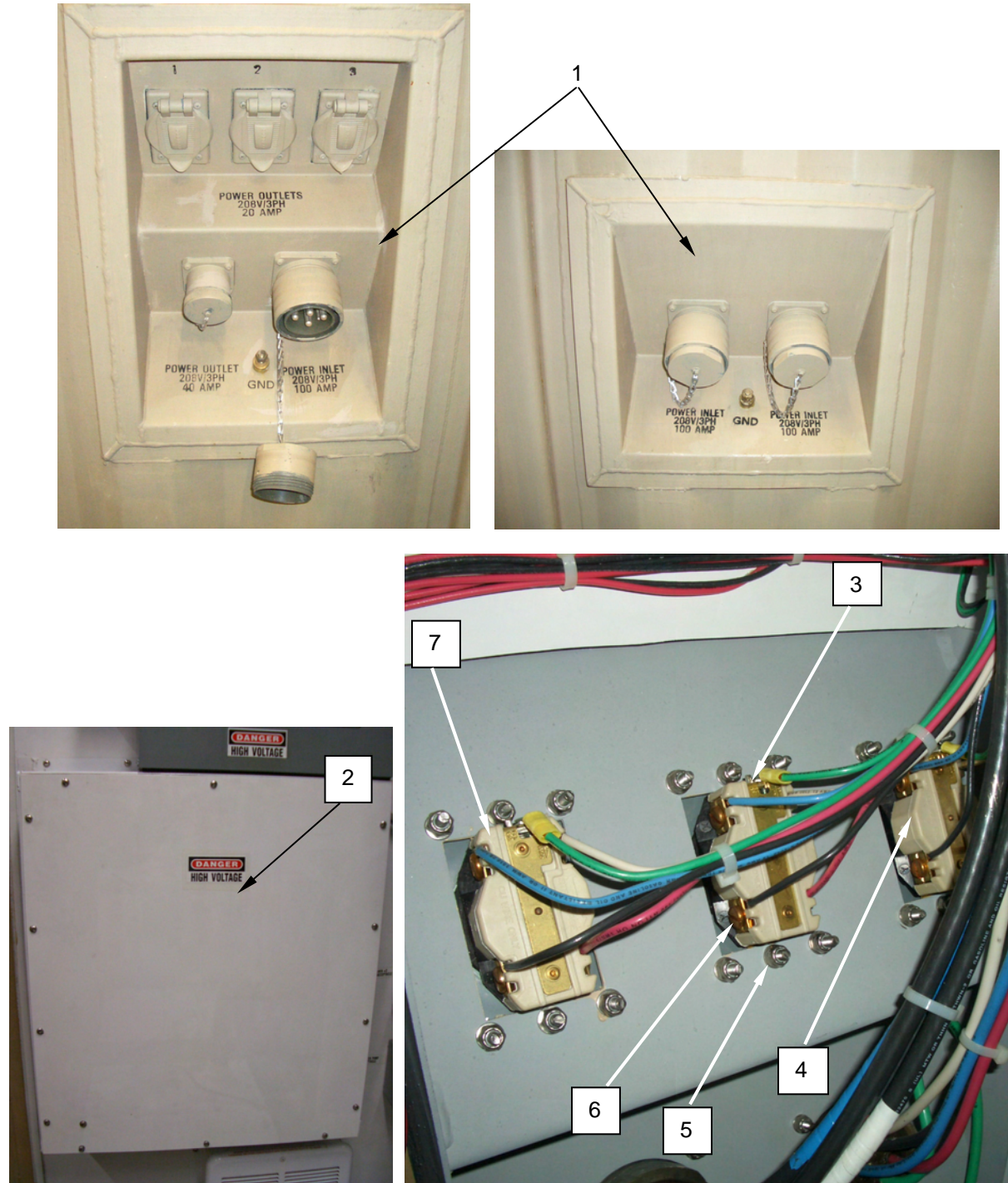


Figure 2. Replacing a 208V, 3 Phase, 20 A Power Outlet Receptacle.

END OF TASK

REPLACE – CONTINUED**Replacing 208V, 3 Phase, 40A MS Connector****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to observe safety precautions may result in injury or death to personnel.

1. Place all circuit breakers in the main breaker panel and dryer breaker panel to the OFF position.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from both exterior FP-CBL power panels (Figure 3, Item 1).
4. Remove screws and lockwashers that secure the interior power panel access cover (Figure 3, Item 2) at the rear of the power panel. Remove panel and set aside.
5. To replace the 208V, 3 Phase, 40 A MS connector (Figure 3, Item 6), tag all wires.
6. Trace wires leading from the connector back to their junction point and disconnect wires. Clip any tie wraps as necessary.
7. Unscrew the retainer (Figure 3, Item 4) and pull the connector body out of the sleeve. Remove the defective connector body (Figure 3, Item 5).
8. Remove the screws, nuts, and lockwashers (Figure 3, Item 3) that secure the MS connector and set aside. Remove the outer body (Figure 3, Item 6) of the MS connector from the power entry panel from the outside of the FP-CBL.
9. Install a new MS connector in position on the power entry panel from the outside of the FP-CBL and secure with screws, nuts, and lockwashers (Figure 3, Item 3) set aside earlier.
10. Connect all wires from MS connector to their connection points as tagged earlier. Install new tie wraps as necessary to replace those removed earlier.
11. Install the interior power panel access cover (Figure 3, Item 2) at the rear of the power panel with screws and lockwashers removed earlier. Tighten securely.
12. Re-connect all power cables to exterior power input panels of FP-CBL.
13. Re-connect all FP-CBL power cables to power source. Turn on external power from generators, shore, or local grid sources if shut down earlier.
14. Switch all circuit breakers in main breaker panel and dryer breaker panel to ON and verify normal operation of the components controlled by the replaced circuit breaker.

REPLACE - CONTINUED

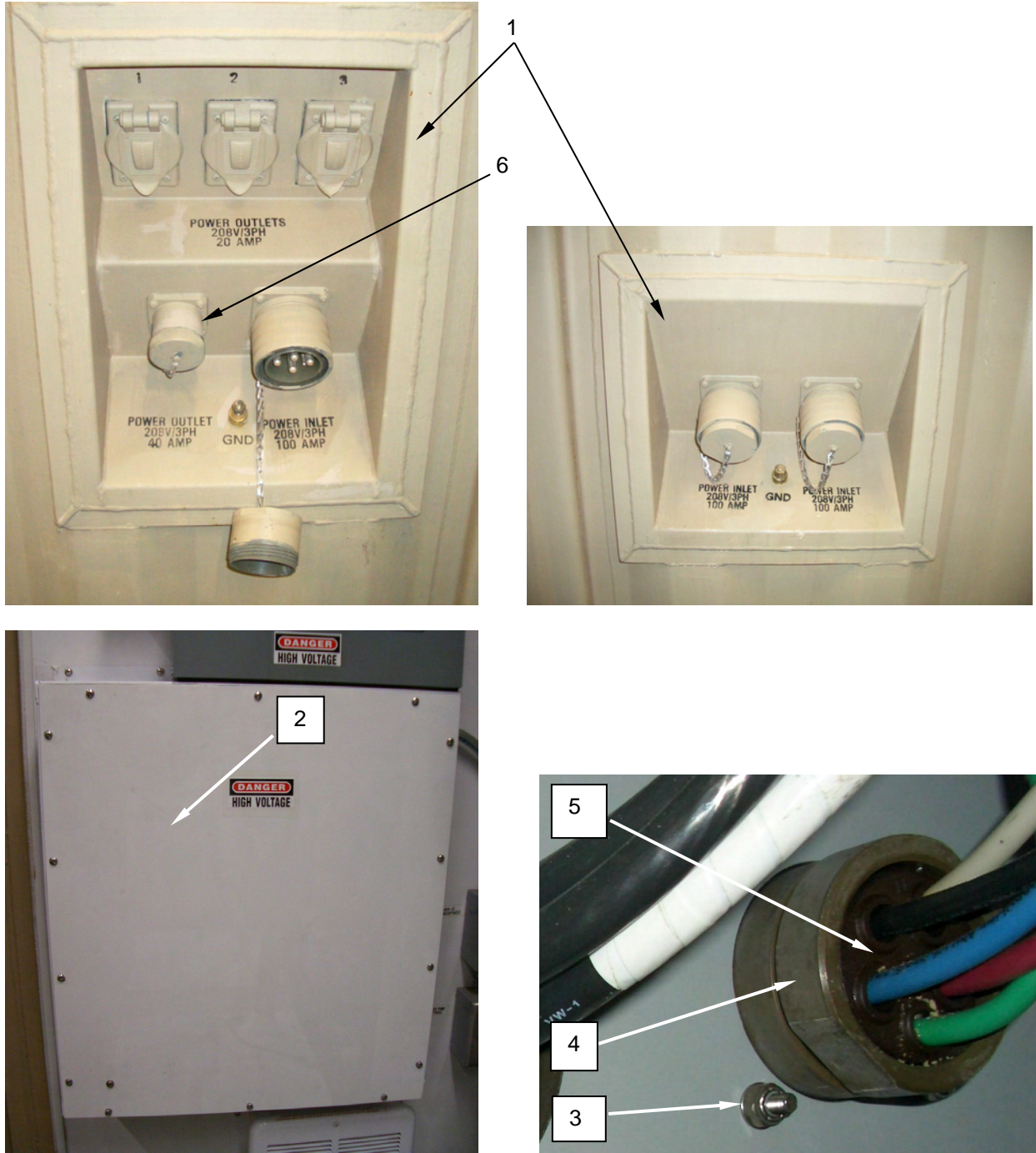


Figure 3. Replacing the 208V, 3 Phase, 40A MS Connector.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WALL RECEPTACLE
WALL SWITCH
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment ConditionAll circuit breakers and switches to
OFF position.**TEST****Test Wall Receptacles****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Touching a live wire may cause serious injury or death to personnel.

1. Ensure exterior power cable is connected to the main power service panel (Figure 1, Item 1).
2. Turn OFF all circuit breakers (Figure 1, Item 2).
3. If testing the exhaust fan power receptacle, disconnect the exhaust fan power cord and turn the exhaust fan switch (Figure 1, Item 4) to the ON position.
4. Remove receptacle plate cover (Figure 1, Item 3) and retain screws.
5. Turn ON circuit breaker for the receptacle to be tested.
6. Using a multimeter set to test AC voltage greater than 250 volts, test for voltage at each wall receptacle side contact (Figure 1, Item 5). Ensure that voltage measured is approximately 115 VAC.
7. If receptacle is defective, go to the REPLACE paragraph of this work package.
8. Turn OFF circuit breaker for the receptacle to be tested.
9. Replace cover.

TEST - CONTINUED

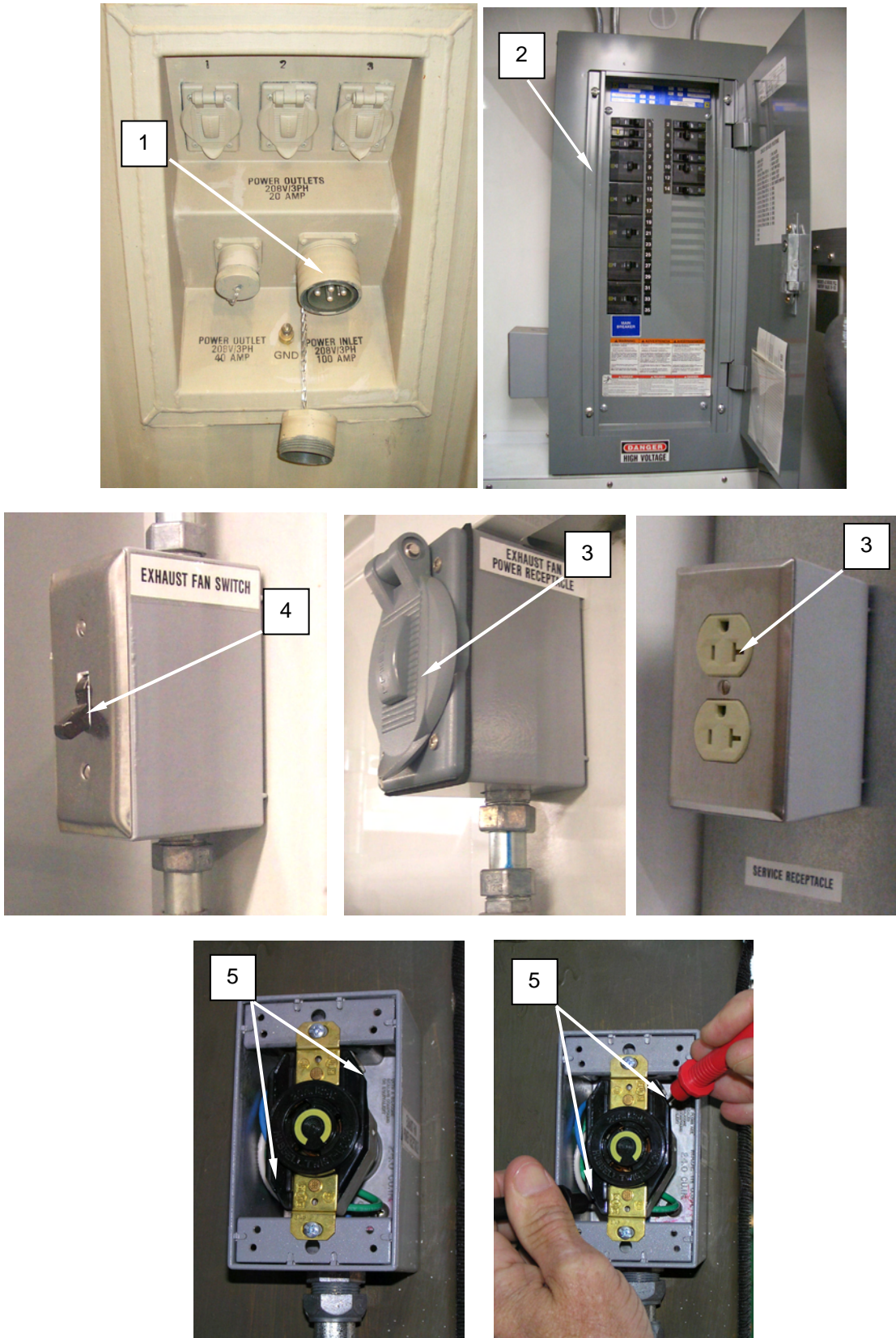


Figure 1. Test Wall Receptacles.

END OF TASK

TEST - CONTINUED**Test Wall Switch (Exhaust Fan or Interior Lights)****WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Touching a live wire may cause serious injury or death to personnel.

1. Turn off all circuit breakers and disconnect all power cables from the power input panels on the exterior of the FP-CBL.
2. Remove the two switch cover screws (Figure 2, Item 1) and set aside.
3. Remove the switch cover plate and insulator (Figure 2, Item 6) and set aside.
4. Remove the two screws (Figure 2, Item 4) securing the switch (Figure 2, Item 3) to the switch box (Figure 2, Item 2) and retain.
5. Pull the switch out of the box.
6. Disconnect and tag the wiring at the switch.

NOTE

Do not attempt to test continuity with the switch installed and wiring connected. Electrical components in line with the switch may give a false reading.

7. Place the switch in the ON position.
8. Use a multimeter set to read resistance (ohms Ω) and test for continuity across the two poles (Figure 2, Item 5) of the switch.
9. If there is no continuity, replace the switch.
10. Place the switch in the OFF position.
11. Use a multimeter set to read resistance (ohms Ω) and ensure that there is an open circuit (i.e. infinite resistance) across the two poles (Figure 2, Item 5) of the switch.
12. If an open circuit is not measured with the switch in the OFF position, replace the switch.
13. Reinstall the switch by connecting the tagged wiring at the switch.
14. Place the switch in the box.
15. Install the two screws (Figure 2, Item 4) retained earlier to secure the switch (Figure 2, Item 3) to the switch box (Figure 2, Item 2).
16. Install the switch cover plate and insulator (Figure 2, Item 6) set aside earlier.
17. Install the two switch cover screws (Figure 2, Item 1) set aside earlier.

TEST - CONTINUED

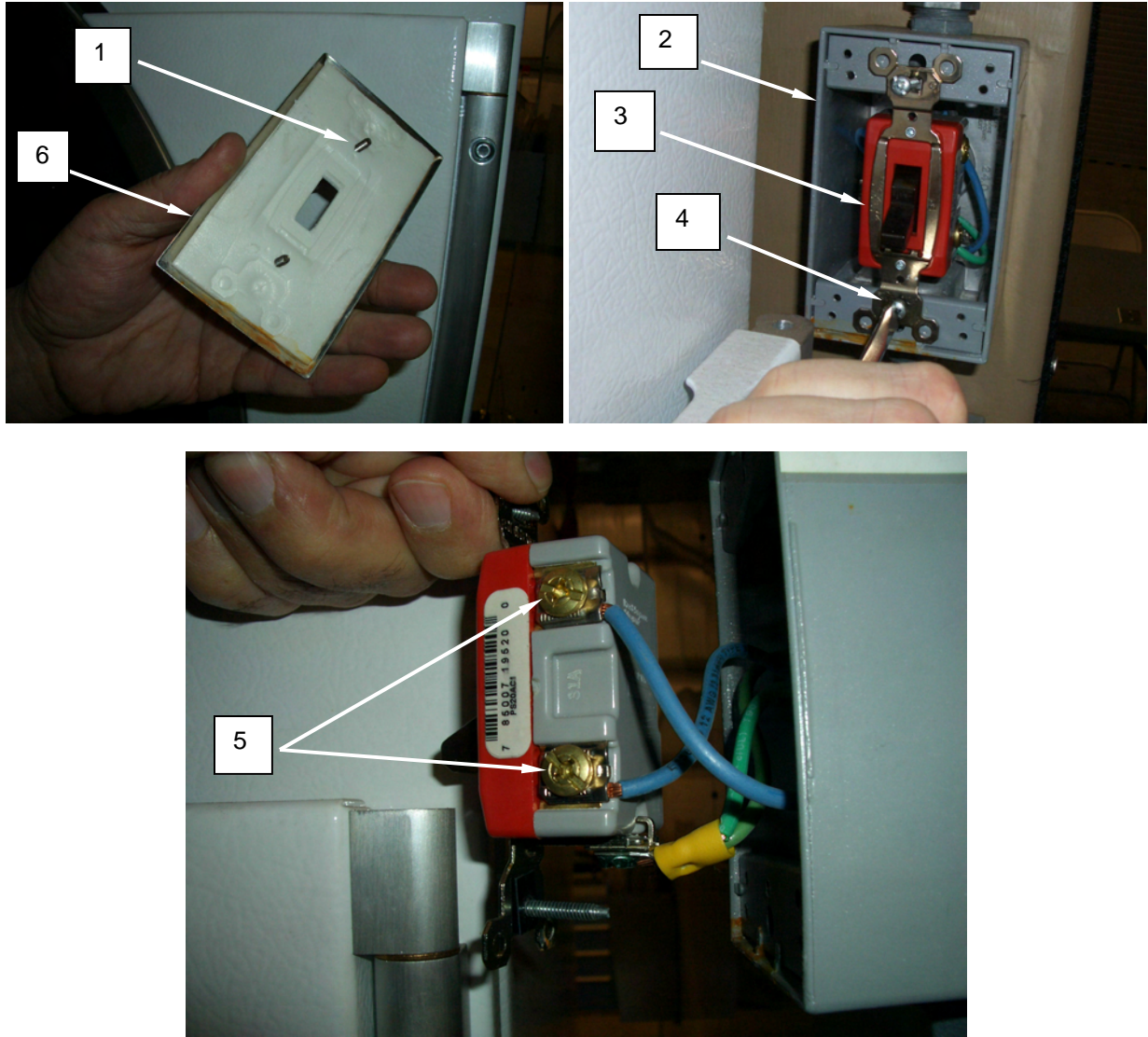


Figure 2. Test Wall Switch.

END OF TASK

REPLACE**Replace Wall Receptacle**

1. Turn off all circuit breakers and disconnect all power cables from the power input panels on the exterior of the FP-CBL.
2. Remove the receptacle cover screw(s) (Figure 3, Item 4) and set aside.
3. Remove the receptacle cover plate and insulator (Figure 3, Item 1) and set aside.
4. Remove the two screws securing the receptacle (Figure 3, Item 3) to the box (Figure 3, Item 2) and retain.
5. Pull the receptacle out of the box.
6. Tag and disconnect the wiring going to the receptacle.
7. Install a new receptacle by connecting the wiring as tagged earlier.
8. Place the receptacle in the box.
9. Install the two screws retained earlier to secure the receptacle (Figure 3, Item 3) to the box (Figure 3, Item 2).
10. Install the cover plate and insulator (Figure 3, Item 1) set aside earlier.
11. Install the cover plate screw(s) (Figure 3, Item 4) set aside earlier.
12. Turn circuit breakers ON and verify proper operation.

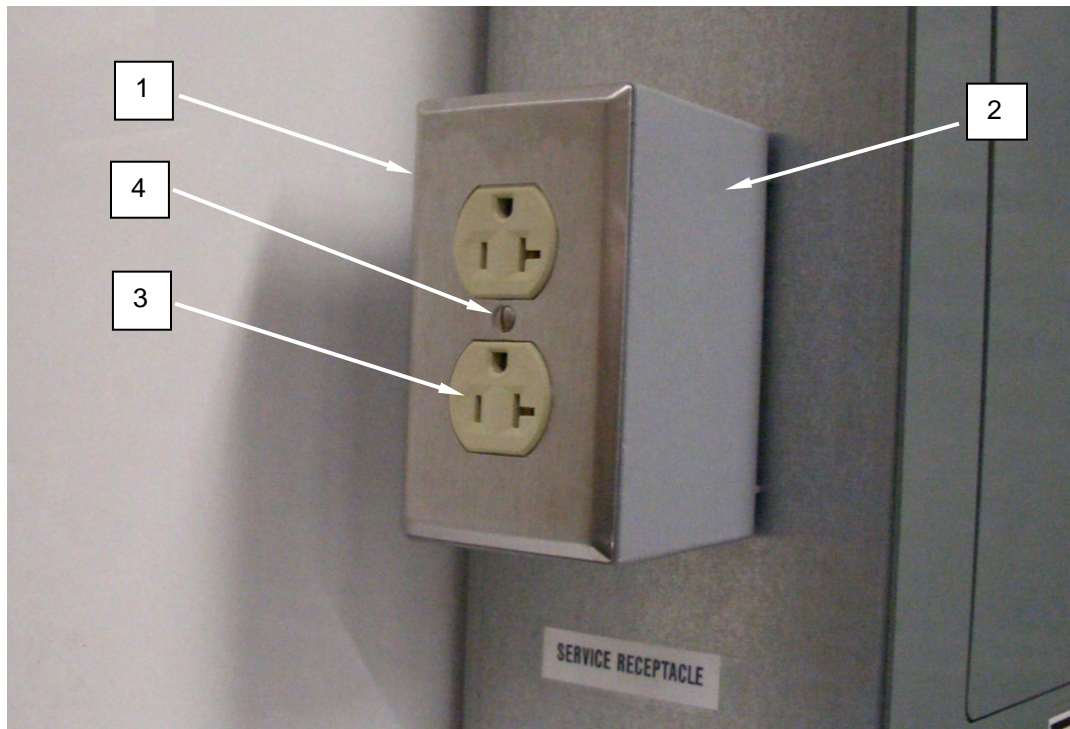


Figure 3. Replacing a Wall Receptacle.

END OF TASK

REPLACE - CONTINUED**Replace Wall Switch**

1. Turn OFF all circuit breakers.
2. Remove the two switch cover screws (Figure 4, Item 1) and set aside.
3. Remove the switch cover plate and insulator (Figure 4, Item 6) and set aside.
4. Remove the two internal screws (Figure 4, Item 4) securing the switch (Figure 4, Item 3) to the switch box (Figure 4, Item 2) and retain.
5. Pull the switch out of the box.
6. Disconnect and tag the wiring at the switch poles (Figure 4, Item 5).
7. Connect the wires to the new switch at the switch poles.
8. Place the new switch in the switch box, and secure with two internal screws (Figure 4, Item 4) retained earlier.
9. Replace the switch cover and insulator (Figure 4, Item 6), and secure with two screws (Figure 4, Item 1) set aside earlier.
10. Turn circuit breakers ON and verify normal operation.

REPLACE - CONTINUED

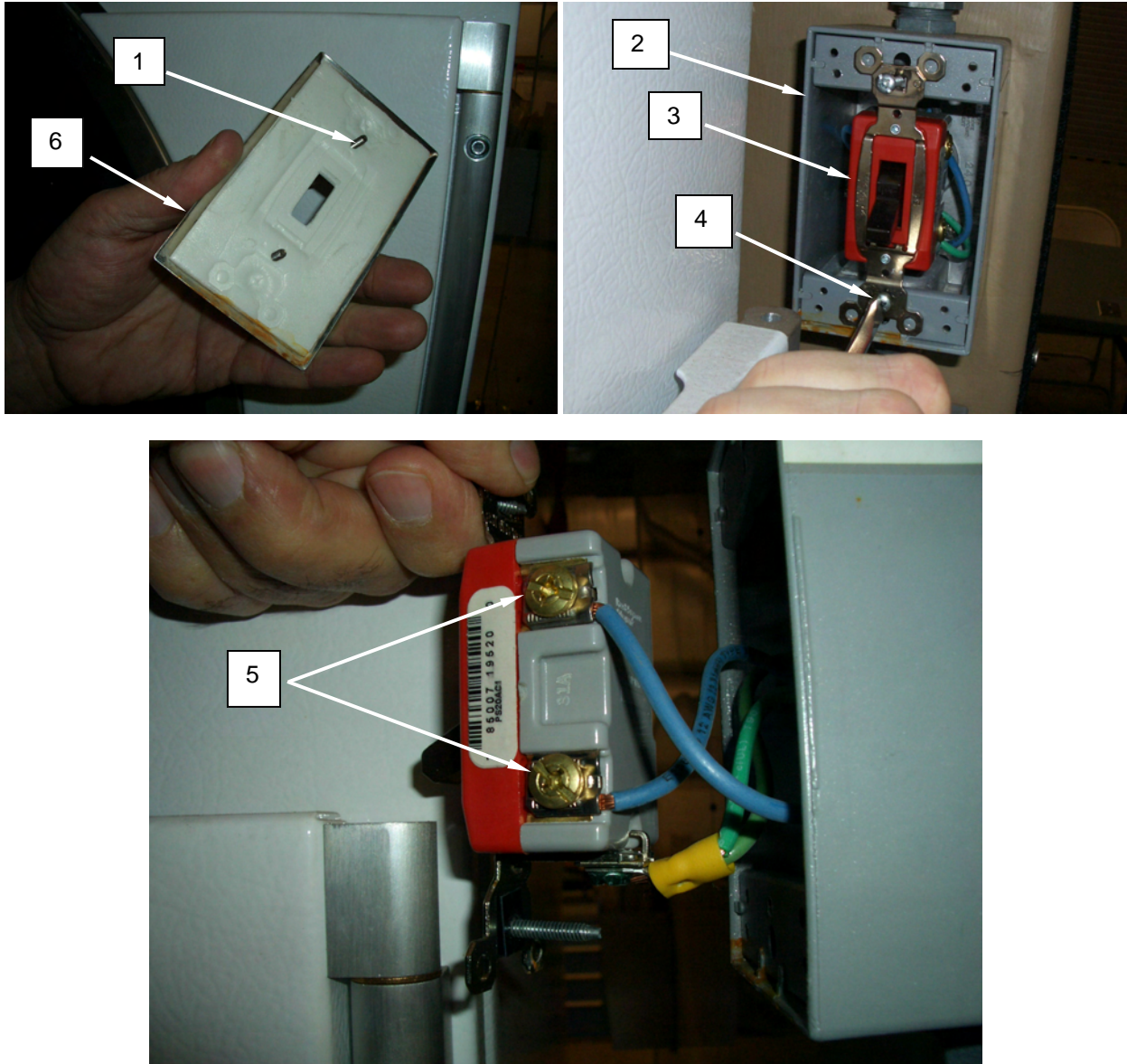


Figure 4. Replace a Wall Switch.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

**EXHAUST FAN
INSPECT, TEST, SERVICE, REPLACE**

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)

Materials/Parts

Gloves, Chemical and Oil Protective (WP 0101, Item 29)
Rag, Wiping (WP 0101, Item 44)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)
Laundry and Textile Specialist 92S (3)

Equipment Condition

All circuit breakers and switches to OFF position.

References

WP 0041
WP 0045

INSPECT

WARNING



This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to comply may cause injury or death to personnel.

1. Inspect the interior and exterior of the exhaust fan (Figure 1, Item 1) for material damage, clogging, and excessive rust or corrosion.
2. Inspect the exhaust fan and ensure that it has been installed properly and that all bolts are secure.

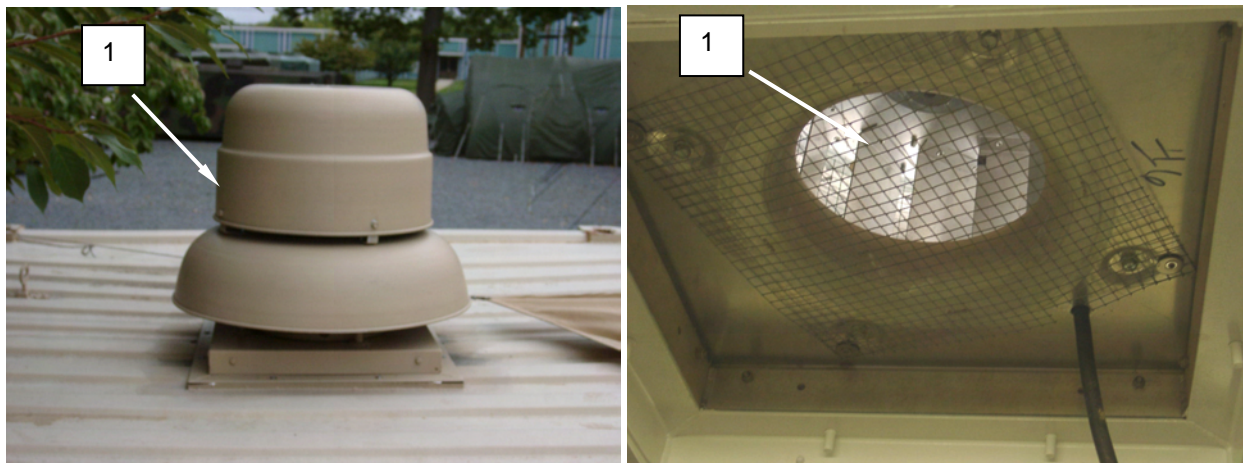


Figure 1. Inspect the Exhaust Fan.

END OF TASK

TEST

1. With the exhaust fan plugged in to the exhaust fan power receptacle (Figure 2, Item 1) and turned on, set circuit breaker #5 (Figure 2, Item 2) to the ON position and observe if the breaker trips to the OFF or center "tripped" position. Unplug the exhaust fan, reset the circuit breaker and observe to see if breaker trips. If breaker trips only when the exhaust fan is plugged into the exhaust fan power receptacle, it indicates a potential problem with the exhaust fan.
2. Unplug the exhaust fan.
3. Using a multimeter set to read resistance (ohms), measure the resistance between the two gold blades (Figure 2, Item 3) of the plug. If continuity (i.e. zero resistance) is measured between the two gold blades (Figure 2, Item 3) of the plug, replace the defective exhaust fan.
4. If an open condition (i.e. infinite resistance) is measured between either of the gold blades (Figure 2, Item 3) and the silver blade (Figure 2, Item 4), replace the defective fan.
5. If the fan passes the above tests, but exhaust fan circuit breaker #5 still trips, then either the receptacle or the circuit breaker may be defective. Refer to WP 0045 or WP 0041 for more information.

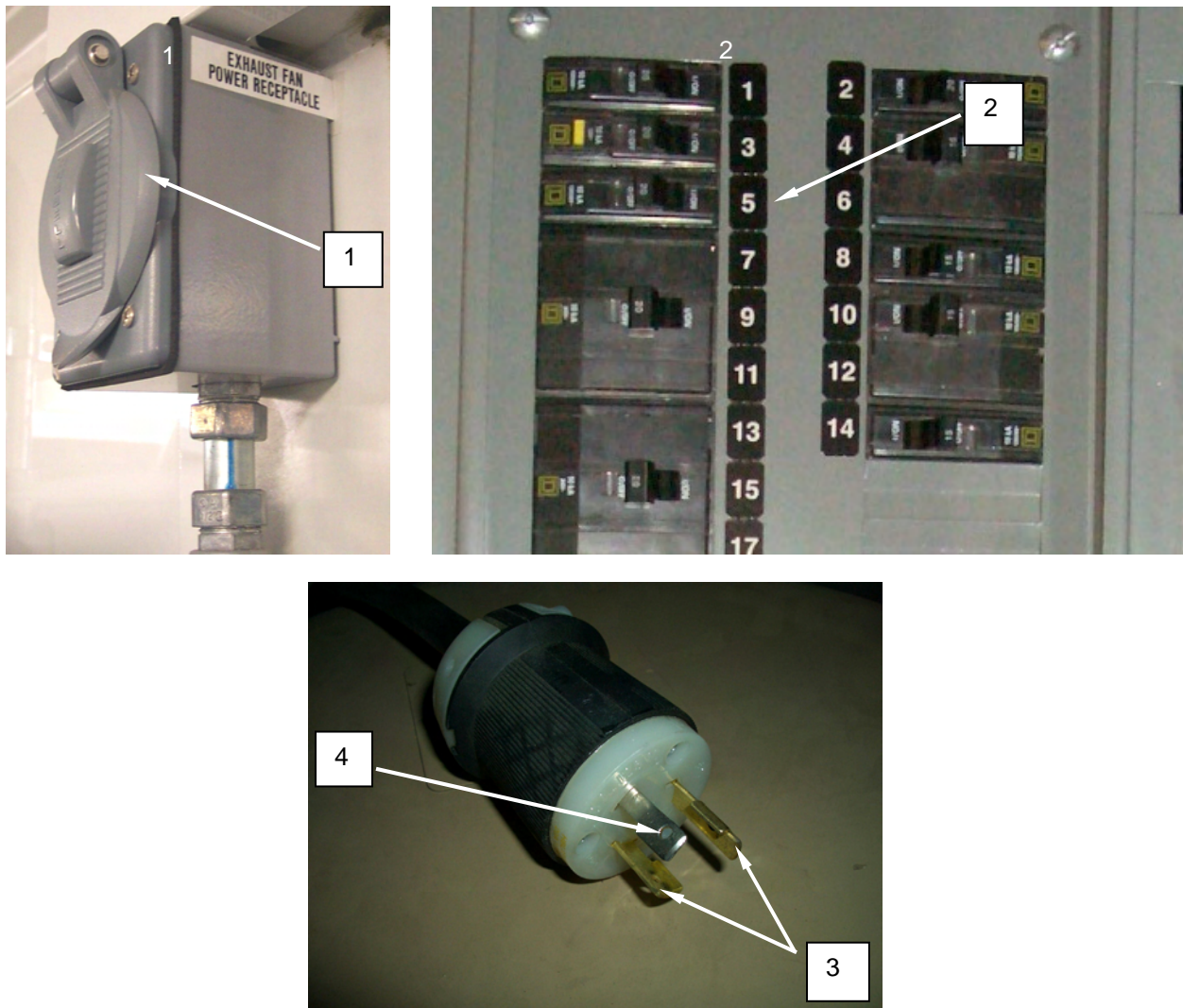


Figure 2. Test the Exhaust Fan.

END OF TASK

SERVICE**Clean the Exhaust Fan****WARNING**

Ensure power is disconnected before attempting this procedure. Wear heavy work gloves while handling the fan. Serious injury to personnel may result if safety precautions are not observed.

WARNING

The exhaust fan is heavy, awkward, and difficult to maneuver. To prevent injury, two persons are required on top of the container to handle the fan. Failure to follow this warning could result in serious injury to personnel.

1. Unplug exhaust fan (Figure 3, Item 2) by removing the plug (Figure 3, Item 3) from the exhaust fan power receptacle.
2. Using the folding hand grips on outside wall of container, have two persons climb on top of FP-CBL. Have a person on the ground hand the tools necessary to remove the bolts securing the exhaust fan to a person on the roof of the container.
3. Remove bolts (Figure 3, Item 1) securing the exhaust fan to the roof of the FP-CBL and set aside.
4. Remove exhaust fan from top of container (Figure 3, Item 6).
5. Clean lower grate (Figure 3, Item 5) and surrounding screen (Figure 3, Item 4) for lint and any other debris.
6. Re-position the exhaust fan on top of container.
7. Install bolts (Figure 3, Item 1) set aside earlier and secure fan.
8. Have the two persons positioned on the roof of the FP-CBL hand the tools down to a person on the ground and carefully climb down using the folding hand grips.
9. Re-install the plug (Figure 3, Item 3) of the exhaust fan (Figure 3, Item 2) into exhaust fan power receptacle.

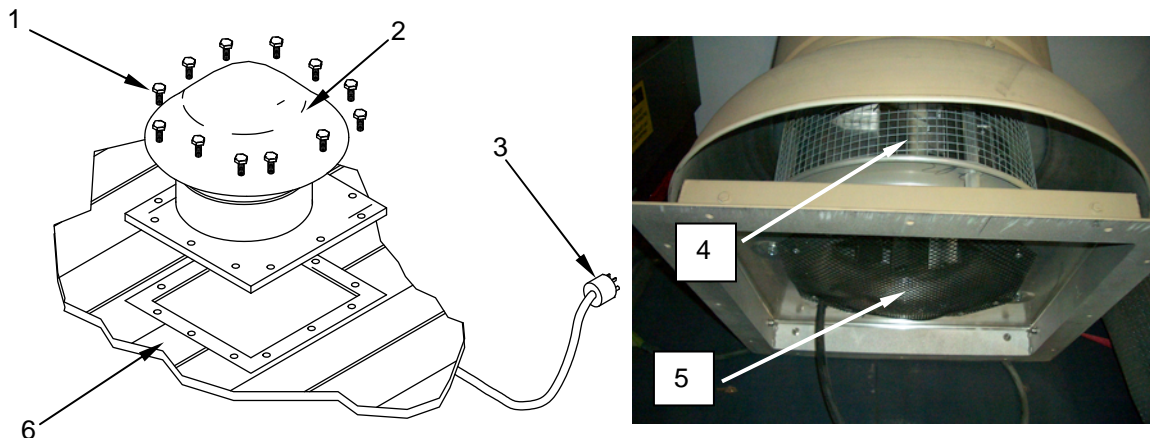


Figure 3. Clean the Exhaust Fan.

END OF TASK

REPLACE**WARNING**

The exhaust fan is heavy, awkward, and difficult to maneuver. To prevent injury, four persons are required – two on top of the container to handle the fan, and two on the ground. Failure to follow this warning could result in serious injury or death to personnel.

1. Unplug exhaust fan (Figure 4, Item 1) from exhaust fan power receptacle (Figure 4, Item 2).
2. Using the folding hand grips on outside wall of container, have two persons climb on top of FP-CBL. Have a person on the ground hand the tools necessary to remove the bolts securing the exhaust fan to a person on the roof of the container.
3. Remove bolts (Figure 4, Item 3) securing the exhaust fan to the roof of the FP-CBL and set aside. Wrap excess cord and store in fan assembly.
4. Have two persons move the exhaust fan (Figure 4, Item 1) to the edge of the container roof and carefully hand down to two persons positioned on the ground. Have the two persons on the ground hand the new exhaust fan to the two persons positioned on the container roof.
5. Pass power cord through opening on top of FP-CBL and place the replacement exhaust fan in position on top of container.
6. Install bolts (Figure 4, Item 3) set aside earlier and secure fan to container.
7. Have the two persons positioned on the roof of the FP-CBL hand down any tools to a person positioned on the ground and then carefully climb down using the folding hand grips.
8. Plug exhaust fan (Figure 4, Item 1) into exhaust fan power receptacle (Figure 4, Item 2) and verify proper operation.

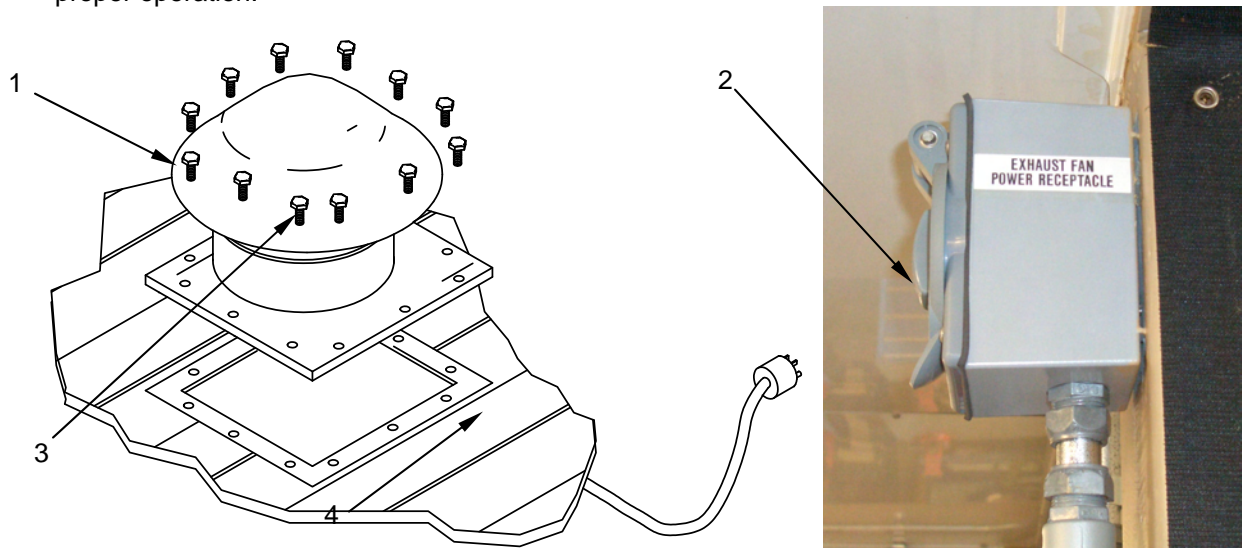


Figure 4. Replace the Exhaust Fan.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

**PUMP AND WASHER RECEPTACLES
TEST, REPLACE**

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)

Materials/Parts

Tape, Electrical Insulation, 3/4-in Width (WP 0101, Item 62)
Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL shut down
Circuit breakers in ON position ONLY for TEST
Circuit breakers in OFF position for REPLACE

TEST

WARNING



This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to comply may cause injury or death to personnel.

NOTE

While different receptacles are used for the washers and pumps, the testing procedure is the same.

1. Disconnect plug from receptacle (Figure 1, Item 1). Ensure power is connected and the appropriate circuit breaker is ON. Refer to Table 1 if necessary.

Table 1. Circuit Breakers for Receptacles.

Receptacle	Circuit Breaker(s)
Washer No. 1	No. 4 and No. 6
Reuse Transfer Pump	No. 14
Washer No. 2	No. 10 and No. 12
Waste Pump	No. 8

2. If testing the washer receptacles, use a voltmeter set to read at least 250 VAC to check for 208 VAC power at the receptacle inlets (Figure 1, Item 4). All other receptacles must be tested for 120 VAC.
3. If there is power at the receptacle (Figure 1, Item 1), no further test is required. If there is no power at the receptacle, switch the circuit breaker to OFF and tag out.
4. Remove screws retaining receptacle cover (Figure 1, Item 2) and remove cover. Set aside.
5. Remove screws (Figure 1, Item 3) retaining receptacle to box and set aside. Remove receptacle.

TEST - CONTINUED

6. Tag and disconnect wiring from receptacle (Figure 1, Item 1).
7. Use a multimeter and ensure that there is continuity (i.e. zero resistance) between the front receptacle plug blade inlet (Figure 1, Item 4) and corresponding terminal on rear of receptacle.
8. Use a multimeter and ensure that there is an open circuit (i.e. infinite resistance) between each front receptacle plug blade inlet (Figure 1, Item 4) and ground.
9. Use a multimeter and ensure that there are no shorts (i.e. zero resistance) between each front receptacle plug blade inlet (Figure 1, Item 4) and ground.
10. Connect wiring to receptacle (Figure 1, Item 1) as tagged.
11. Install receptacle (Figure 1, Item 1) into box (Figure 1, Item 3) and retain with screws set aside earlier.
12. Install receptacle cover (Figure 1, Item 2) and retain with screws set aside earlier.
13. Switch circuit breaker ON and monitor for normal operation.

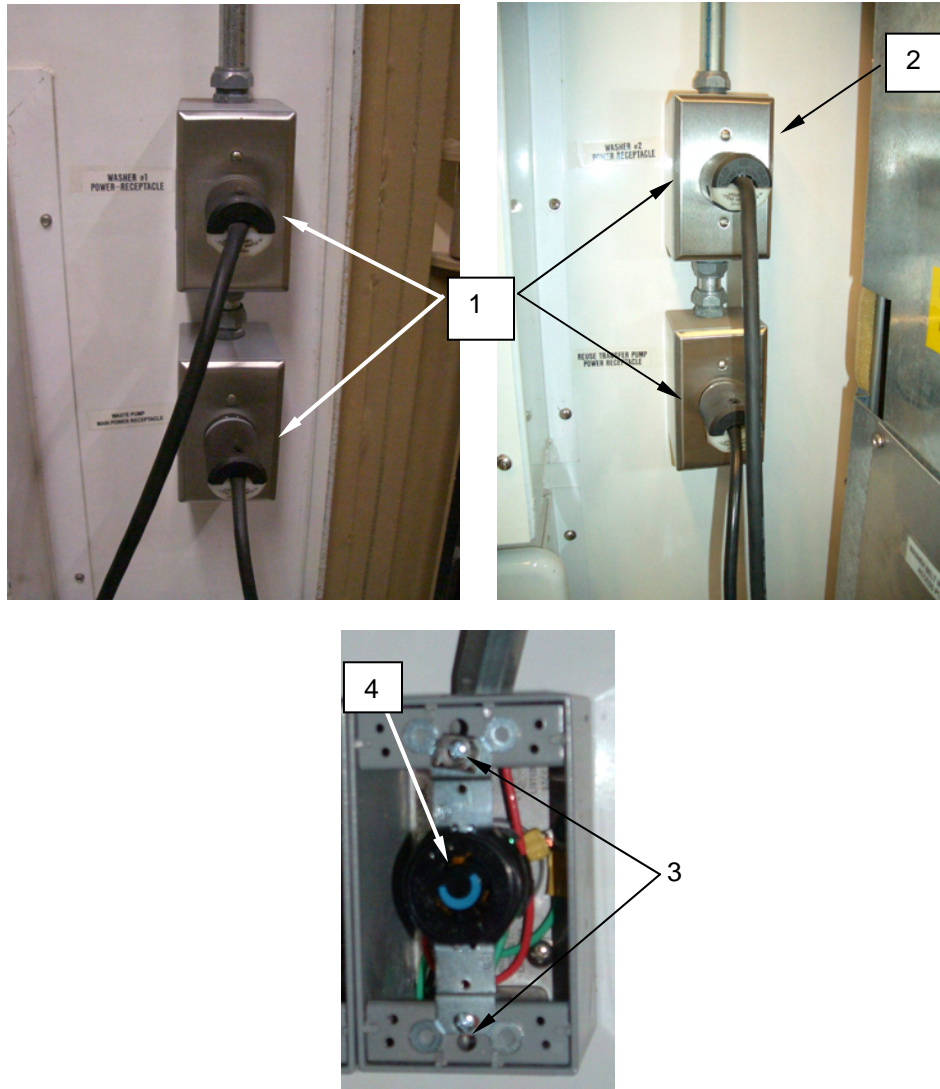


Figure 1. Test a Receptacle.

END OF TASK

REPLACE**WARNING**

This equipment operates at high voltages. Use extreme caution, observe all warnings, and follow all safety procedures. Failure to comply may cause injury or death to personnel.

1. Switch appropriate circuit breaker to OFF, and disconnect plug from the receptacle (Figure 2, Item 1). Refer to Table 2 as necessary.

Table 2. Circuit Breakers for Receptacles.

Receptacle	Circuit Breaker(s)
Washer No. 1	No. 4 and No. 6
Reuse Transfer Pump	No. 14
Washer No. 2	No. 10 and No. 12
Waste Pump	No. 8

2. Remove screws retaining receptacle cover (Figure 2, Item 2) and remove cover. Set aside.
3. Remove screws (Figure 2, Item 3) retaining receptacle to box (Figure 2, Item 4) and set aside. Remove receptacle.
4. Tag and disconnect wiring from receptacle (Figure 2, Item 1).
5. Connect wiring to replacement receptacle as tagged.
6. Install receptacle into box (Figure 2, Item 4) and retain with screws (Figure 2, Item 3) set aside earlier.
7. Install cover (Figure 2, Item 2), and retain with screws set aside earlier.
8. Switch main breaker ON and monitor for normal operation.

REPLACE - CONTINUED

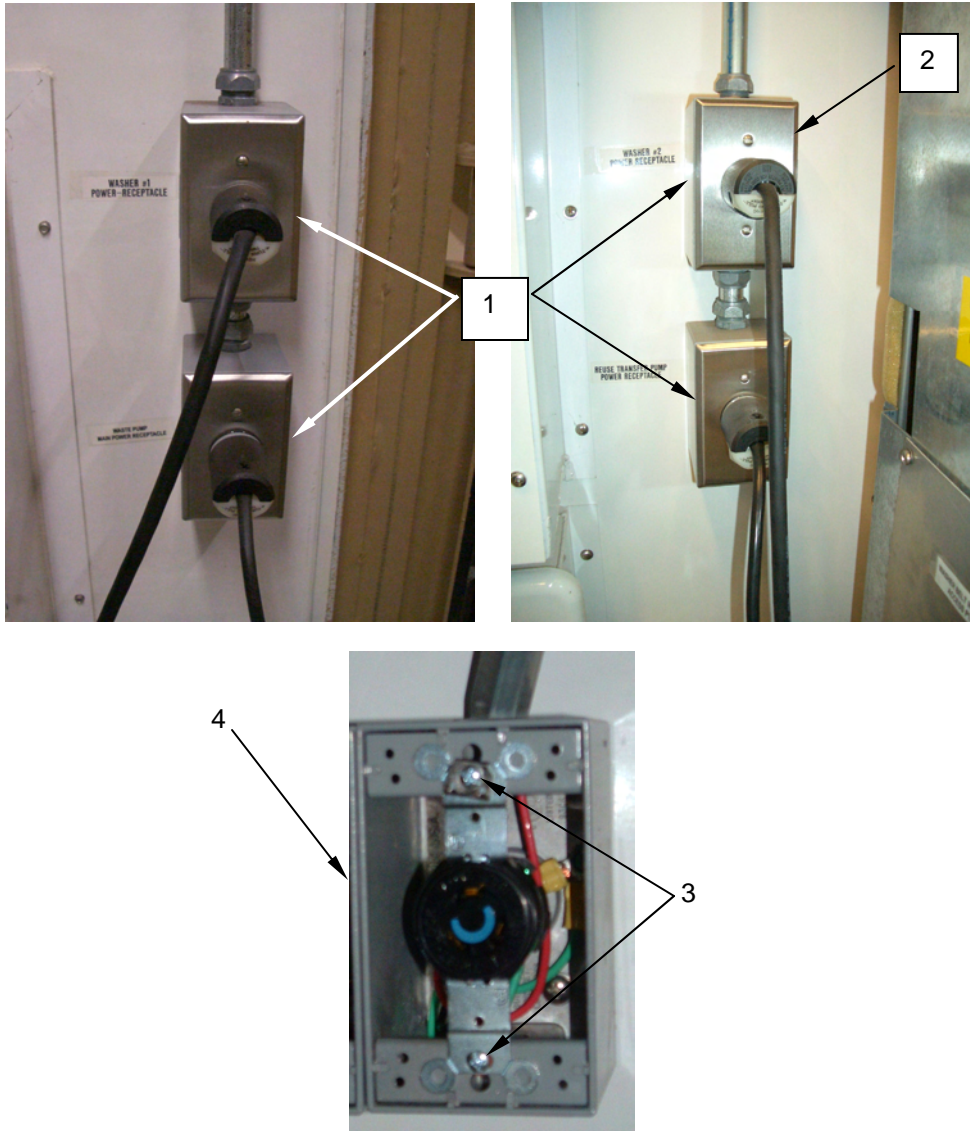


Figure 2. Replace a Receptacle.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**SPACE HEATER
INSPECT, TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Rag, Wiping (WP 0101, Item 44)

Equipment Condition

All circuit breakers and switches to OFF position.

INSPECT**WARNING**

If the space heater malfunctions during operation, it may still be hot enough to burn. Allow time for the unit to cool before servicing.

1. Inspect the space heater (Figure 1, Item 1) for material damage, excessive rust, corrosion, or clogging. Ensure that lint or other debris is not clogging louvers on grate.
2. Inspect for improper installation of the space heater (Figure 1, Item 1).

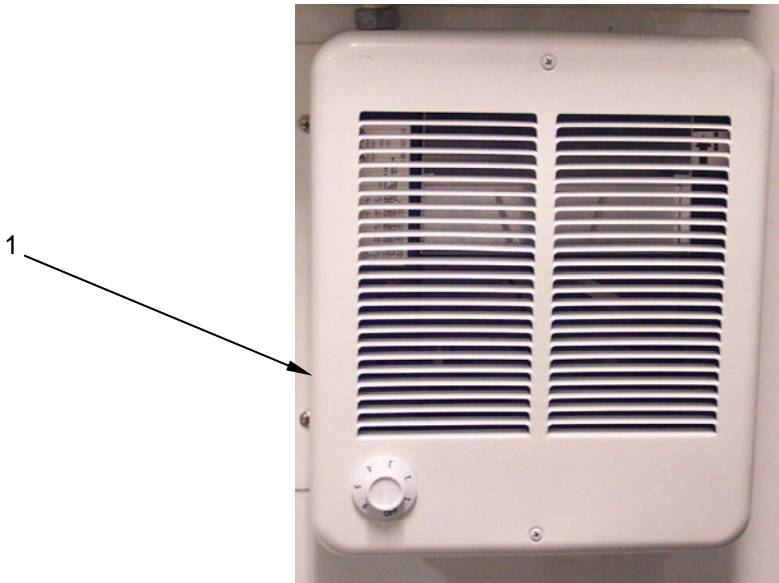


Figure 1. Inspect the Space Heater.

END OF TASK

TEST

1. Switch all circuit breakers to ON.
2. Turn heater thermostat (Figure 2, Item 1) to highest setting.
3. Observe if breaker #2 trips to the OFF or center position.
4. Monitor heater operation. Heater should begin to operate within two minutes.
5. Turn heater thermostat (Figure 2, Item 1) to the lowest setting.
6. Monitor heater operation. Heater should turn off immediately.
7. If heater is operating as described, no further testing is required. If heater does not operate normally, replace heater.

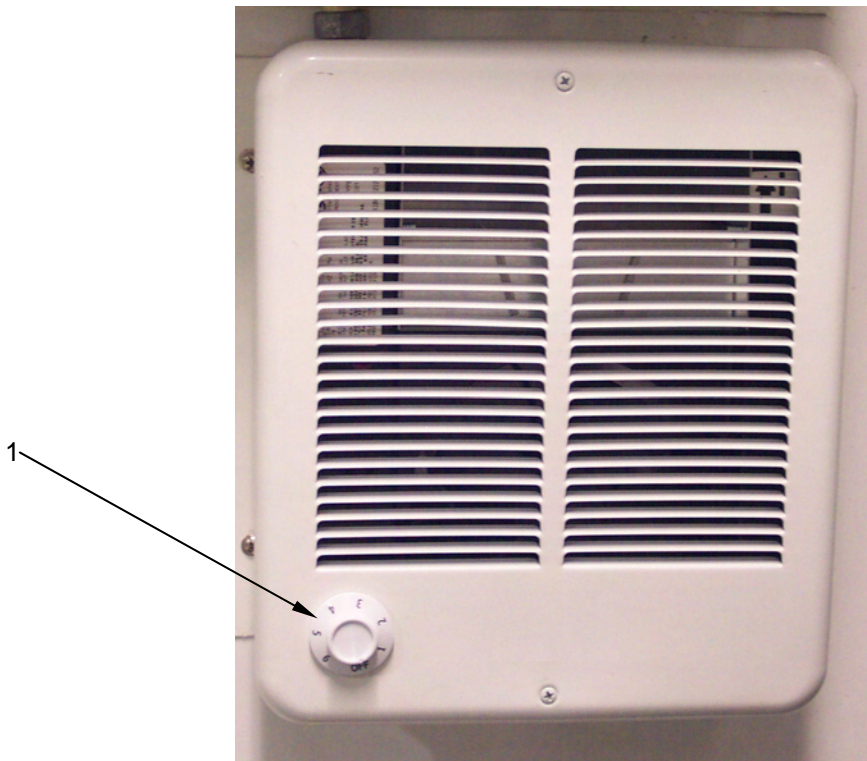


Figure 2. Test Space Heater Operation.

END OF TASK

REPLACE**WARNING**

If the space heater malfunctions during operation, it may still be hot enough to burn. Allow time for the unit to cool before servicing.

1. Remove thermostat knob (Figure 3, Item 1) and set aside.
2. Remove two screws (Figure 3, Item 2) from heater from front cover while supporting cover. Set screws aside.
3. Remove front cover (Figure 3, Item 3) and set aside.
4. Remove two screws (Figure 3, Item 7) securing heater assembly (Figure 3, Item 6) and set aside.
5. Pull heater assembly (Figure 3, Item 6) from back box (Figure 3, Item 5).

WARNING

The wires and socket conduct electricity at a dangerous voltage and amperage. Double check that power is OFF. Do not touch bare wires. Failure to observe safety precautions may result in serious injury or death to personnel.

6. Tag and disconnect wires (Figure 3, Item 4) from heater assembly (Figure 3, Item 6).

NOTE

The replacement heater assembly will come complete with the back box installed and will require that the back box be removed prior to installation. Follow steps 1 – 6 above to disassemble the replacement heater assembly. After disassembling the replacement heater assembly, discard the back box – it will not be replaced.

7. Connect wires (Figure 3, Item 4) as tagged to replacement heater assembly.
8. Place heater assembly (Figure 3, Item 6) into back box (Figure 3, Item 5).
9. Secure with two retaining screws (Figure 3, Item 7) set aside earlier.
10. Replace front cover (Figure 3, Item 3) set aside earlier.
11. Reinstall screws (Figure 3, Item 2) set aside earlier into heater.
12. Replace thermostat knob (Figure 3, Item 1) set aside earlier.

REPLACE - CONTINUED

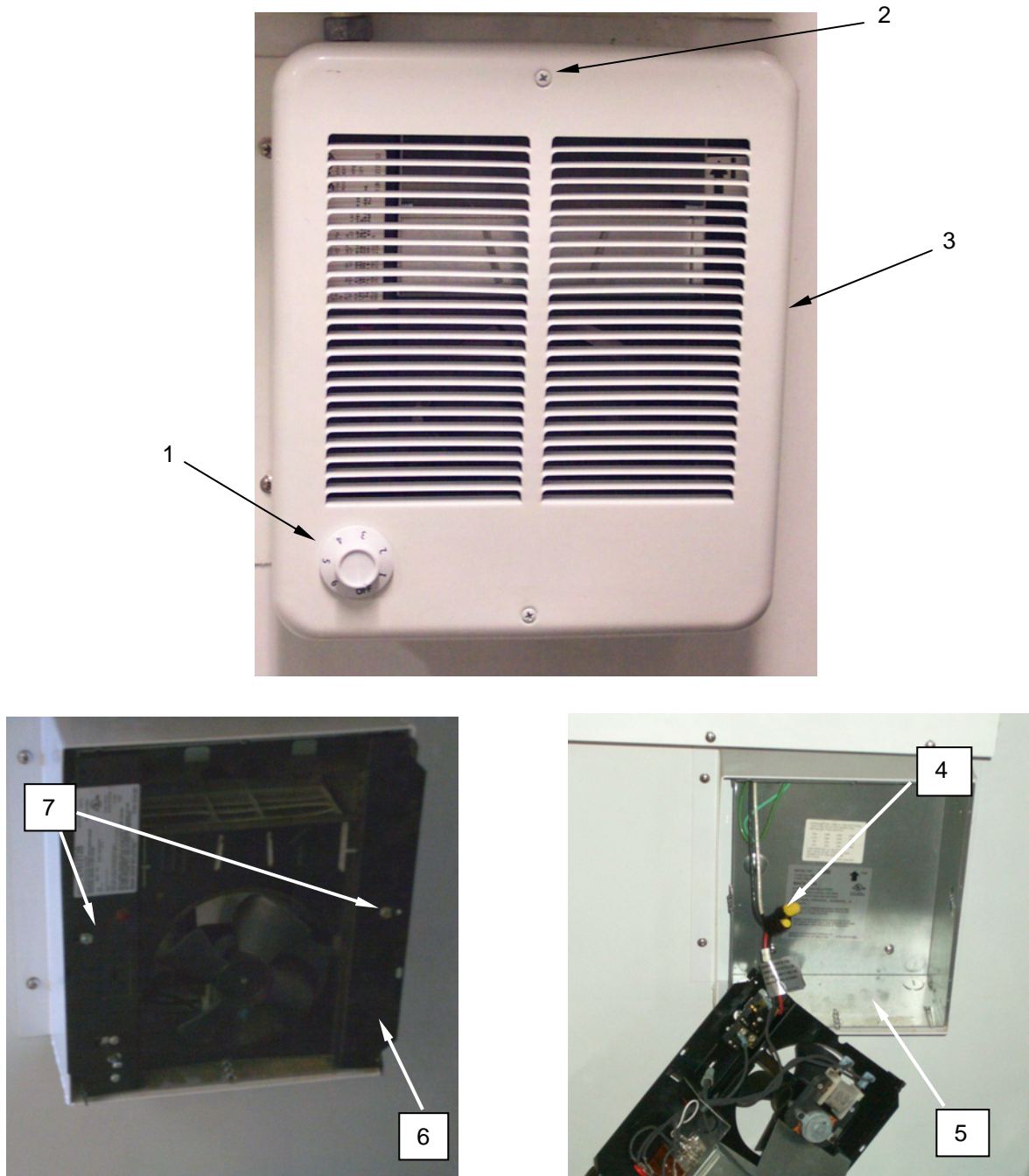


Figure 3. Replace Space Heater.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

PIPES AND FITTINGS, METALLIC AND NONMETALLIC
REPAIR

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)
Shop Equipment, Automotive Maintenance and
Repair: Organizational Maintenance, Common
No.1 (WP 0099, Item 2)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Adhesive (WP 0101, Item 2)
Primer, Adhesive (WP 0101, Item 43)
Tape, Antiseize, ½-in Wide x 260-in Long
(WP 0101, Item 60)

Equipment Condition

FP-CBL shut down and drained IAW WP 0008

REPAIR

Repair the Nonmetallic Plumbing

WARNING



Avoid skin contact with graywater. Graywater is to be considered hazardous at all times. Full protection in the form of rubber gloves and safety glasses should be used when performing any type of maintenance that involves graywater. Failure to follow this warning could result in serious illness.

1. Place FP-CBL out of service and disconnect power.
2. Cut out damaged CPVC pipe section (Figure 1, Item 1) or fitting.
3. Clean cut and prime ends.
4. Cut replacement pipe section as necessary to fit.
5. Install pipe section (Figure 1, Item 3) fitting, and couplings (Figure 1, Item 2) as necessary and cement in place.
6. Operate FP-CBL and monitor for leakage and normal operation.

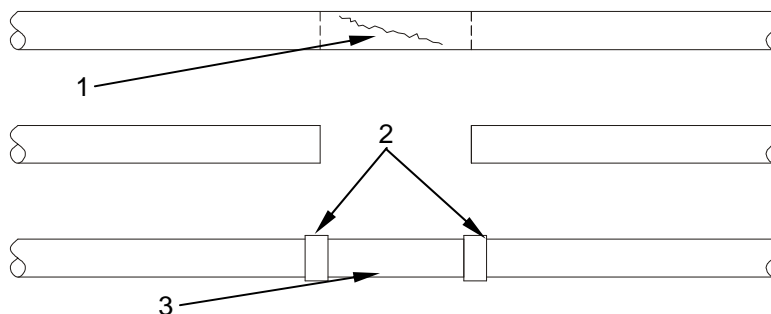


Figure 1. Repair the Nonmetallic Plumbing.

END OF TASK

REPAIR - CONTINUED**Repair Metallic Plumbing By Replacing Copper/Brass Pipe Fittings****NOTE**

The following procedure applies only to threaded pipe nipples and fittings. Items depicted in Figure 2. are typical of metallic plumbing components that can be repaired but are not limited to those shown.

1. Place the FP-CBL out of service and disconnect power.
2. Use a wrench to steady attached plumbing, and unscrew nipple (Figure 1, Item 1) or fitting to be replaced.
3. Apply antiseize tape to threads of replacement nipple (Figure 1, Item 1) or fitting.
4. Use a wrench to steady attached plumbing, and install replacement nipple (Figure 1, Item 1) or fitting.
5. Ensure replacement nipple or fitting is tight.
6. Operate FP-CBL and monitor for leakage and normal operation.



Figure 2. Replace Copper/Brass Pipe Fittings.

END OF TASK**END OF WORK PACKAGE**

SERVICE MAINTENANCE

VALVES, BALL
VALVES, GATE
VALVES, BRASS BALL
VALVES, BRASS CHECK
REPLACE

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Tape, Antiseize, ½-in Wide x 260 inches Long
(WP 0101, Item 60)

Equipment Condition

FP-CBL shut down and drained

References

WP 0005

REPLACE**Replace Ball Valve****NOTE**

If the unions of the valves are serviceable, the replacement valve may be installed using the existing unions. Retain the unused unions as repair parts.

1. Remove any retaining clamps (Figure 1, Item 3) as necessary and set aside.
2. If applicable, loosen clamps and remove any hoses (Figure 1, Item 5) that are attached to the ball valve (Figure 1, Item 4) being replaced.

NOTE

If the ball valve being replaced is inline with a union fitting (Figure 1, Item 1), loosen and separate the union to remove the pipe section containing the ball valve. This will simplify the replacement procedure. Once the replacement of the ball valve is complete, reinstall the pipe section and tighten the union fitting.

3. Taking note of the flow direction on the body of the defective ball valve, hold the pipe with pliers and unscrew damaged valve (Figure 1, Item 4). Remove the defective ball valve.
4. Remove any residual antiseize tape from the threaded fitting(s) (Figure 1, Item 2) and apply new antiseize tape.
5. Install replacement valve (Figure 1, Item 4) on the threaded fitting. Ensure that the ball valve is installed in the same flow direction and with the handle as the same position as the original ball valve.
6. Operate FP-CBL and monitor for leakage and normal operation.

REPLACE - CONTINUED

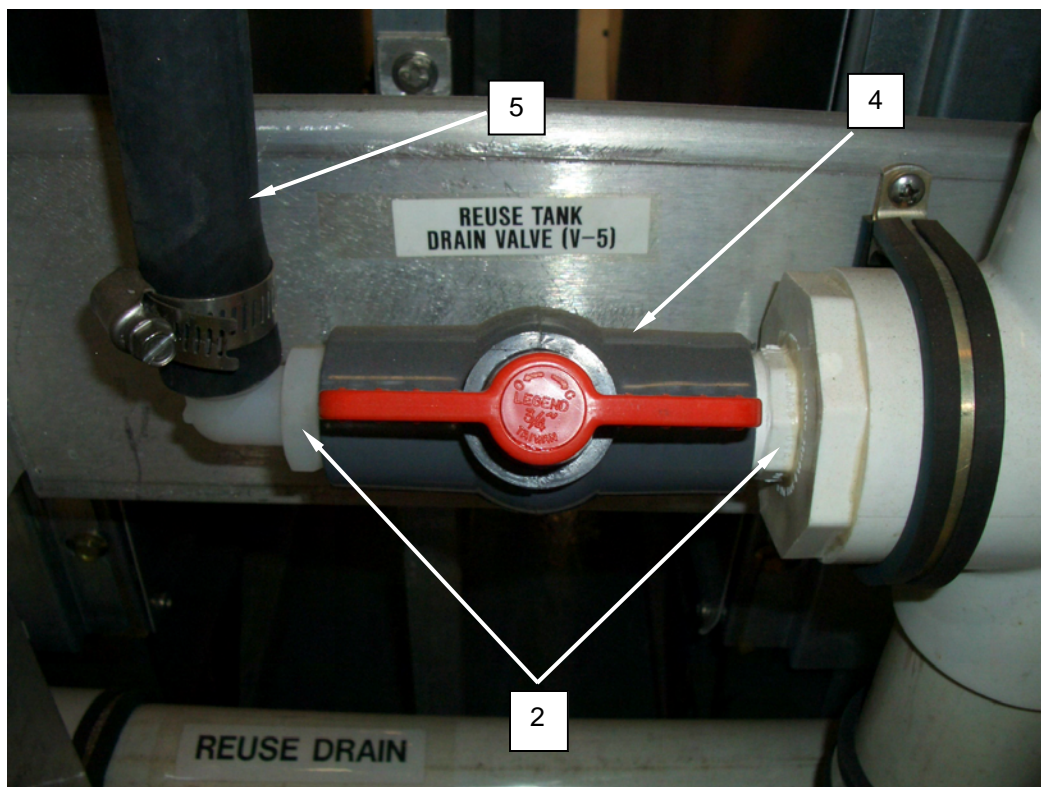
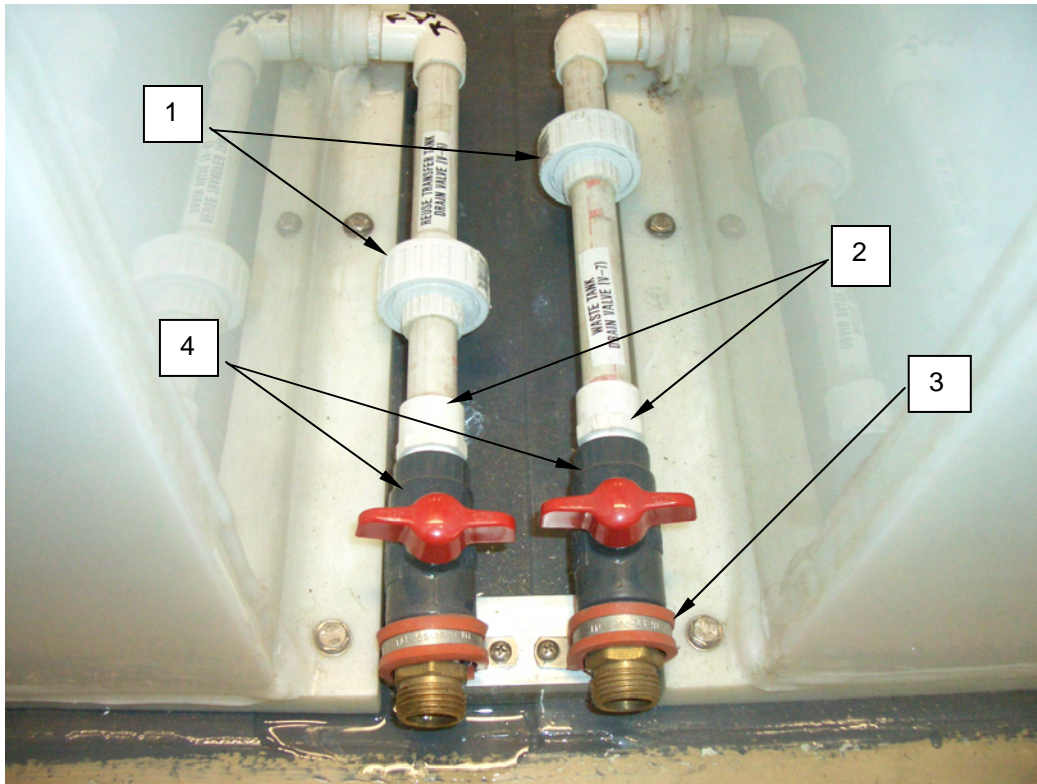


Figure 1. Replace Ball Valve.

END OF TASK

REPLACE - CONTINUED**Replace Gate Valves****NOTE**

It is not necessary to replace the valve body unless it is damaged. Replacing the valve core and gaskets is sufficient.

1. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
2. Place FP-CBL out of service and disconnect power.
3. Remove screws, nuts and washers retaining gate valve core (Figure 2, Item 3) to valve body (Figure 2, Item 1).
4. Ensure new gaskets (Figure 2, Item 2) are in place, and install replacement gate valve core (Figure 2, Item 3) to valve body (Figure 2, Item 1).
5. Re-connect power cables. Re-connect external power, if applicable. Operate FP-CBL and monitor for leakage and normal operation.

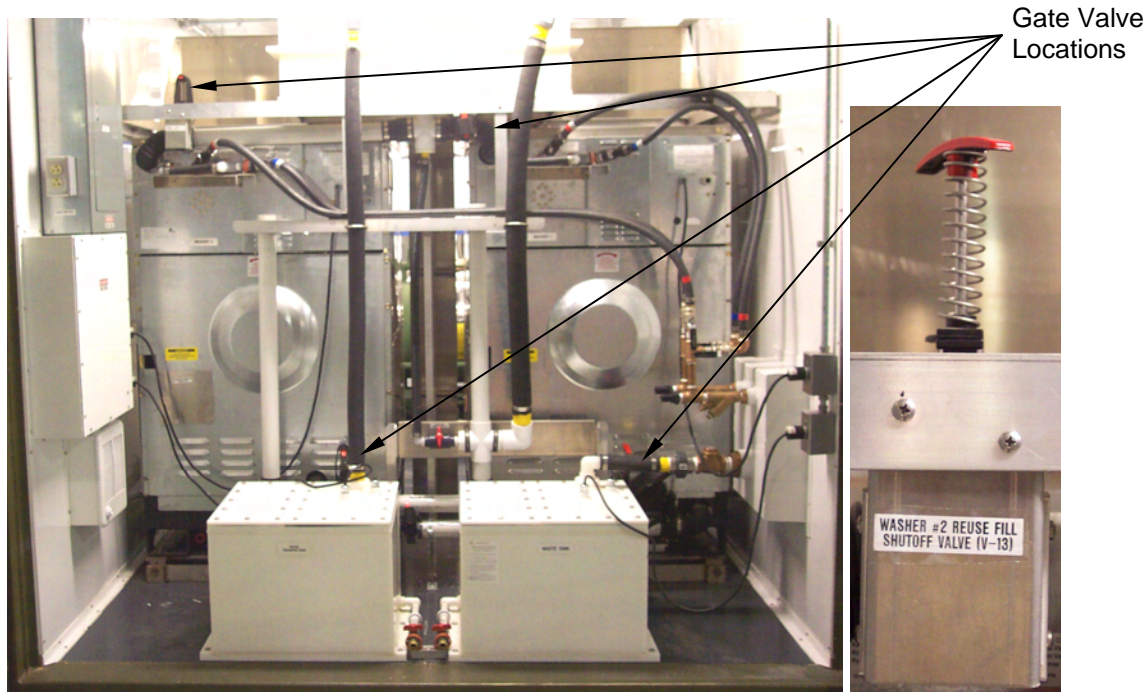


Figure 2. Replace Hand Operated Gate Valves.

END OF TASK

REPLACE - CONTINUED**Replace Brass Ball Valve**

1. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
2. Place FP-CBL out of service and disconnect power.
3. Note position of brass ball valve (Figure 3, Item 1) and valve operating handle (Figure 3, Item 4).
4. Remove the nut (Figure 3, Item 3) retaining the operating handle (Figure 3, Item 4) and remove the operating handle.
5. Use a wrench to steady attached plumbing and unscrew valve (Figure 3, Item 1) to be replaced.
6. Remove the nut (Figure 3, Item 3) retaining the operating handle (Figure 3, Item 4) on the replacement valve, and remove the operating handle
7. Apply antiseize tape to threads of replacement valve (Figure 3, Item 1) or attaching nipple (Figure 3, Item 2).
8. Use a wrench to steady attached plumbing and install replacement valve.
9. Ensure replacement valve (Figure 3, Item 1) is tight and correctly aligned to ease operation.
10. Reinstall operating handle to valve and place operating handle in operational configuration IAW WP 0005.
11. Operate FP-CBL and monitor for leakage and normal operation.

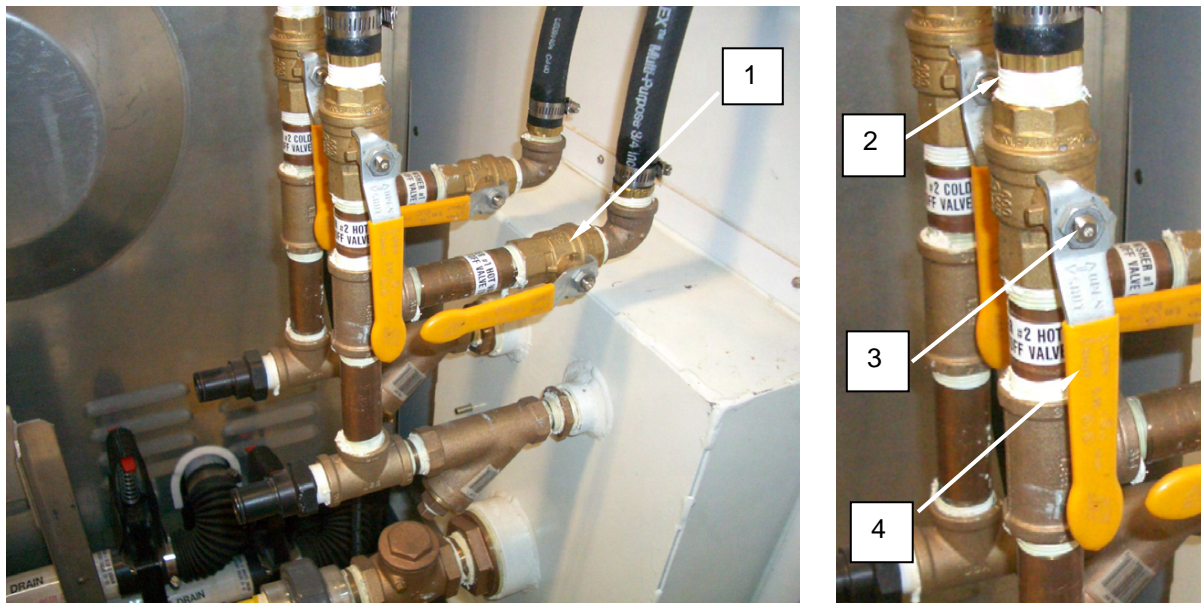


Figure 3. Replace Brass Ball Valves.

END OF TASK

REPLACE - CONTINUED**Replace Brass Check Valves**

1. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
2. Place FP-CBL out of service and disconnect power.
3. Locate nearest union (Figure 4, Item 1) or hose fitting and disconnect.
4. Make a note of direction of flow (Figure 4, Item 2) and position of check valve (Figure 4, Item 3).
5. Use a wrench to steady the attached pipe and remove the check valve.
6. Use a wrench to steady the check valve (Figure 4, Item 3) and remove any remaining attached pipe or fittings as an assembly.
7. Apply antiseize tape to check valve or attached male pipe fittings.
8. Use a wrench to steady attaching pipe.
9. Install check valve ensuring that the correct direction of flow (Figure 4, Item 2) and valve position has been retained.
10. Use a wrench to steady the replacement check valve.
11. Install any remaining attached pipe and fitting as a assembly onto the replacement check valve.
12. Connect and tighten any remaining disconnected unions (Figure 4, Item 1) or hose fittings.
13. Operate FP-CBL and monitor for leakage and normal operation.

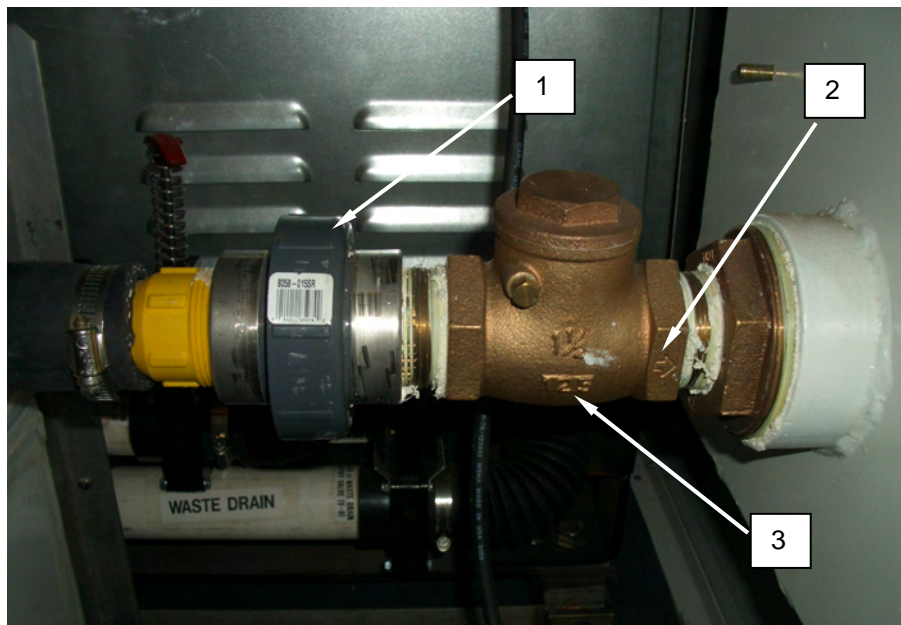


Figure 4. Replace Brass Check Valves.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
**HOSES
REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

None required.

Equipment Condition

All circuit breakers and switches to OFF position.
FP-CBL Water feed closed and disconnected.
QDC hose assembly removed.

REPLACE**Replacing INTERNAL Freshwater and Graywater Hoses (Hoses With Quick Disconnect Coupling)**

1. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels and all exterior QDC hose connections are removed.
2. Locate hose to be replaced.
3. Loosen and remove hose clamps (Figure 1, Item 5) at both ends of hose (Figure 1, Item 5).
4. Remove hose assembly (Figure 1, Item 1).
5. Disconnect quick disconnect couplings (Figure 1, Item 4). Inspect for any damage. If serviceable, set aside. If damaged, replace couplings.
6. Cut replacement hose to same length as damaged hose.
7. Reinstall quick disconnect couplings (Figure 1, Item 4) and retain with hose clamps (Figure 1, Item 5).
8. Install replacement hose assembly.
9. Operate and monitor for leaks and normal operation.

END OF TASK**Replacing INTERNAL Freshwater and Graywater Hoses (Hoses Without Quick Disconnect Couplings)**

1. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels and all exterior QDC hose connections are removed.
2. Locate hose to be replaced.
3. Loosen and remove hose clamps (Figure 1, Item 3) at both ends of hose (Figure 1, Item 2).
4. Remove hose.

REPLACE – CONTINUED

5. Cut replacement hose to same length as damaged hose.
6. Install replacement hose and retain with hose clamps (Figure 1, Item 3).
7. Operate and monitor for leaks and normal operation.

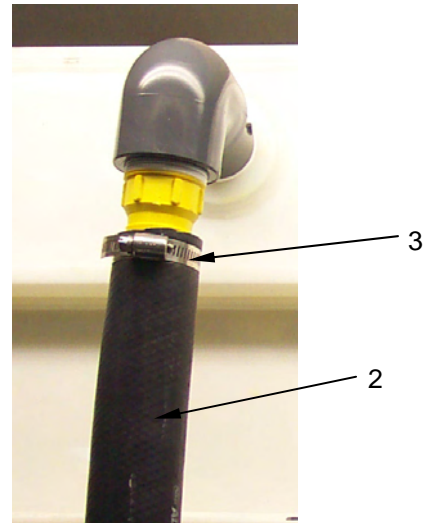
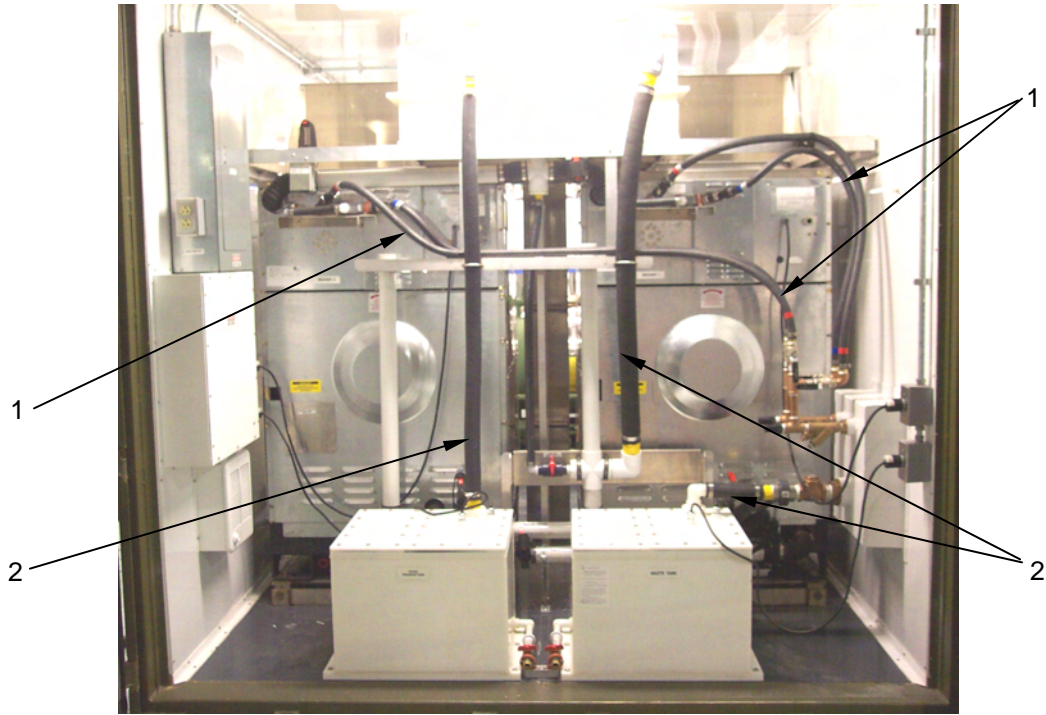


Figure 1. Replace Internal Freshwater and Graywater Hoses.

END OF TASK

REPLACE - CONTINUED**Replace EXTERNAL Freshwater and Graywater Hoses and Damaged QD Hose Components (as required)**

1. Replace damaged gaskets (Figure 2, Item 1 and Item 2). A small screwdriver or knife may be necessary to remove the gaskets.
2. Locate hose to be replaced.
3. Loosen and remove hose clamps (Figure 2, Item 4) at both ends of hose (Figure 2, Item 3).
4. Remove hose assembly (Figure 2, Item 3).
5. Remove quick disconnect couplings (Figure 2, Item 5) and inspect for serviceability. If serviceable, set aside for reuse. If damaged, discard and replace.
6. Cut replacement hose to same length as damaged hose.
7. Reinstall quick disconnect couplings (Figure 2, Item 5) and retain with hose clamps (Figure 2, Item 4).
8. Install replacement hose assembly.
9. Operate and monitor for leaks and normal operation.

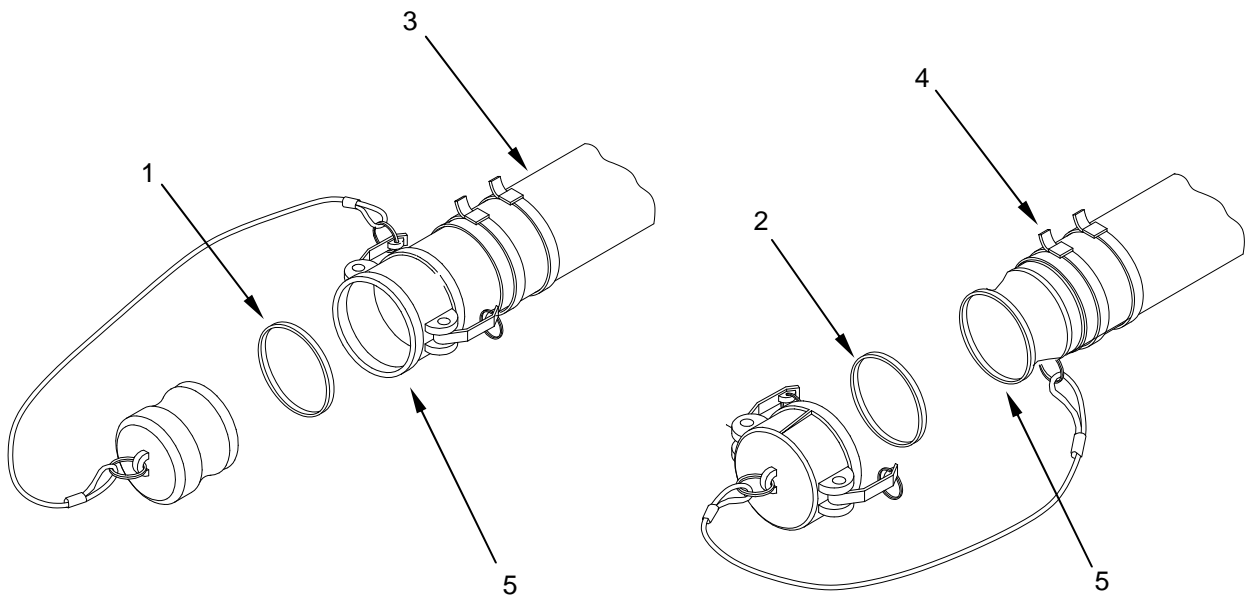


Figure 2. Replace Damaged QD Hose Components.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**TANKS
SERVICE, REPAIR, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No.1 (WP 0099, Item 2)
Torch, Set, Cutting and Welding (WP 0099, Item 4)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (2)

Materials/Parts

General Purpose Detergent (WP 0101, Item 25)
Bleach, Laundry, Sodium Hypochlorite, 1 Gal (WP 0101, Item 7)
Tape, Antiseize (WP 0101, Item 60)
Sheet, Plastic (WP 0101, Item 54)
Sheet, Aluminum 1/8-inch (WP 0101, Item 53)
Sheet, Rubber 1/8-inch (WP 0101, Item 55)
Rag, Wiping (WP 0101, Item 44)
Sealant, RTV (WP 0101, Item 47)
Cleaner, Solvent (WP 0101, Item 10)
Screw, Machine, Stainless Steel ¼-20 x 1 (WP 0101, Item 52)
Nut, Stainless Steel ¼-20 (WP 0101, Item 40)

Equipment Condition

FP-CBL shutdown and drained

References

TB MED 577
WP 0007

SERVICE**Clean and Disinfect Drainage Tanks****WARNING**

Always secure and tag circuit breakers and switches OFF before attempting any electrical repairs. Remember that the FP-CBL is a wet environment, and capable of posing a shock hazard even when personnel are not in direct contact with metal parts.



Ensure graywater pipes have been sanitized IAW procedures contained in TB MED 577 before attempting any repairs. Always use provided safety equipment, including hand and eye protection, when performing maintenance on graywater handling components. Failure to observe safety precautions may result in serious illness or death from biohazards.

NOTE

At the discretion of the maintenance technician, small holes, cracks, or other defects may be repaired with RTV sealant.

1. Place FP-CBL out of service. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels.

SERVICE – CONTINUED

2. Drain tank to be cleaned into an approved container by attaching supplied drain hose (Figure 1, Item 3) to drain connection (Figure 1, Item 2) and opening drain valve (Figure 1, Item 1).
3. Remove the top access cover (Figure 1, Item 5) of drainage tank by removing retaining bolts (Figure 1, Item 4).
4. Clean and disinfect the interior of the tank IAW TB MED 577.
5. Install the top access cover (Figure 1, Item 5) of drainage tank and retain with bolts (Figure 1, Item 4).
6. Close drain valve (Figure 1, Item 1) and disconnect drain hose (Figure 1, Item 3) from drain connection (Figure 1, Item 2).
7. Connect power and place FP-CBL back in service.

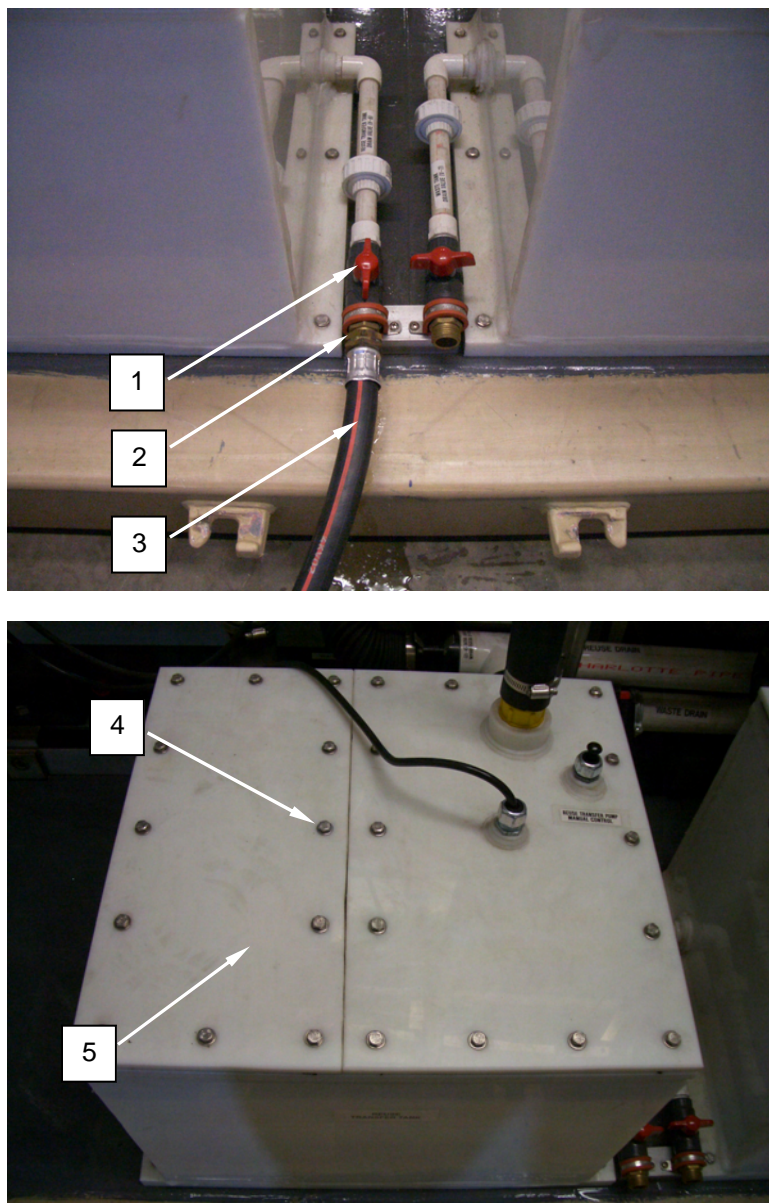


Figure 1. Clean and Disinfect Drainage Tanks.

END OF TASK

REPAIR**Repairing Waste Tank or Reuse Transfer Tank**

1. Place FP-CBL out of service. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels.
2. Drain tank (Figure 2, Item 2) IAW WP 0008.
3. Remove narrow access panel (Figure 2, Item 1) from top of drainage tank.
4. Clean and disinfect IAW previous section entitled SERVICE.
5. Locate source of leak.

NOTE

If crack is located, always drill the ends to stop the crack. Failure to do so may result in continued damage after repairs are complete. If tank is cracked, drill ends of crack and clean crack of any residue.

6. Allow tank to dry completely.
7. If crack is narrow enough, the damage area may be heated with a propane torch and rewelded.
8. If damage is more substantial, cut a patch (Figure 2, Item 6) of plastic or metal large enough to cover the damaged area with approximately 1-1/2-inch overlap.
9. Cut a rubber or paper gasket (Figure 2, Item 5) to match the patch, with approximately 1/2-inch overlap.
10. Drill 1/4-inch holes at 1-inch intervals around the perimeter of the patch (Figure 2, Item 6).
11. Place the drilled patch (Figure 2, Item 6) in location over the damaged area of the tank (Figure 2, Item 4), mark the holes, and drill corresponding holes into the tank.
12. Place the patch (Figure 2, Item 6) over the gasket (Figure 2, Item 5), mark the holes, and cut corresponding holes in the gasket.
13. Assemble the patch (Figure 2, Item 6) and gasket (Figure 2, Item 5) together with stainless steel 1/4 - 20 x 1 machine screws (Figure 2, Item 7).
14. Install the assembled patch (Figure 2, Item 6) into the tank (Figure 2, Item 1) and secure each machine screw (Figure 2, Item 7) with stainless steel 1/4 -20 nut (Figure 2, Item 3).
15. Install the narrow access panel (Figure 2, Item 1) to the top of the tank and secure with screws.
16. Place FP-CBL back into service, re-connect power cables and external power, if applicable, and monitor for leakage and normal operation.

REPAIR - CONTINUED

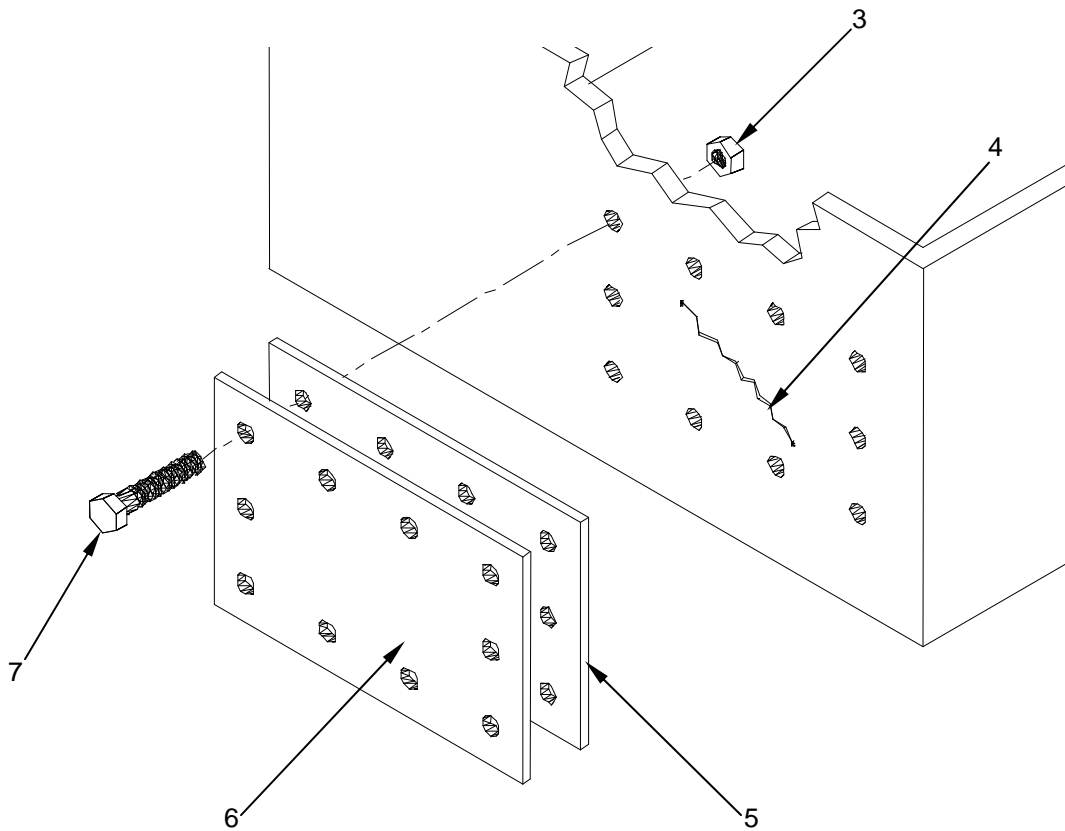
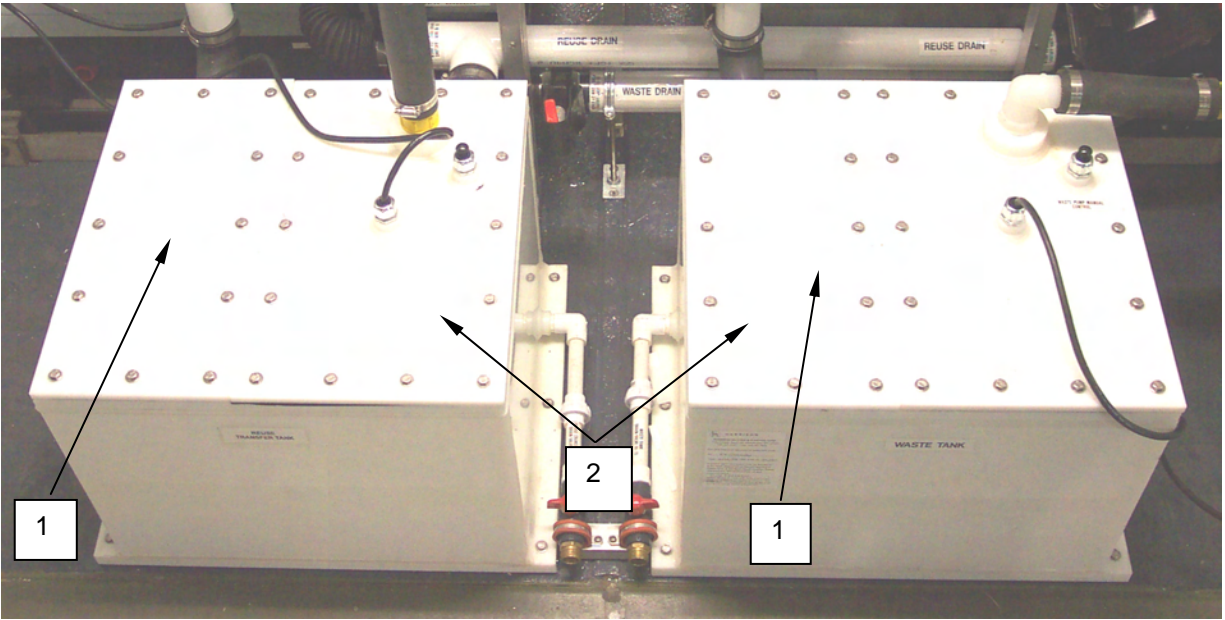


Figure 2. Repair Waste Tank or Reuse Transfer Tank.

END OF TASK

REPAIR - CONTINUED**Repairing Water Reuse Holding Tank****NOTE**

There may be instances when the damaged area cannot be reached in order to repair by the patch method. If the torch repair method is also not possible, the tank should be replaced.

1. Place FP-CBL out of service. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels..
2. Drain tank (Figure 3, Item 1) completely.
3. Remove hose connection (Figure 3, Item 2).
4. Remove mounting hardware (Figure 3, Item 3) retaining tank to tank rack.

**WARNING**

The water reuse holding tank installed in the FP-CBL weighs approximately 92 lbs. when empty and requires four people to lift/move. Use appropriate number of personnel when moving the reuse holding tank. To avoid serious injury, individuals should never attempt to lift an item if it requires more than one person.

5. Remove tank (Figure 3, Item 1).
6. Remove screws, washers and nuts retaining the access panel to the top of tank and remove access cover.
7. Locate source of leak.

NOTE

If crack is located, always drill the ends to stop the crack. Failure to do so may result in continued damage after repairs are complete.

8. If tank is cracked, drill ends of crack (Figure 3, Item 4) and clean crack of any residue.
9. Allow tank to dry completely.
10. If crack is narrow enough, the damage area may be heated with a propane torch and rewelded.
11. If damage is more substantial, cut a patch (Figure 3, Item 7) of plastic or metal large enough to cover the damage area with approximately 1-1/2-inch overlap.
12. Cut a rubber or paper gasket (Figure 3, Item 6) to match the patch, with approximately ½ -inch overlap.
13. Drill ¼-inch holes at 1-inch intervals around the perimeter of the patch (Figure 3, Item 7).
14. Placed the drilled patch (Figure 3, Item 7) in location over the damage area of the tank. Mark the holes, and drill corresponding holes into the tank.
15. Place the patch (Figure 3, Item 7) over the gasket (Figure 3, Item 6), mark the holes, and cut corresponding holes in the gasket.

REPAIR - CONTINUED

16. Assemble the patch (Figure 3, Item 7) and gasket (Figure 3, Item 6) together with stainless steel machine screws (Figure 3, Item 8).
17. Install the assembled patch (Figure 3, Item 7) into the tank and fasten the machine screws with stainless steel nuts (Figure 3, Item 5).
18. Install the narrow access panel to top of tank and secure with screws.
19. Installed the assembled tank in place and retain with mounting hardware (Figure 3, Item 3).
20. Install hose connections (Figure 3, Item 2) onto tank.
21. Monitor tank repair for leakage.

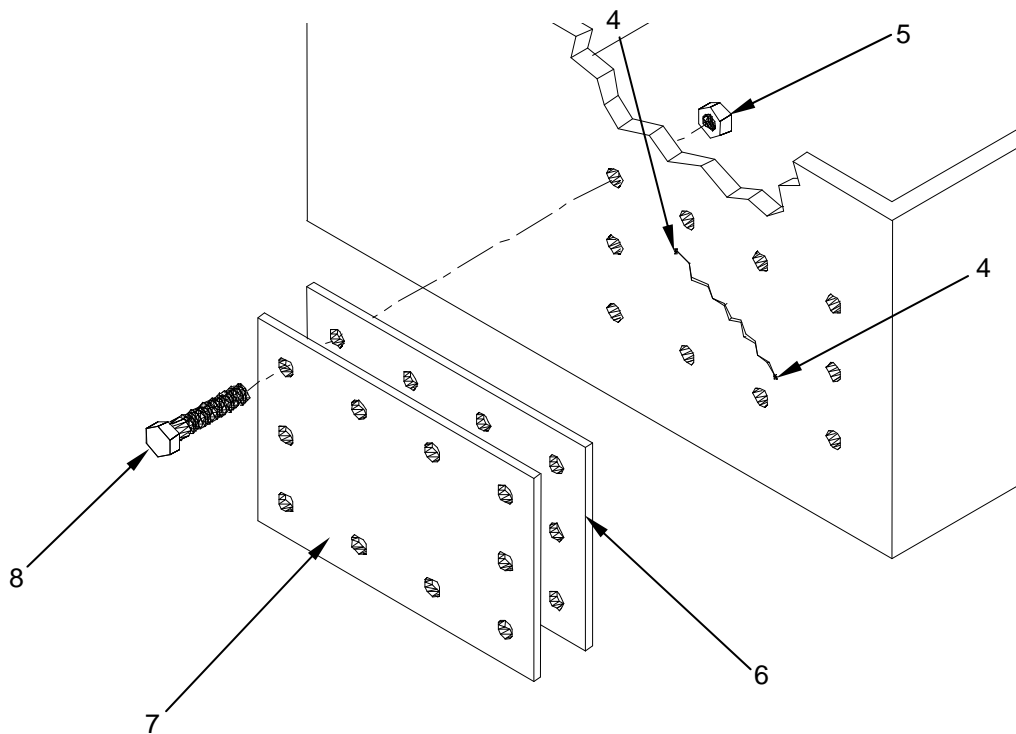
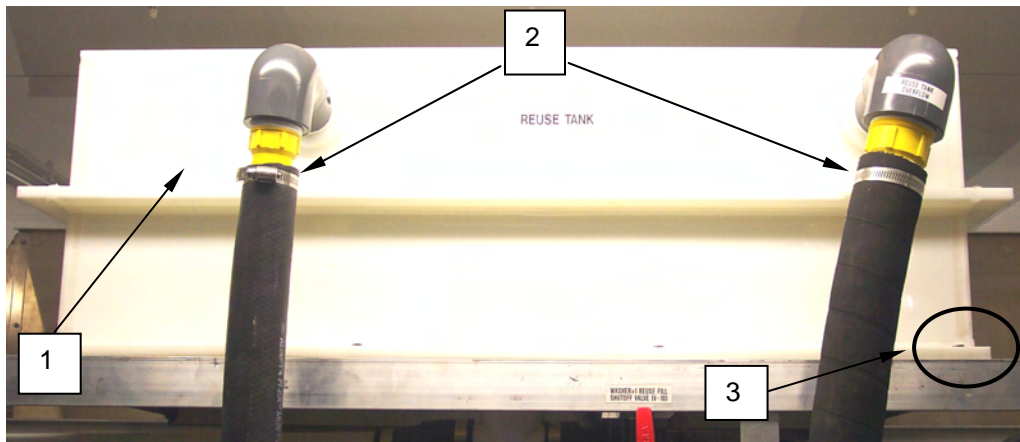


Figure 3. Repair Water Reuse Holding Tank.

END OF TASK

REPLACE**Replacing Reuse Holding Tank**

1. Place FP-CBL out of service. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels.
2. Drain tank (Figure 4, Item 1) completely.
3. Remove hose connections (Figure 4, Item 2).
4. Remove mounting hardware (Figure 4, Item 3) retaining tank to tank rack (Figure 4, Item 4).

**WARNING**

The water reuse holding tank installed in the FP-CBL weighs approximately 92 lbs. when empty and requires four people to lift/move. Use appropriate number of personnel when moving the reuse holding tank. To avoid serious injury, individuals should never attempt to lift an item if it requires more than one person.

5. Remove tank (Figure 4, Item 1).

NOTE

It may be necessary to strip the reuse holding tank of fittings to remove the holding tank and install the replacement tank. Inspect all fittings for serviceability and replace any damaged fittings.

6. Remove screws, washers and nuts retaining top of tank and remove top. Set top aside.
7. Install the top of tank set aside earlier and retain with screws to top of new tank.
8. Install the assembled tank in place and retain with original hardware.
9. Install hose connections onto tank.
10. Place FP-CBL back in service. Re-connect power cables. Re-connect power source, if applicable.
11. Monitor tank repair for leakage.

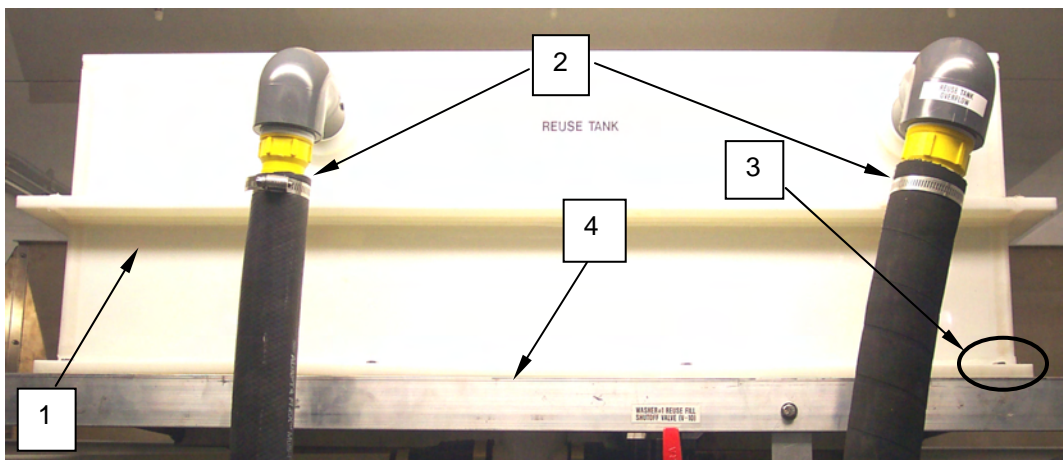


Figure 4. Replace Reuse Holding Tank.

END OF TASK

REPLACE - CONTINUED

Replacing Waste Tank or Reuse Transfer Tank

NOTE

The replacement procedures for the waste tank and reuse transfer tank are identical except where noted.

1. Attach drain hose (Figure 5, Item 6) to drain fitting (Figure 5, Item 7) and open tank drain valve (Figure 5, Item 8). Drain tank (Figure 5, Item 1) into an approved container.
2. Remove clamp (Figure 5, Item 3) and disconnect union connection (Figure 5, Item 2) to tank drain valve (Figure 5, Item 8). Set clamp aside.
3. Remove bolts (Figure 5, Item 4) retaining tank to FP-CBL deck (Figure 5, Item 5).

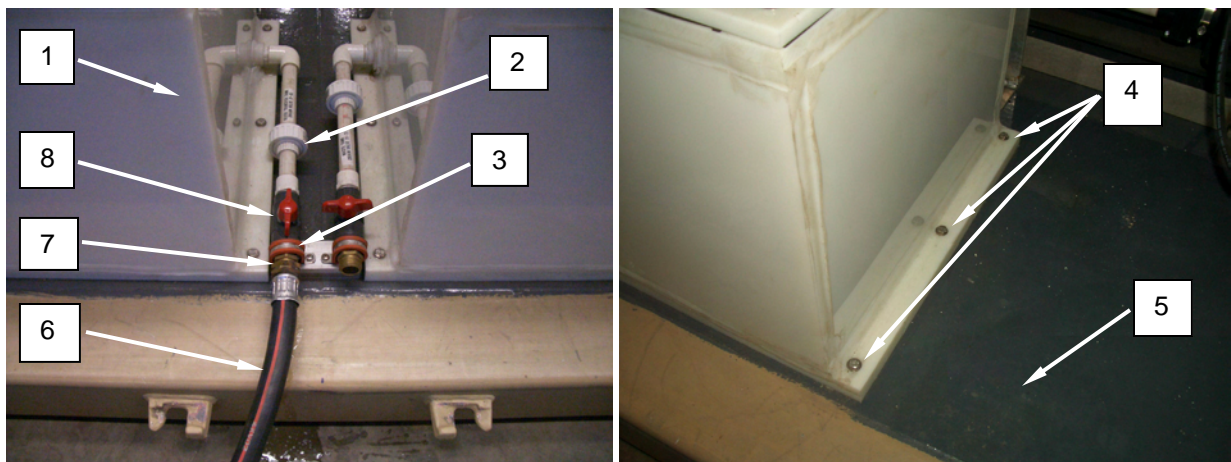


Figure 5. Disconnecting Union Connection and Removing Bolts Securing Tank.

4. If replacing the waste tank, loosen union (Figure 6, Item 2) and disengage top discharge hose (Figure 6, Item 1) from check valve (Figure 6, Item 3).

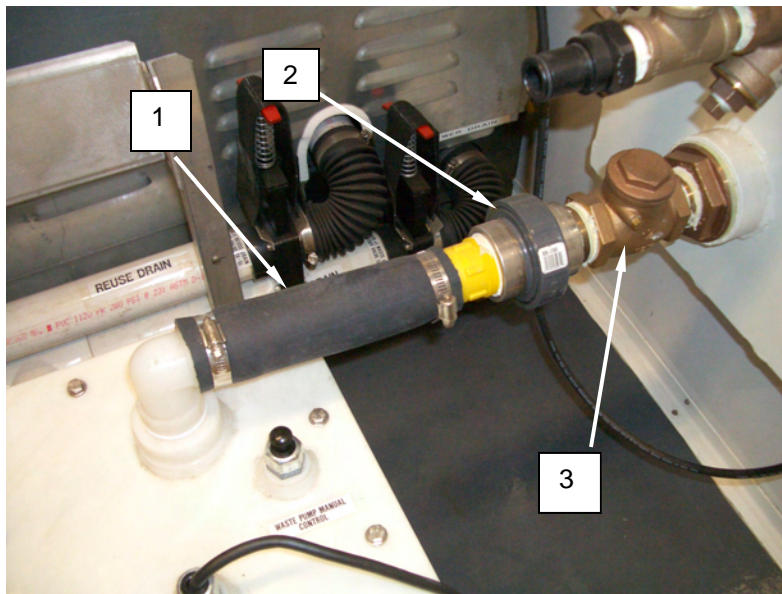


Figure 6. Disengaging Top Discharge Hose from Check Valve.

REPLACE - CONTINUED

5. If replacing the reuse transfer tank, loosen clamp (Figure 7, Item 1) and remove discharge hose (Figure 7, Item 2).

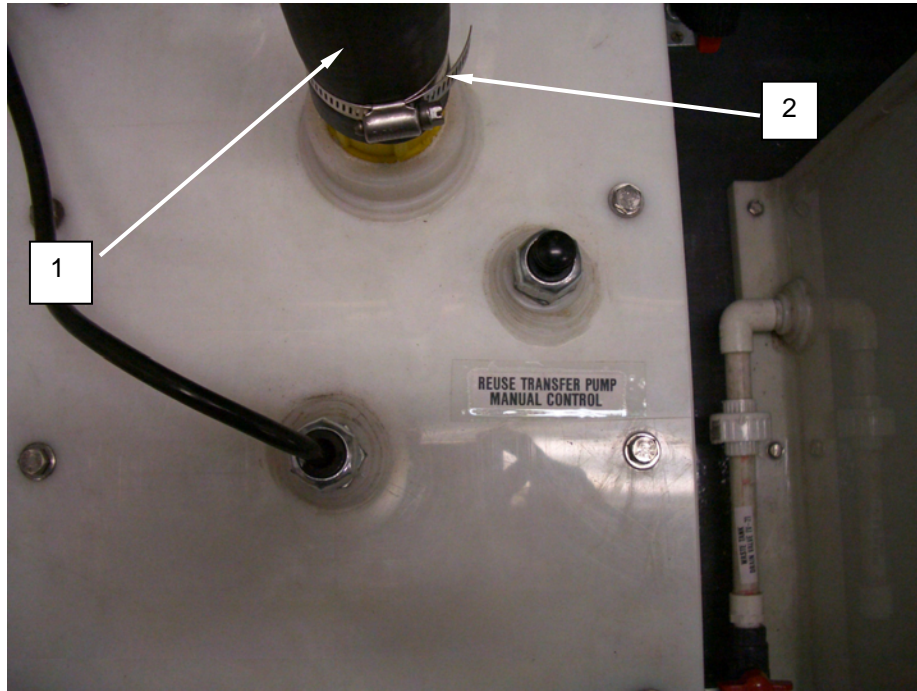


Figure 7. Removing Reuse Transfer Tank Discharge Hose (if applicable).

6. Disconnect rear hose connections (Figure 8, Item 1) from tank.

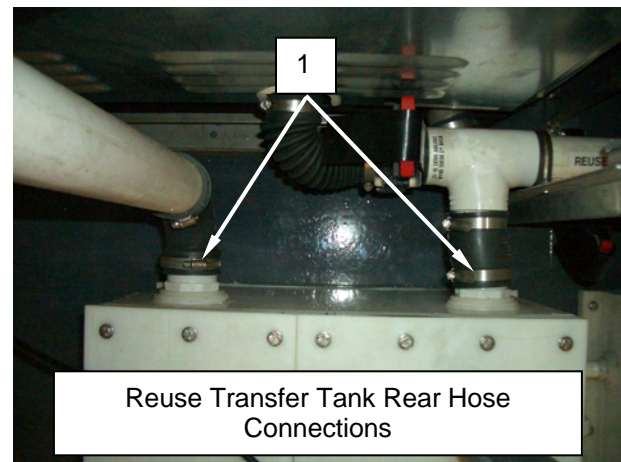
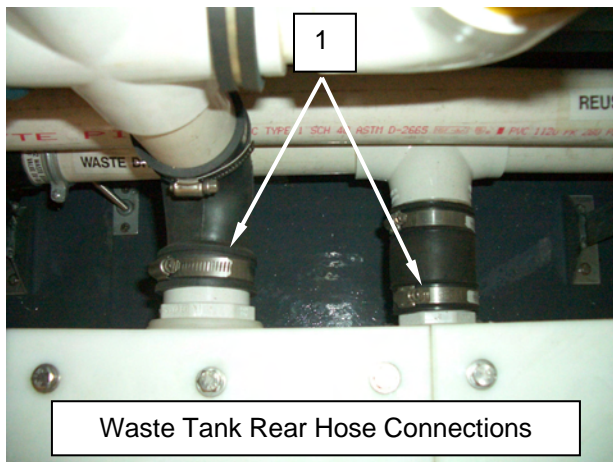


Figure 8. Disconnecting Rear Hose Connections.

REPLACE - CONTINUED

7. Remove narrow access cover on top (Figure 9, Item 1) of drainage tank.

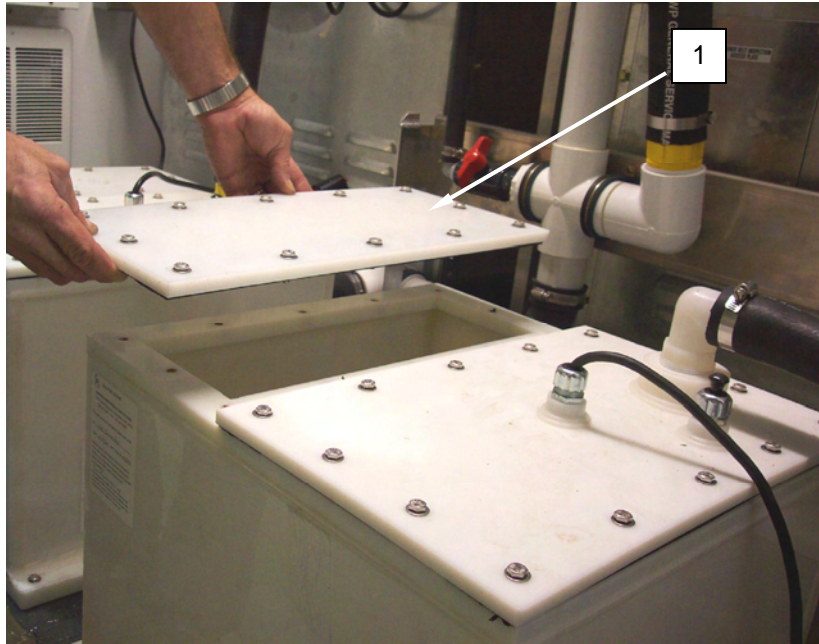


Figure 9. Removing Narrow Access Cover from Drainage Tank.

8. Disconnect manual lift rod (Figure 10, Item 1) from pump inside tank and remove manual lift rod from tank.
9. Disconnect pump plug cord (Figure 10, Item 2) from receptacle. Disassemble and remove plug from cord and set aside.
10. Loosen watertight tank penetration (Figure 10, Item 3) and pull pump wiring through.



Figure 10. Loosening Watertight Tank Penetration and Pulling Wiring Through.

REPLACE - CONTINUED

11. Loosen hose clamps, and remove discharge hose (Figure 11, Item 4) from pump (Figure 11, Item 1).
12. Remove fasteners (Figure 11, Item 3) retaining pump to tank and remove pump. Set pump aside.
13. Remove watertight tank penetration (Figure 11, Item 2) from tank. Set aside.

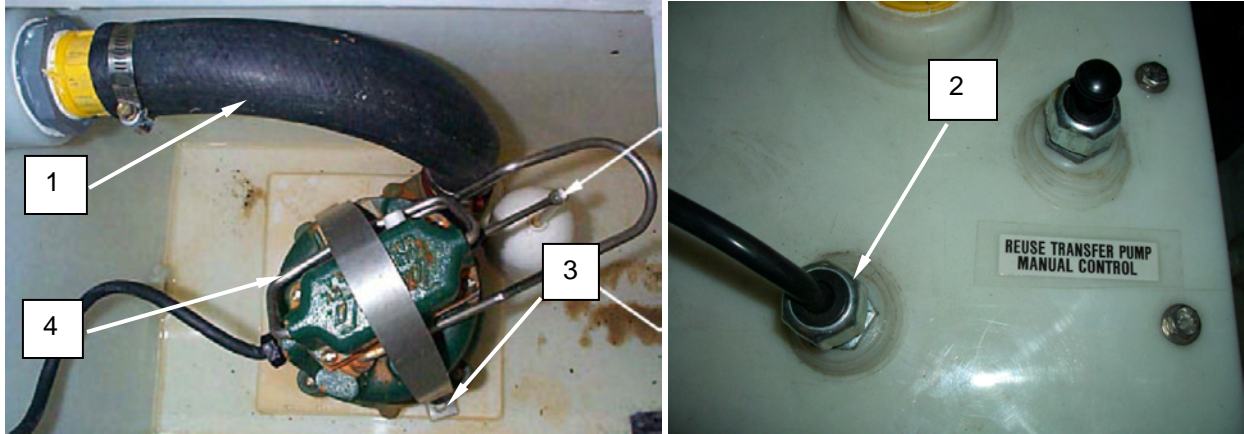


Figure 11. Removing Pump from Tank.

14. Remove tank.

NOTE

It will be necessary to strip the drainage tank of fittings to install on the replacement tank. Inspect components for serviceability and replace damaged components.

15. Install watertight tank penetration onto new tank.
16. Install pump inside tank and secure with fasteners set aside earlier.
17. Loosen watertight tank penetration and pull pump wiring through.
18. Install pump plug set aside earlier onto end of pump cord.
19. Install discharge hose on pump. Tighten hose clamps.
20. Install manual lift knob into tank. Install manual lift rod onto pump inside tank.
21. Install narrow access cover on top of drainage tank.
22. Position new tank on floor of FP-CBL.
23. Install rear hose connections onto fittings at rear of tank.
24. If replacing the reuse transfer tank, install discharge hose and clamp. Tighten securely.
25. Install bolts retaining tank to FP-CBL deck.
26. If replacing the waste tank, engage top discharge hose onto check valve and tighten union.
27. Connect union connection to tank drain valve. Install clamp and tighten both securely.
28. Plug pump plug cord into receptacle.

REPLACE - CONTINUED

29. Place FP-CBL back into service and monitor for normal operation.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
**TANK PUMPS
TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Detergent, Nonphosphate (Type II), 50lb (WP
0101, Item 25)
Bleach, Laundry, Sodium Hypochlorite, 1 Gal. (WP
0101, Item 7)
Container of water

Equipment Condition

FP-CBL set up

References

TB MED 577

TEST**Testing the Tank Pump**

1. Ensure FP-CBL is in service with external power connected.
2. Test tank pump electrical receptacle (Figure 1, Item 1) IAW WP 0045. If tank pump receptacle is good, proceed to step 3.
3. Remove bolts retaining the small access panel (Figure 1, Item 4) to top of tank and set aside. Remove small access panel.

WARNING

Ensure graywater pipes have been sanitized IAW procedures contained in TB MED 577 before attempting any repairs. Always use provided safety equipment, including hand and eye protection, when performing maintenance on graywater handling components. Failure to observe safety precautions may result in serious illness or death from biohazards.

4. Clean and disinfect tank IAW TB MED 577.
5. Using an external water source, fill the tank with enough water to activate pump.
6. If water level goes above top of pump float (Figure 1, Item 3) without activating pump (Figure 1, Item 2), pump is bad. Replace pump assembly IAW the REPLACE procedures in this work package.
7. Replace top cover and tighten bolts securely.
8. Monitor system for proper operation.

TEST - CONTINUED

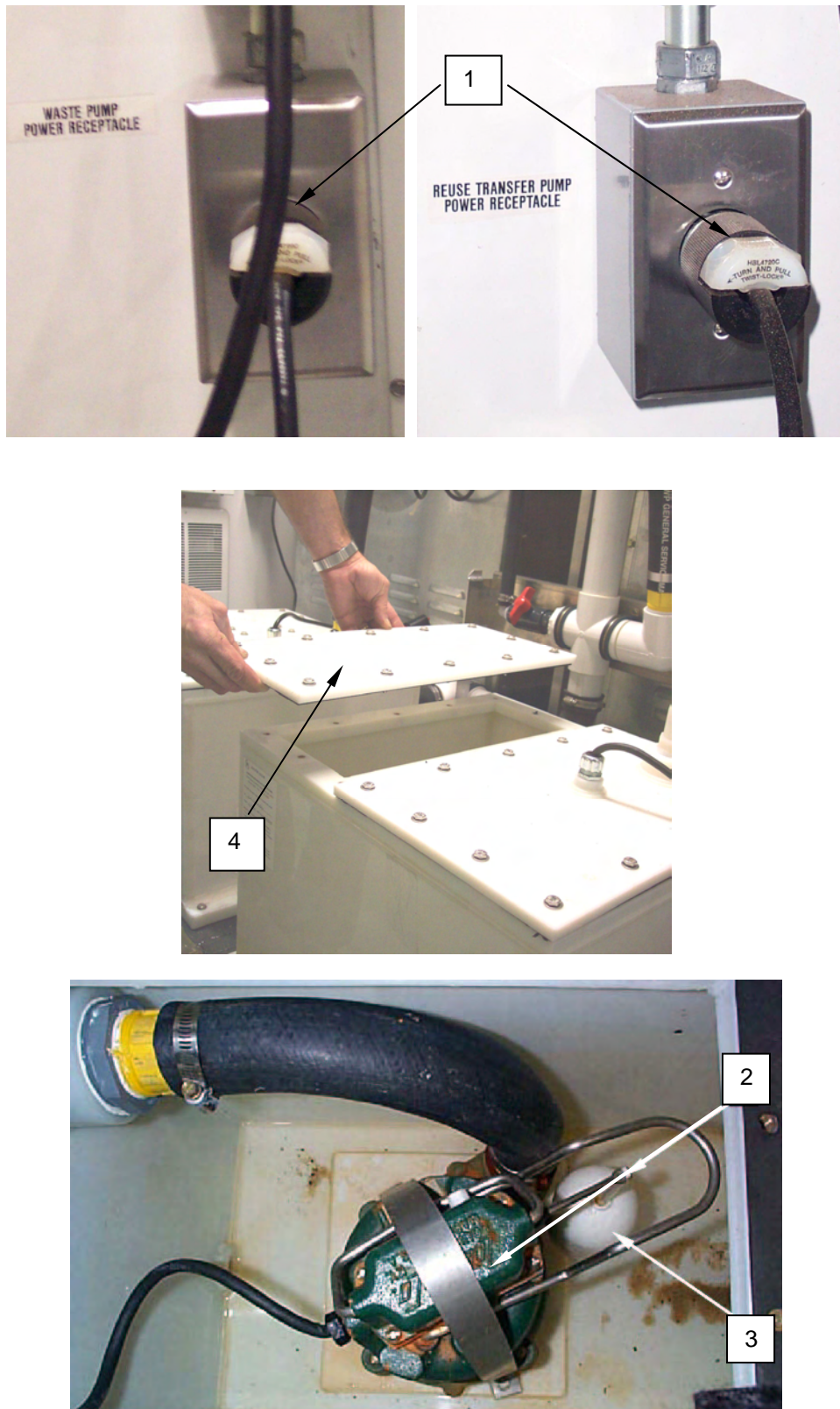


Figure 1. Test the Tank Pump.

END OF TASK

REPLACE**Replacing Tank Pump**

1. Place FP-CBL out of service. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source. Ensure that power cables are disconnected from exterior power input panels.
2. Drain tank completely.
3. Remove manual lift knob (Figure 2, Item 2) and disconnect discharge union.
4. Remove bolts retaining the small access panel (Figure 2, Item 7) to top of tank and set aside. Remove small access panel.

WARNING

Ensure graywater pipes have been sanitized IAW procedures contained in TB MED 577 before attempting any repairs. Always use provided safety equipment, including hand and eye protection, when performing maintenance on graywater handling components. Failure to observe safety precautions may result in serious illness or death from biohazards.

5. Clean and disinfect tank in accordance with TB MED 577.
6. Disconnect discharge hose (Figure 2, Item 3) from pump assembly (Figure 2, Item 4) and remove hose.
7. Remove screws retaining mounting strap (Figure 2, Item 5) and remove strap.
8. Remove pump assembly (Figure 2, Item 4) from tank.
9. Disassemble power cord (Figure 2, Item 6) and retain for installment on replacement pump power cord.
10. Loosen watertight strain relief (Figure 2, Item 1) in tank top.
11. Pull power cord through strain relief.
12. Connect discharge hose (Figure 2, Item 3) and retain with clamp.
13. Install mounting strap (Figure 2, Item 5) and retain with screws.
14. Cut plug from end of replacement pump power cord.
15. Feed power cord through tank top strain relief (Figure 2, Item 3).
16. Strip insulation from end of power cord and install plug (Figure 2, Item 6) onto replacement pump power cord.
17. Install large section of tank cover. Connect discharge hose to pump assembly and discharge union. Install bolts and tighten securely.
18. Install manual lift knob (Figure 2, Item 2).
19. Install small access cover (Figure 2, Item 7) and tighten bolts securely.
20. Connect power, and monitor for normal operation.

REPLACE - CONTINUED

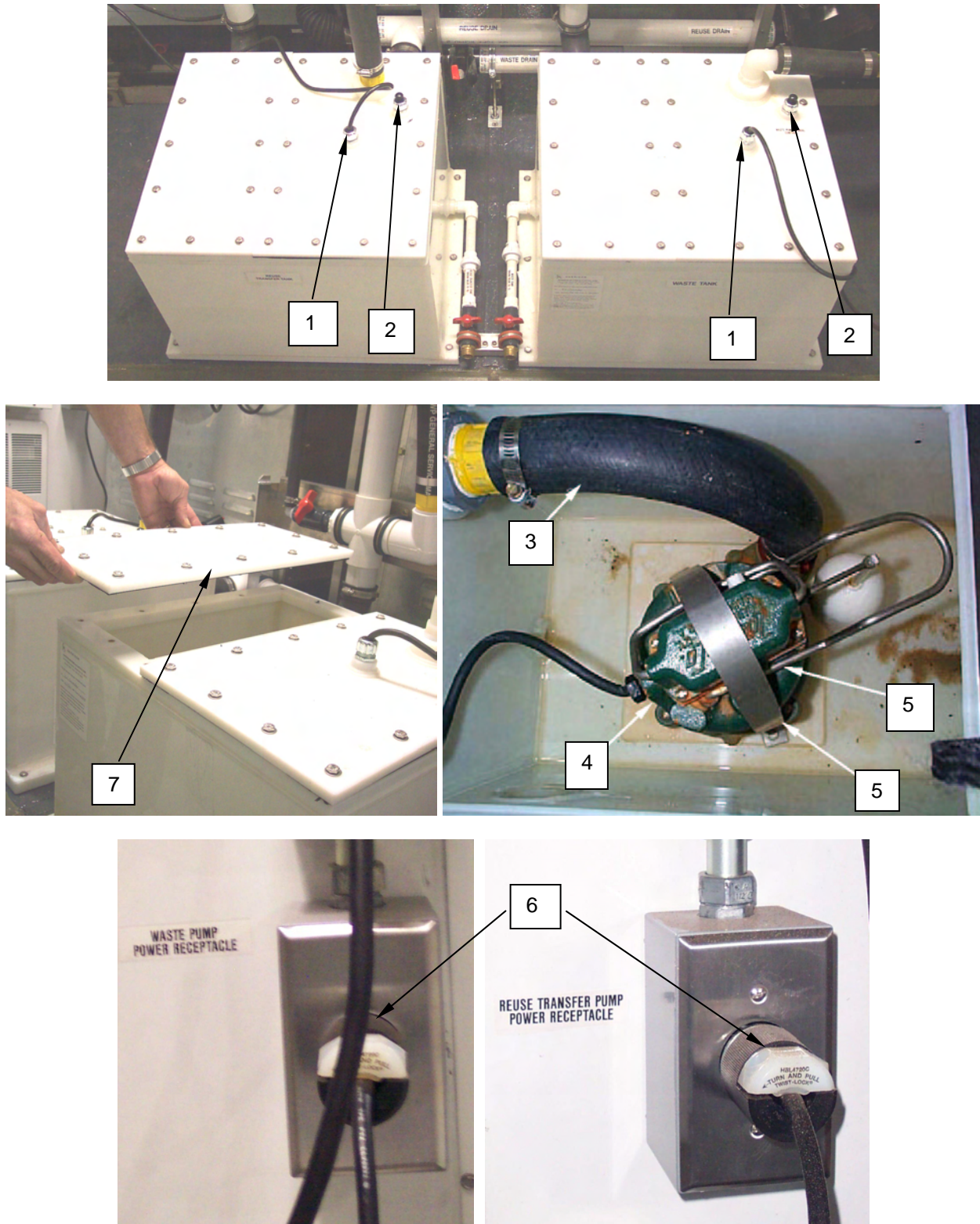


Figure 2. Replace Tank Pump.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

**STRAINER SCREEN
INSPECT, SERVICE, REPLACE**

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)

Materials/Parts

Water bucket

Equipment Condition

FP-CBL shut down.
Incoming Hot and Cold Water Disconnected.

INSPECT

1. Close Washer #1 and Washer #2 hot water shutoff valves (Figure 1, Item 2) and cold water shutoff valves (Figure 1, Item 1).

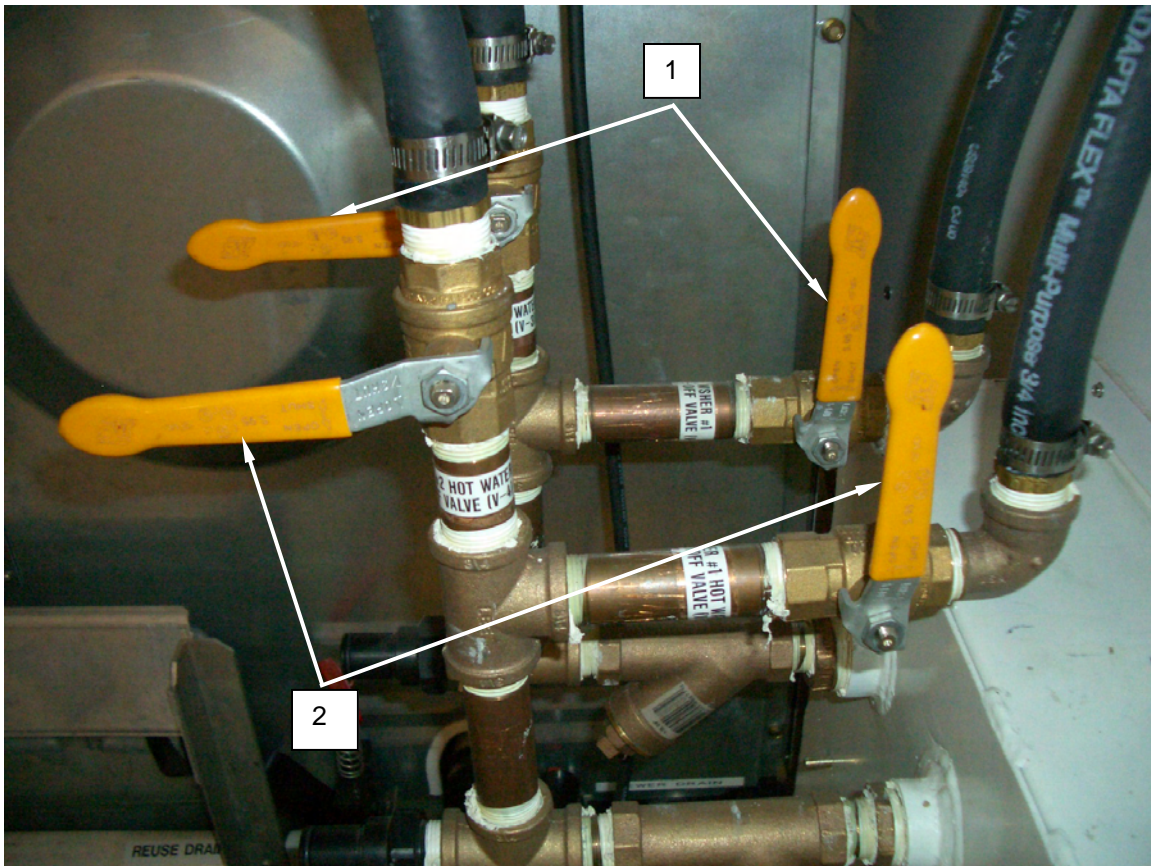


Figure 1. Close Hot and Cold Water Shutoff Valves.

INSPECT – CONTINUED

2. Place suitable container under the strainer screen cap (Figure 2, Item 1) to catch any water.
3. Use a wrench to remove the strainer screen cap (Figure 2, Item 1).
4. Check for debris or damage to the strainer screen (Figure 2, Item 2). Replace if necessary. If serviceable, clean IAW next section.
5. Reinstall strainer screen.
6. Reinstall the strainer screen cap (Figure 2, Item 1). Tighten securely.
7. Open Washer #1 and Washer #2 hot water shutoff valves (Figure 1, Item 1) and cold water shutoff valves (Figure 1, Item 2).
8. Operate FP-CBL and monitor for leakage and normal operation.

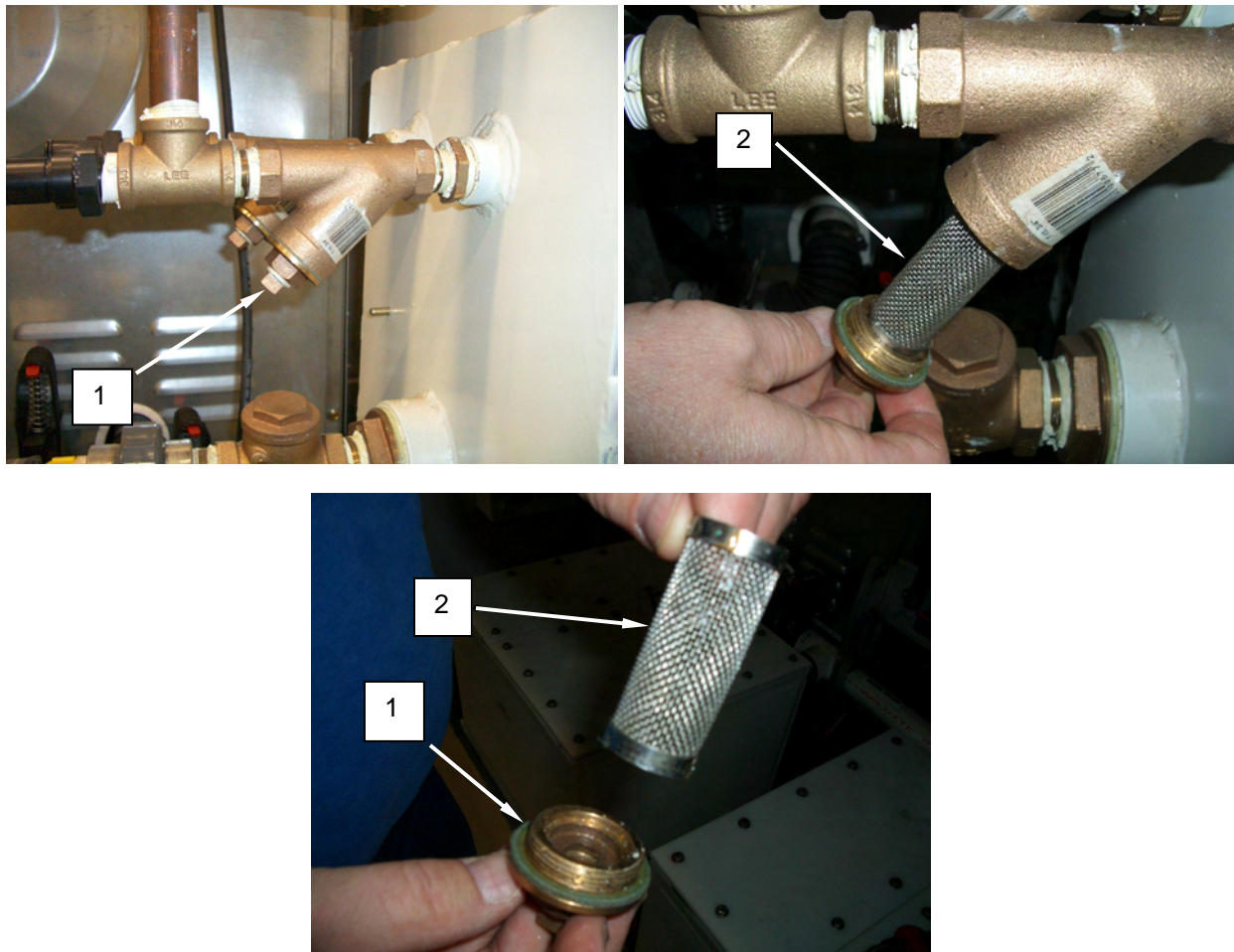


Figure 2. Inspect Strainer Screen.

END OF TASK

SERVICE**Clean Strainer screen**

1. Close Washer #1 and Washer #2 hot water shutoff valves (Figure 3, Item 2) and cold water shutoff valves (Figure 3, Item 1).

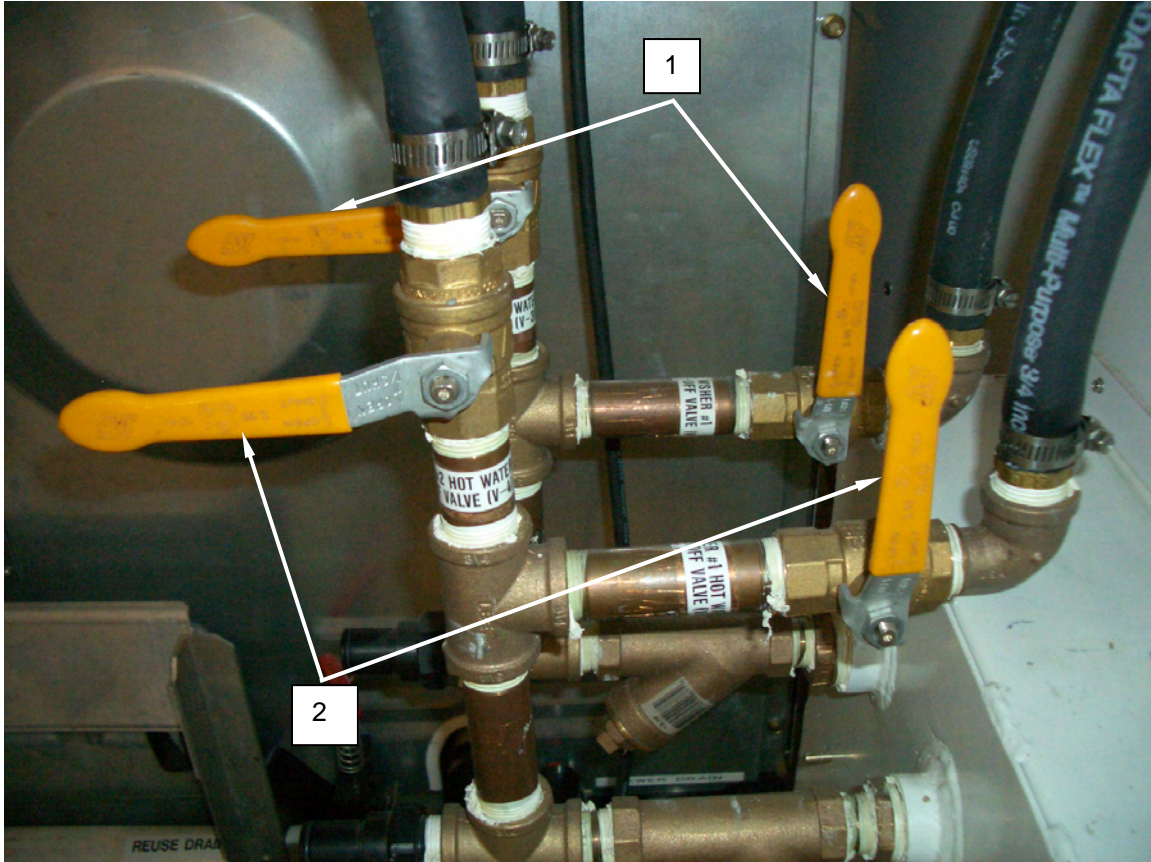


Figure 3. Close Hot and Cold Water Shutoff Valves.

SERVICE – CONTINUED

2. Place suitable container under the strainer screen cap (Figure 4, Item 1) to catch any water.
3. Use a wrench to remove the strainer screen cap (Figure 4, Item 1).
4. Clean any debris on the strainer screen (Figure 4, Item 2). Check for any damage and replace if necessary. If serviceable, reinstall.
5. Reinstall strainer screen.
6. Reinstall the strainer screen cap (Figure 4, Item 1). Tighten securely.
7. Open Washer #1 and Washer #2 hot water shutoff valves (Figure 3, Item 1) and cold water shutoff valves (Figure 3, Item 2).
8. Operate FP-CBL and monitor for leakage and normal operation.

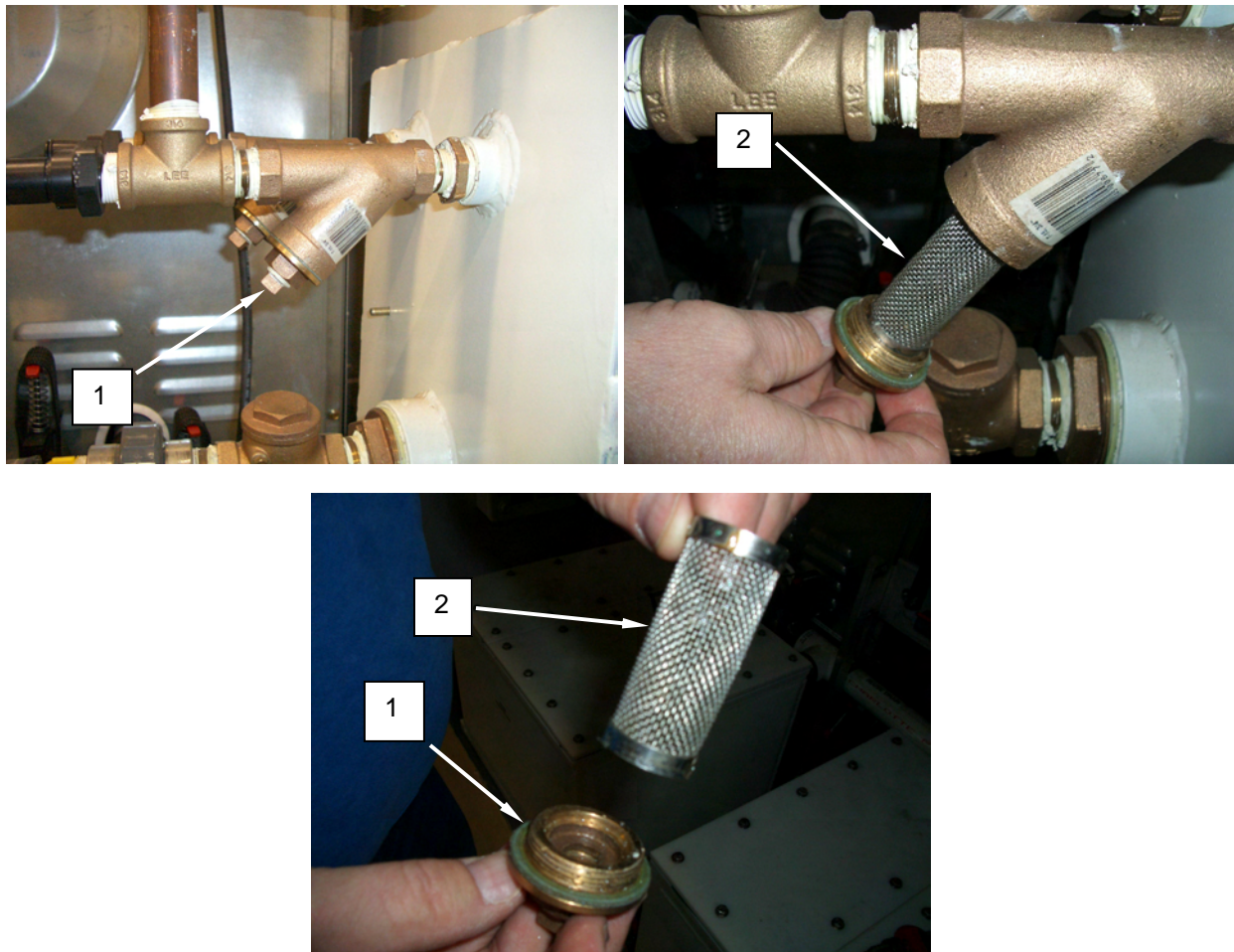


Figure 4. Clean Strainer Screen.

END OF TASK

REPLACE

1. Close Washer #1 and Washer #2 hot water shutoff valves (Figure 5, Item 2) and cold water shutoff valves (Figure 5, Item 1).

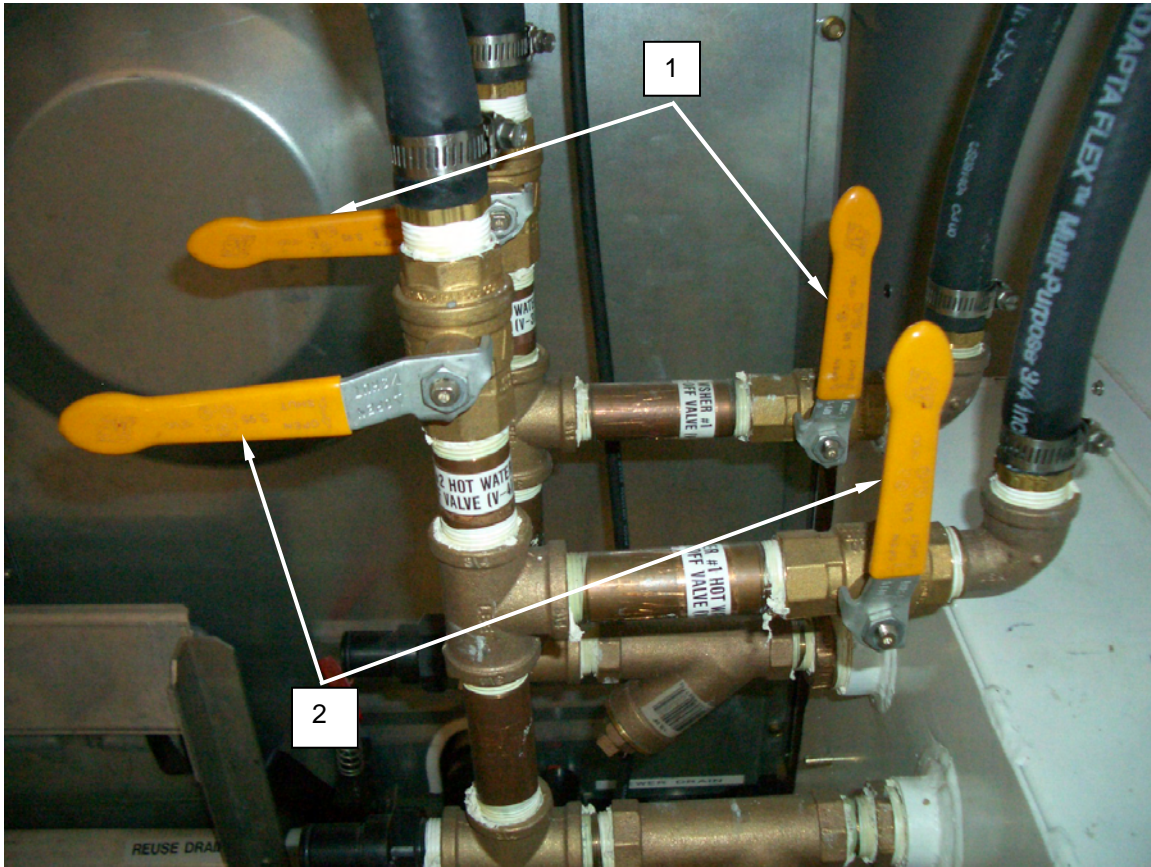


Figure 5. Close Hot and Cold Water Shutoff Valves.

REPLACE – CONTINUED

2. Place suitable container under the strainer screen cap (Figure 6, Item 1) to catch any water.
3. Use a wrench to remove the strainer screen cap (Figure 6, Item 1).
4. Install new strainer screen (Figure 6, Item 2) onto recess in strainer screen cap.
5. Reinstall the strainer screen cap (Figure 6, Item 1). Tighten securely.
6. Open Washer #1 and Washer #2 hot water shutoff valves (Figure 5, Item 1) and cold water shutoff valves (Figure 5, Item 2).
7. Operate FP-CBL and monitor for leakage and normal operation.

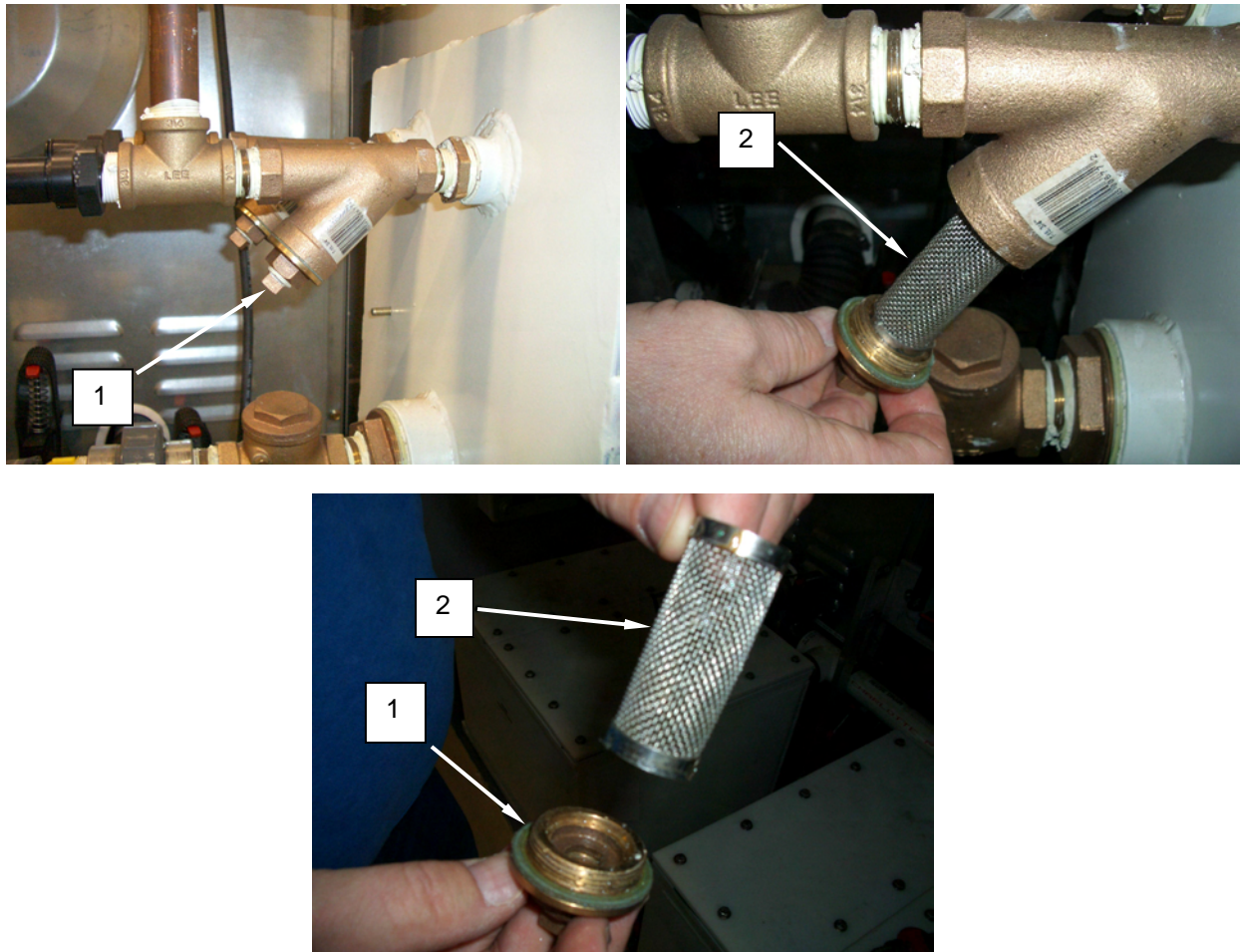


Figure 6. Replace Strainer Screen.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER
REMOVE, INSTALL****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

None required.

Equipment Condition

FP-CBL set up.

REMOVE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment, which might be damaged by the washer on its way in or out.

1. Disconnect washer power cord (Figure 1, Item 2).
2. Shut the hot and cold water supply valves (Figure 1, Item 1) for the washer being removed.

REMOVE – CONTINUED

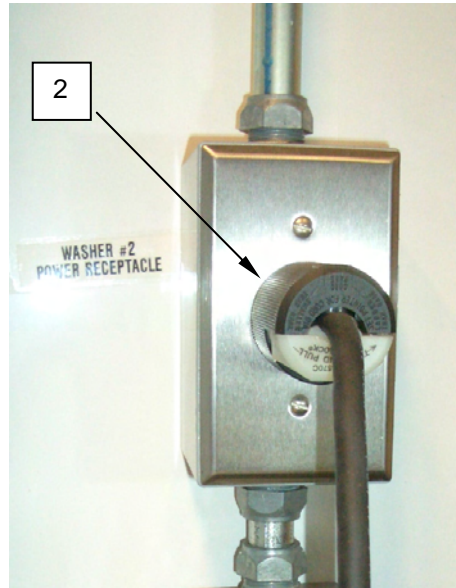
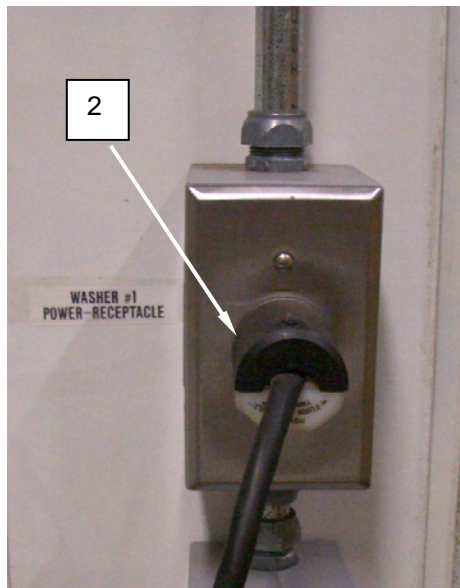
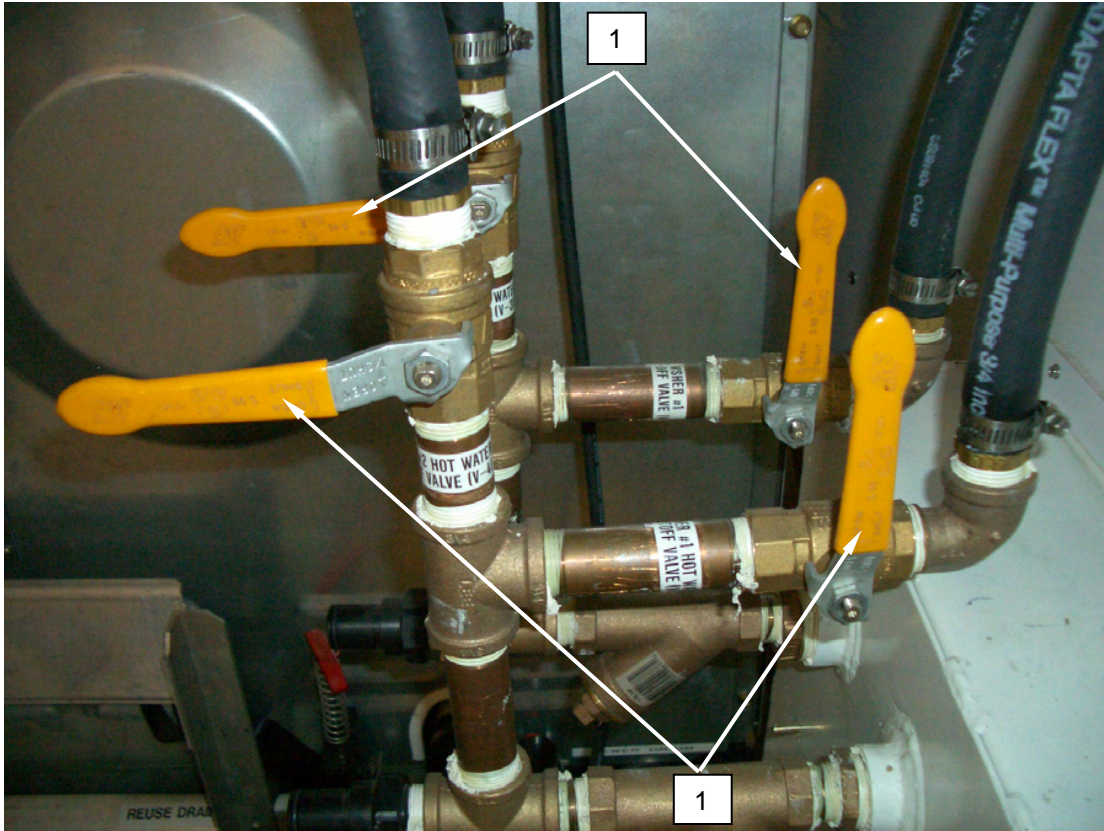


Figure 1. Disconnect Power Cords and Close Valves.

REMOVE - CONTINUED

3. Disconnect hot water supply hose (Figure 2, Item 1) and cold water supply hoses (Figure 2, Item 2) from washer being removed.

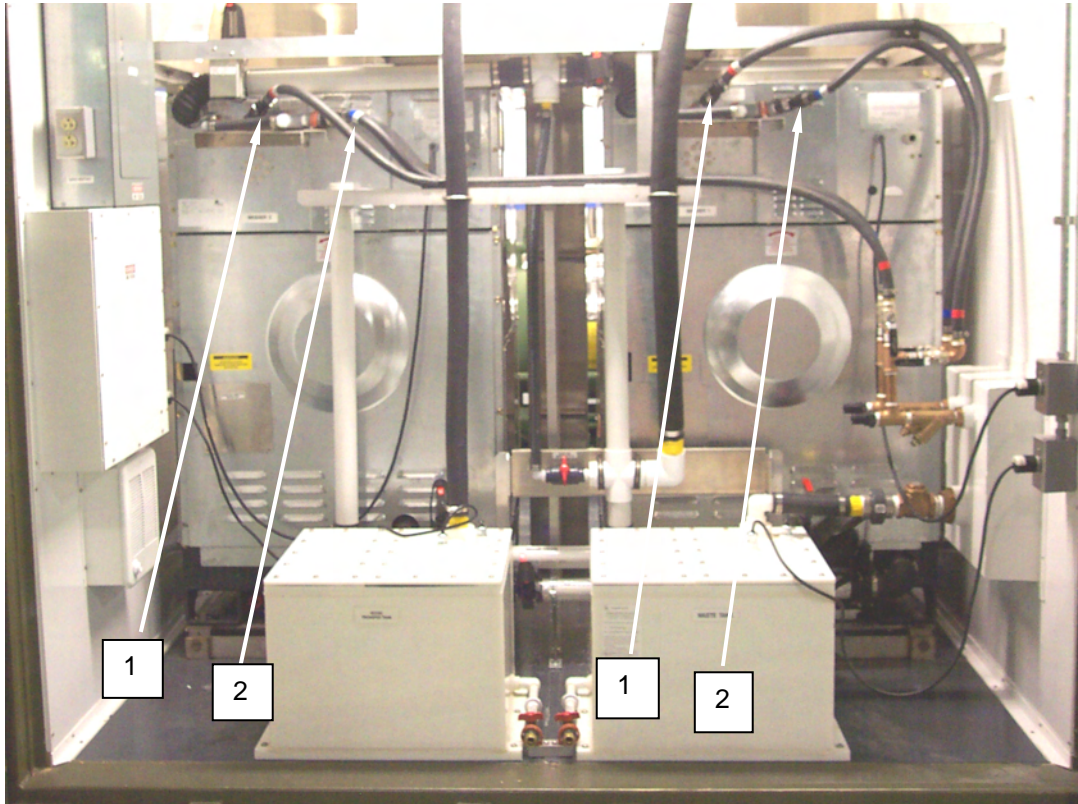


Figure 2. Disconnect Hot and Cold Water Supply Hoses.

REMOVE-CONTINUED

4. Close reuse fill shutoff valve (Figure 3, Item 1), reuse drain shutoff valve (Figure 3, Item 2), and reuse tank drain valve (Figure 3, Item 3).

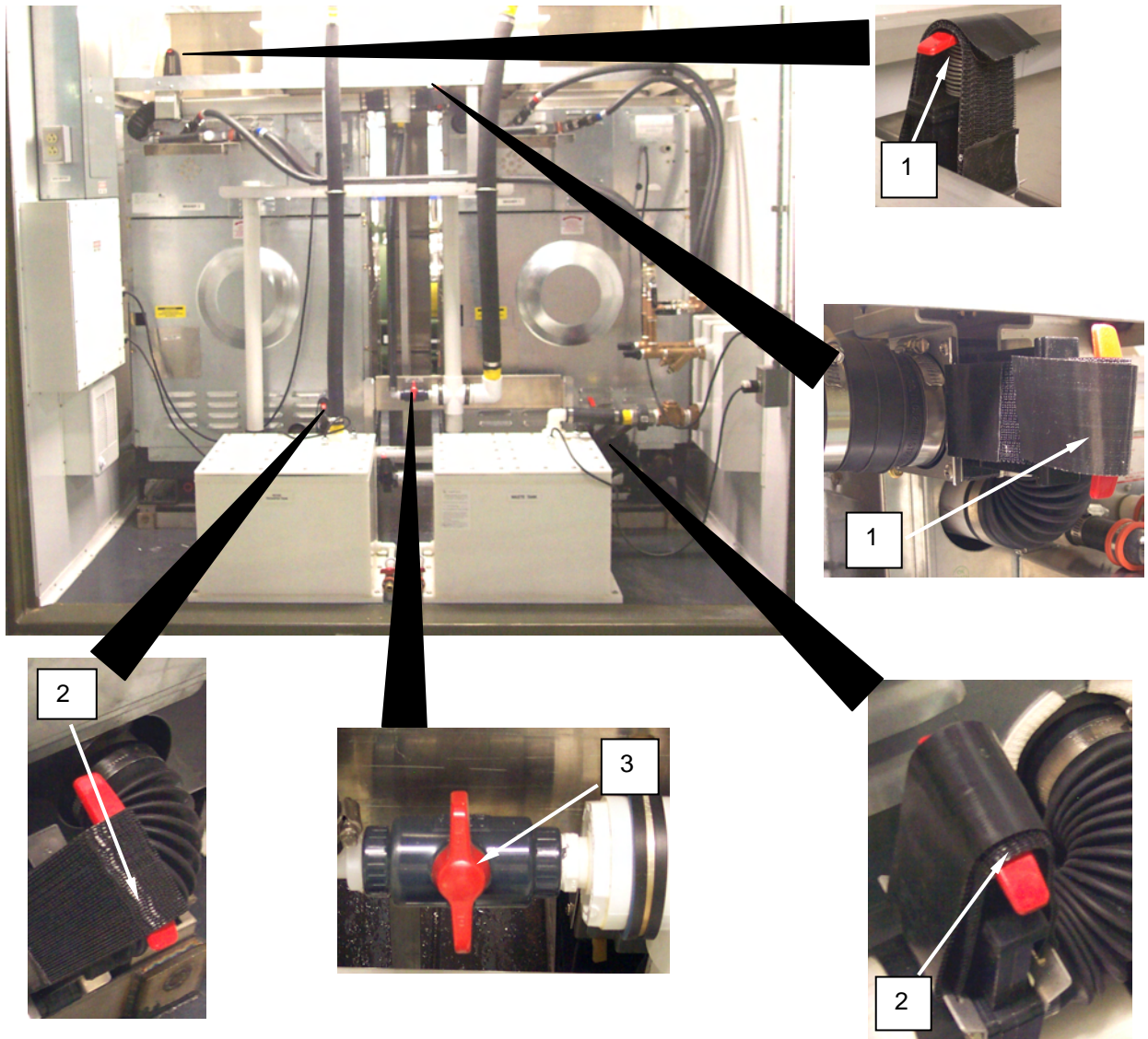


Figure 3. Close Reuse Fill Shutoff Valve, Reuse Drain Shutoff Valve, and Reuse Tank Drain Valve.

REMOVE - CONTINUED

5. Loosen clamps retaining the reuse fill line (Figure 4, Item 1), main drain line (Figure 4, Item 3) and reuse drain line (Figure 4, Item 2), and remove the reuse fill, main drain, and reuse drain lines.

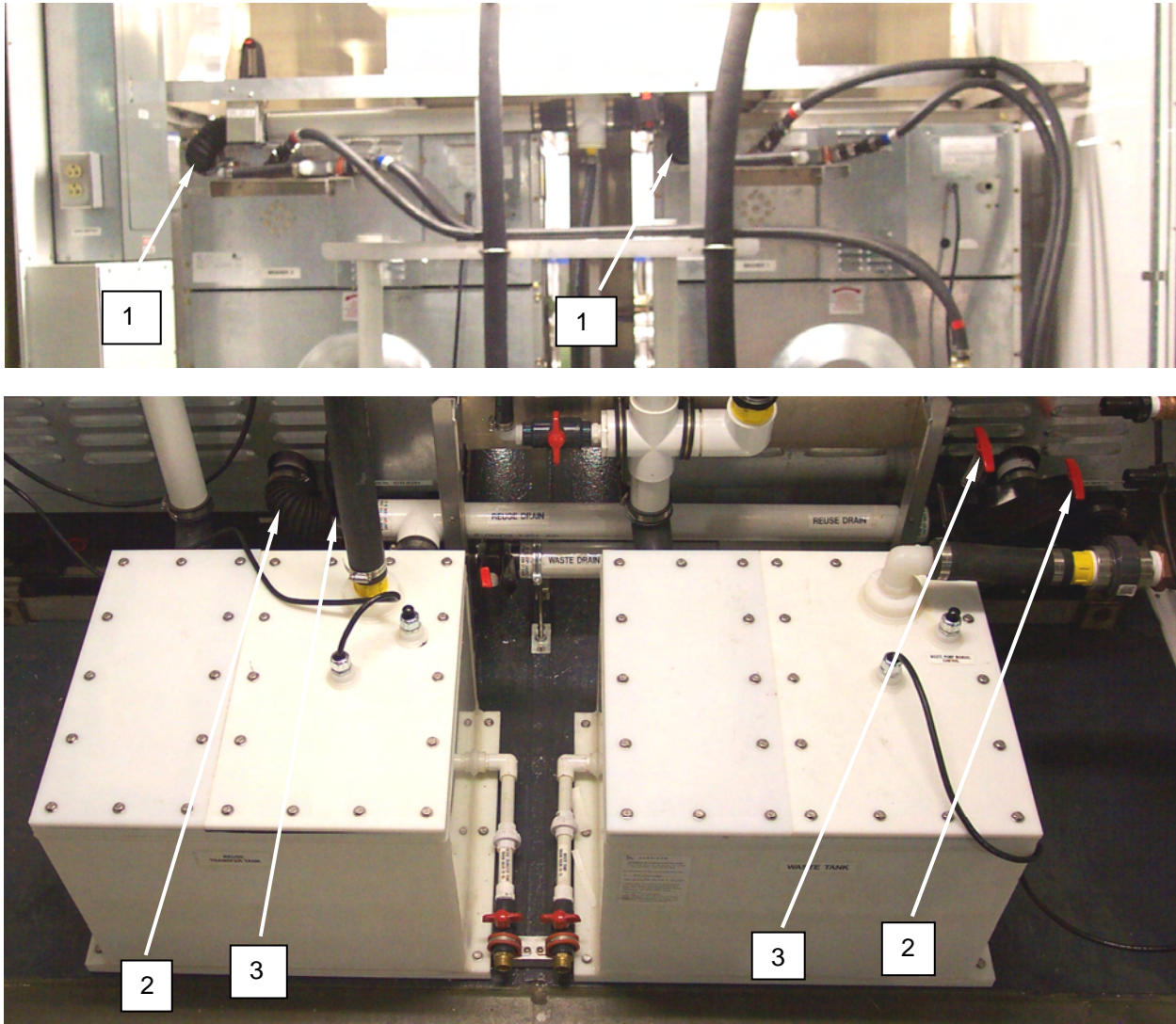


Figure 4. Loosen Clamps and Remove the Reuse Fill, Main Drain, and Reuse Drain Lines.

REMOVE - CONTINUED

6. Remove the screws retaining the washer kick panel (Figure 5, Item 1), and remove the kick panel.
7. Remove bolt (Figure 5, Item 2) retaining washer casters and pull washer out into laundry operator workspace.

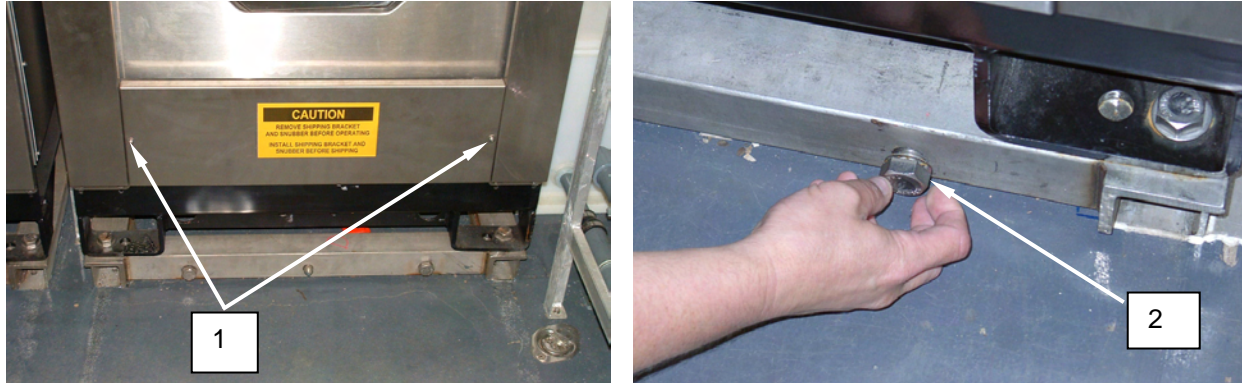


Figure 5. Remove Washer Kick Panel and Remove Bolt Retaining Washer Casters.

END OF TASK

INSTALL**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment which might be damaged by the washer on its way in or out.

NOTE

Ensure the snubbers are out of the way before pushing the washer back. If the washer will not travel all the way back into its operating position, the snubber may be preventing further movement.

1. Push washer back into position and secure in place with bolts (Figure 6, Item 1).
2. Install the kick panel (Figure 6, Item 2) and retain with screws.

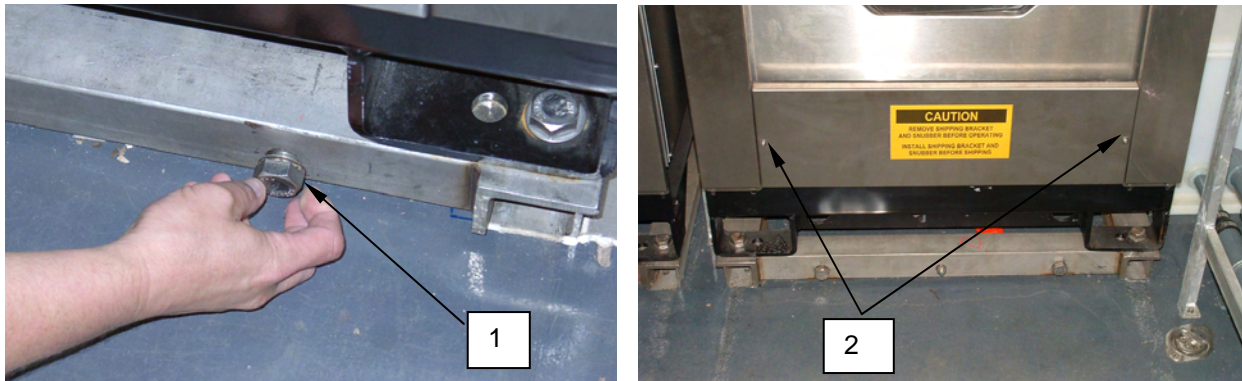


Figure 6. Install Kick Panel.

INSTALL - CONTINUED

3. Connect the reuse fill line (Figure 7, Item 1), main drain line (Figure 7, Item 3) and reuse drain line (Figure 7, Item 2), and retain with clamps.

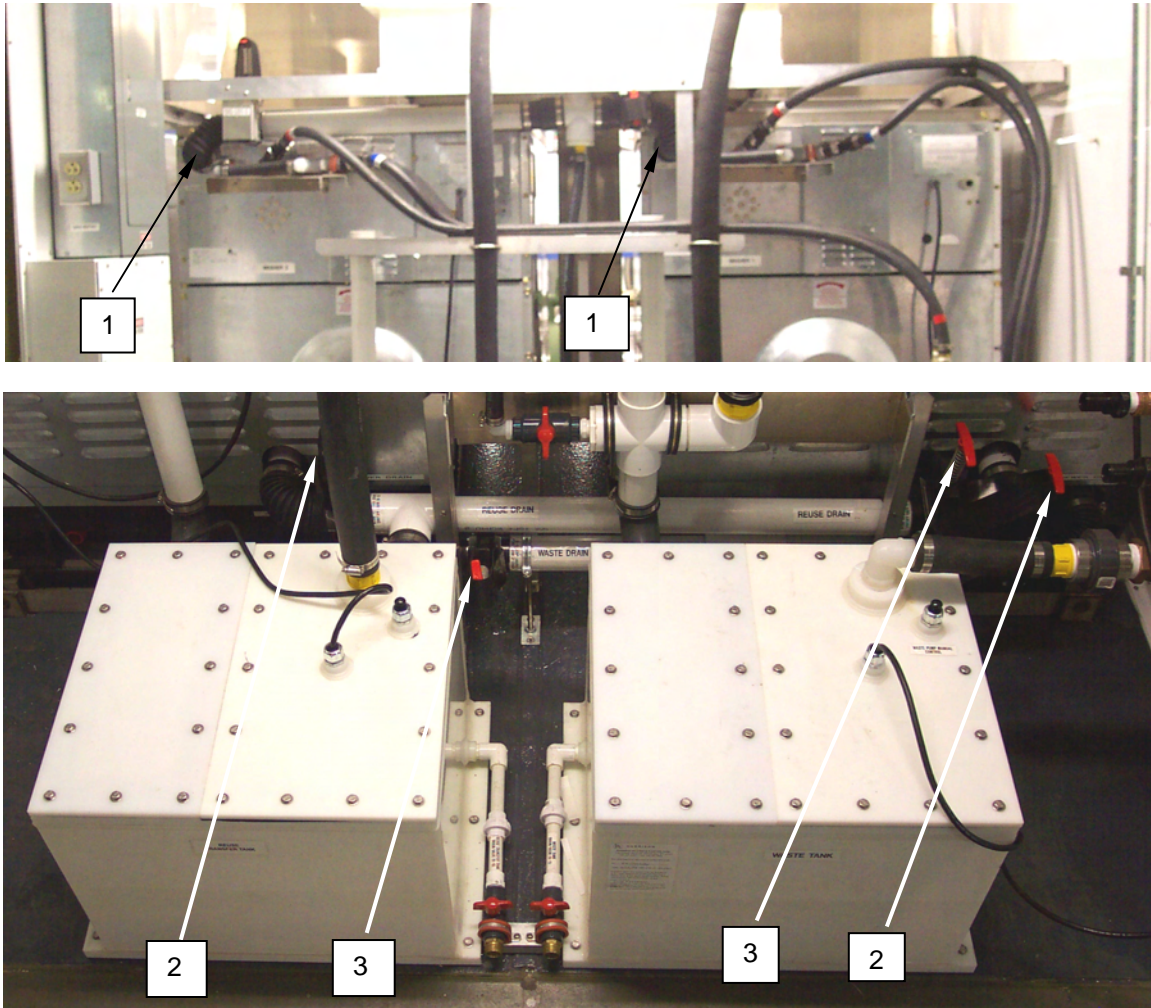


Figure 7. Connect the Reuse Fill Line, Main Drain Line, and Reuse Drain Line.

INSTALL - CONTINUED

4. Open reuse fill shutoff valve (Figure 8, Item 1), reuse drain shutoff valve (Figure 8, Item 2), and reuse tank drain valve (Figure 8, Item 3).

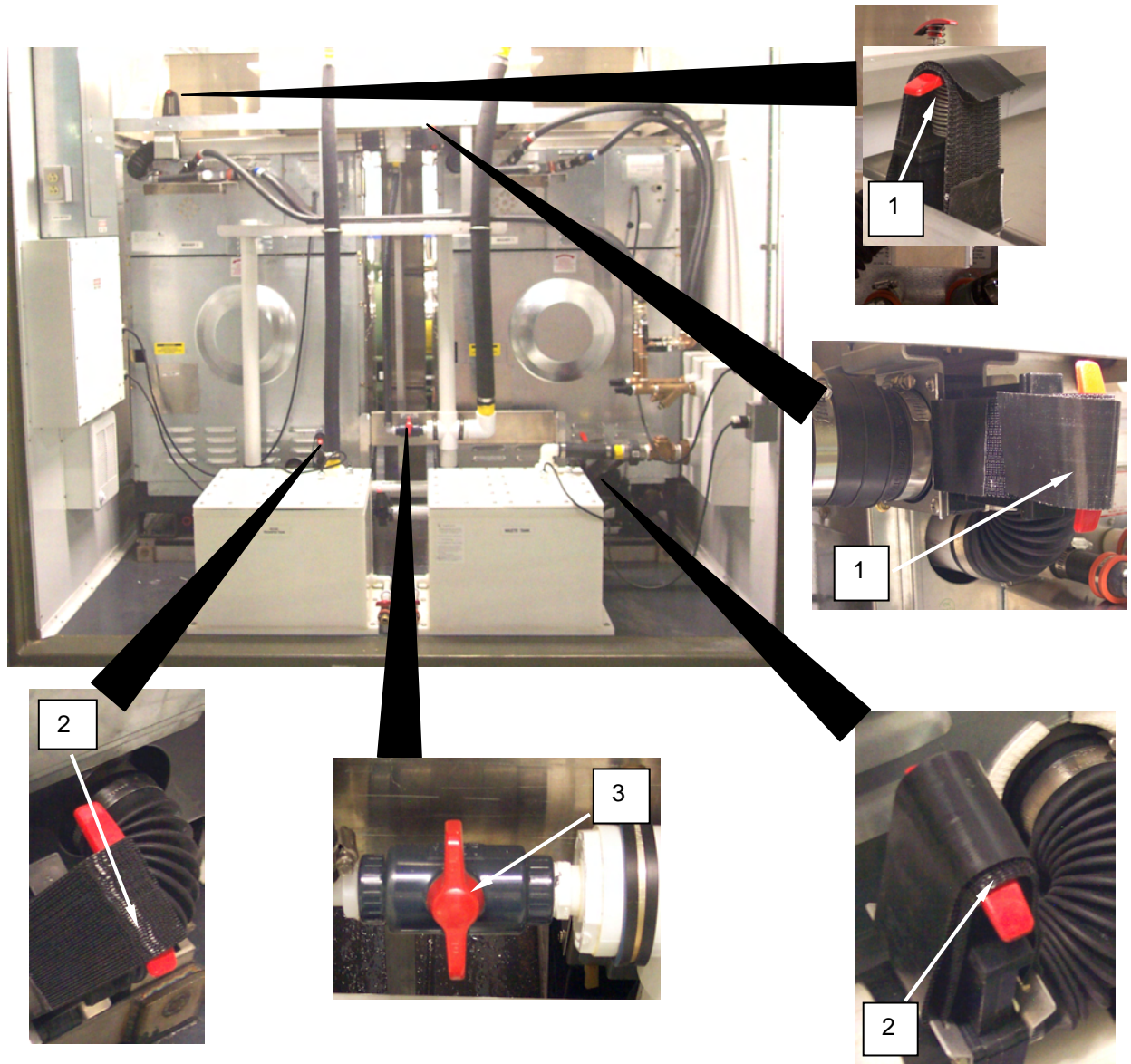


Figure 8. Open Reuse Fill Shutoff Valve, Reuse Drain Shutoff Valve, and Reuse Tank Drain Valve.

INSTALL - CONTINUED

5. Connect washer power cord (Figure 9, Item 1).
6. Open hot and cold water supply valves (Figure 9, Item 2) to washer.
7. Monitor for normal operation.

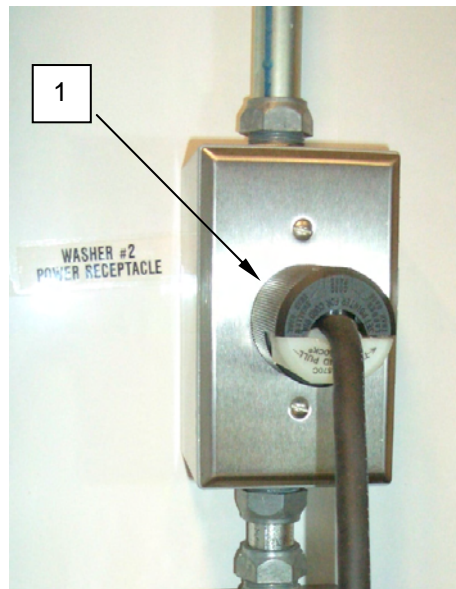
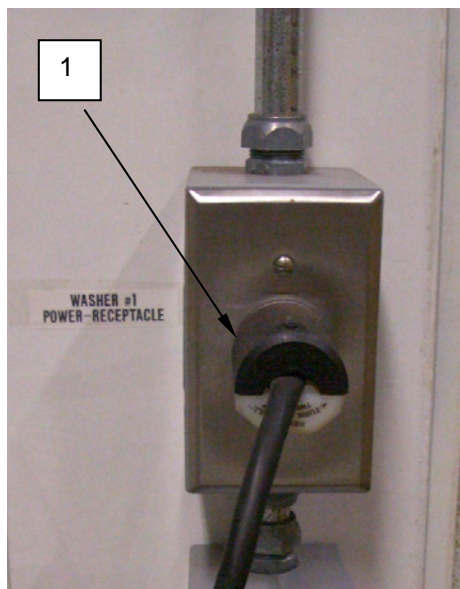
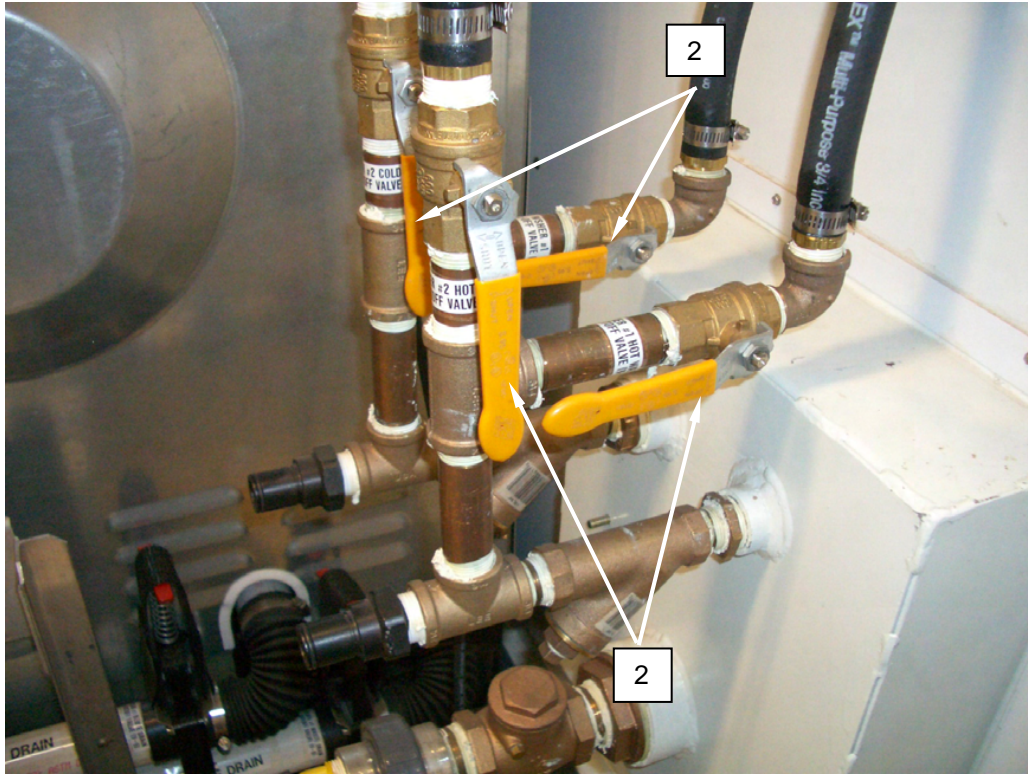


Figure 9. Connect Washer Power Cord and Open Hot and Cold Water Shutoff Valves.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DOOR LOCK ASSEMBLY
TEST, REPAIR****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**Strap, Tiedown, Electrical Component, Medium –
6 in. (WP 0101, Item 59)
Wire Markers (WP 0101, Item 64)**Equipment Condition**

FP-CBL set up

References

WP 0055

TEST**Testing the Door Unlocked Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

This switch is normally open.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 1, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 1, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from unlock switch (Figure 1, Item 3).
7. Use a multimeter to check for zero ohms resistance when the switch (Figure 1, Item 3) is closed.
8. Use a multimeter to check for infinite resistance when the switch (Figure 1, Item 3) is open. Replace a switch (Figure 1, Item 3) which fails either test.

TEST - CONTINUED

9. Connect wiring to switch (Figure 1, Item 3) as tagged.
10. Install door strike assembly (Figure 1, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 1, Item 1).
12. Install washer in accordance with the procedures in WP 0055.
13. Close washer door, and operate.

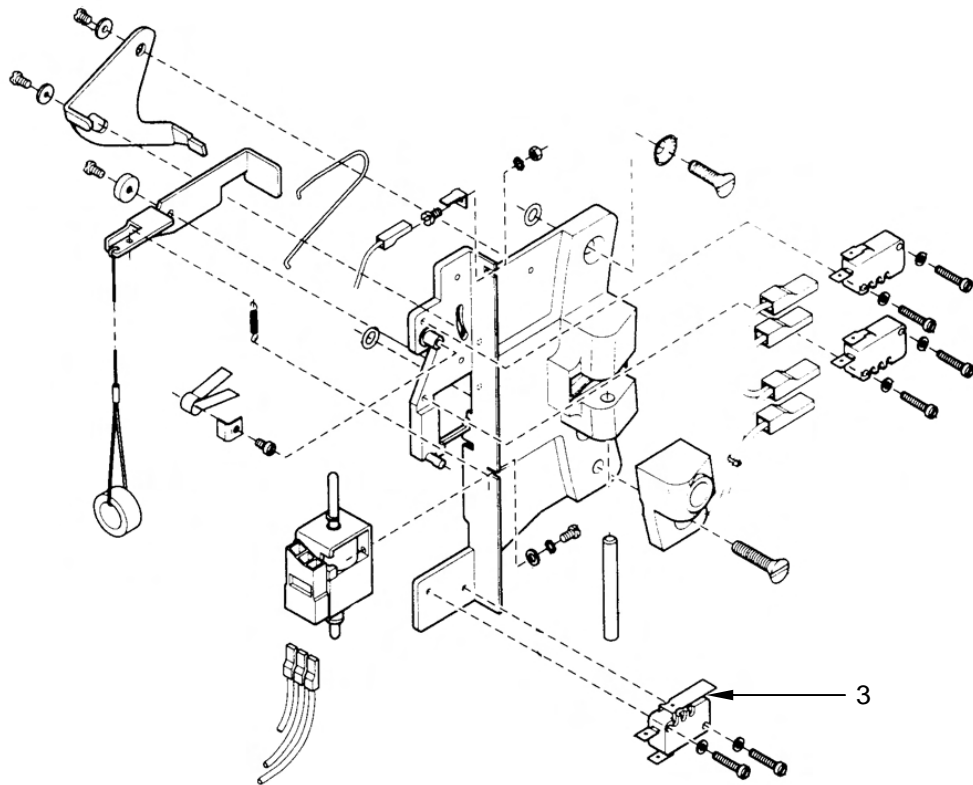


Figure 1. Test the Door Unlocked Switch.

END OF TASK

TEST – CONTINUED**Test the Door Latched Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

This switch is normally open.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 2, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 2, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from latched switch (Figure 2, Item 3).
7. Use a multimeter to check for zero resistance when the switch (Figure 2, Item 3) is closed.
8. Use a multimeter to check for infinite resistance when the switch (Figure 2, Item 3) is open.
9. Replace a switch (Figure 2, Item 3), which fails either test.
10. Connect wiring to switch (Figure 2, Item 3) as tagged.
11. Install door strike assembly (Figure 2, Item 2), and retain with screws.
12. Retain wiring with wire tie (Figure 2, Item 1).
13. Install washer in accordance with the procedures in WP 0055.
14. Close washer door.

TEST - CONTINUED

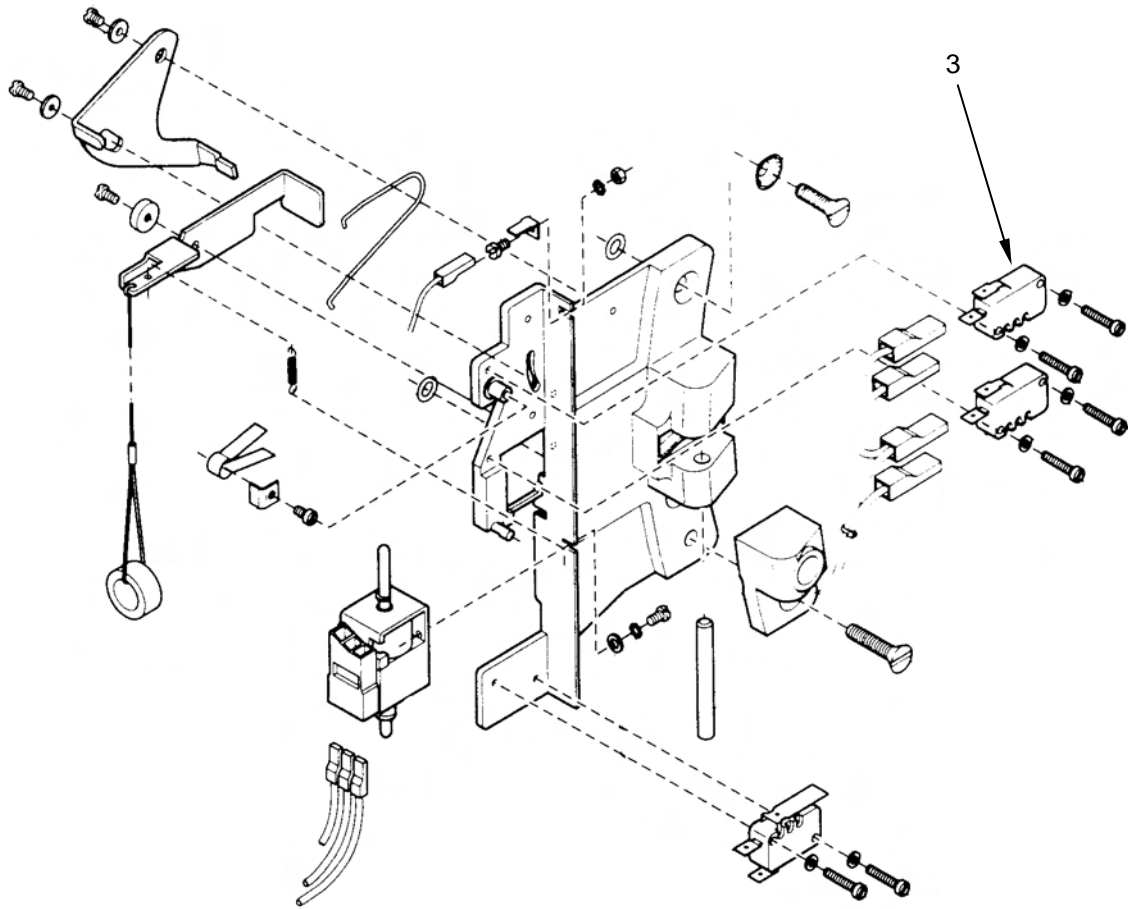


Figure 2. Test the Door Latched Switch.

END OF TASK

TEST - CONTINUED**Test the Door Locked Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

This switch is normally open.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 3, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 3, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from lock switch (Figure 3, Item 3).
7. Use a multimeter to check for zero resistance when the switch (Figure 3, Item 3) is closed.
8. Use a multimeter to check for infinite resistance when the switch (Figure 3, Item 3) is open.
9. Replace a switch (Figure 3, Item 3), which fails either test.
10. Connect wiring to switch (Figure 3, Item 3) as tagged.
11. Install door strike assembly (Figure 3, Item 2), and retain with screws.
12. Retain wiring with wire tie (Figure 3, Item 1).
13. Install washer in accordance with the procedures in WP 0055.
14. Close washer door, and operate.

TEST - CONTINUED

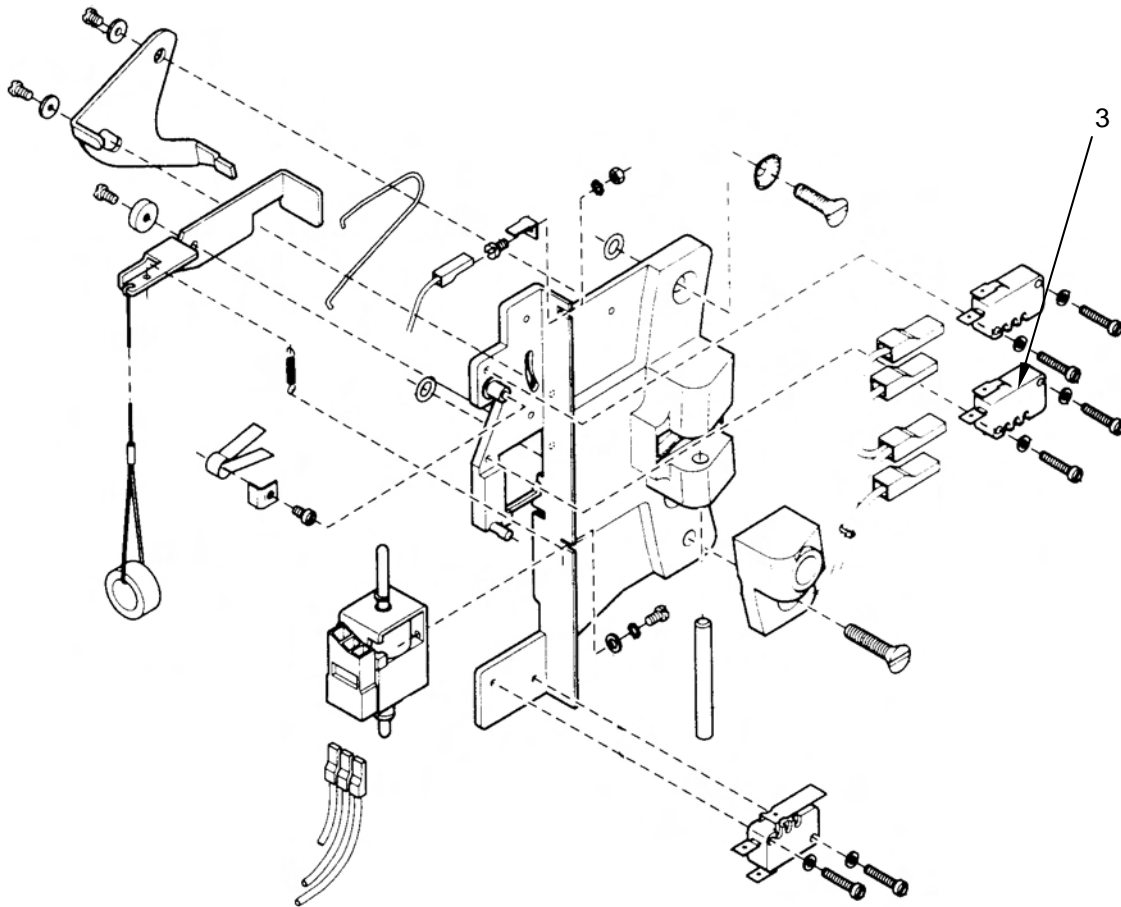


Figure 3. Test the Door Locked Switch.

END OF TASK

TEST - CONTINUED**Test the Door Lock Solenoid****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

This switch is normally open.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 4, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 4, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from solenoid (Figure 4, Item 3).
7. Use a multimeter to check wire terminals for resistance. Refer to Table 1 for acceptable values.

Table 1. Resistance Values for the Door Lock Solenoid.

Wire Terminals	Value in ohms ($\pm 5.0\Omega$)
Black and White	30.0 Ω
Black and Red	25.0 Ω
Red and White	55.0 Ω

8. Replace a solenoid (Figure 4, Item 3) that does not fall within the resistance ranges shown in Table 1.
9. Connect wiring to solenoid (Figure 4, Item 3) as tagged.
10. Install door strike assembly (Figure 4, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 4, Item 1).
12. Install washer in accordance with the procedures in WP 0055.
13. Close washer door, and operate.

TEST - CONTINUED

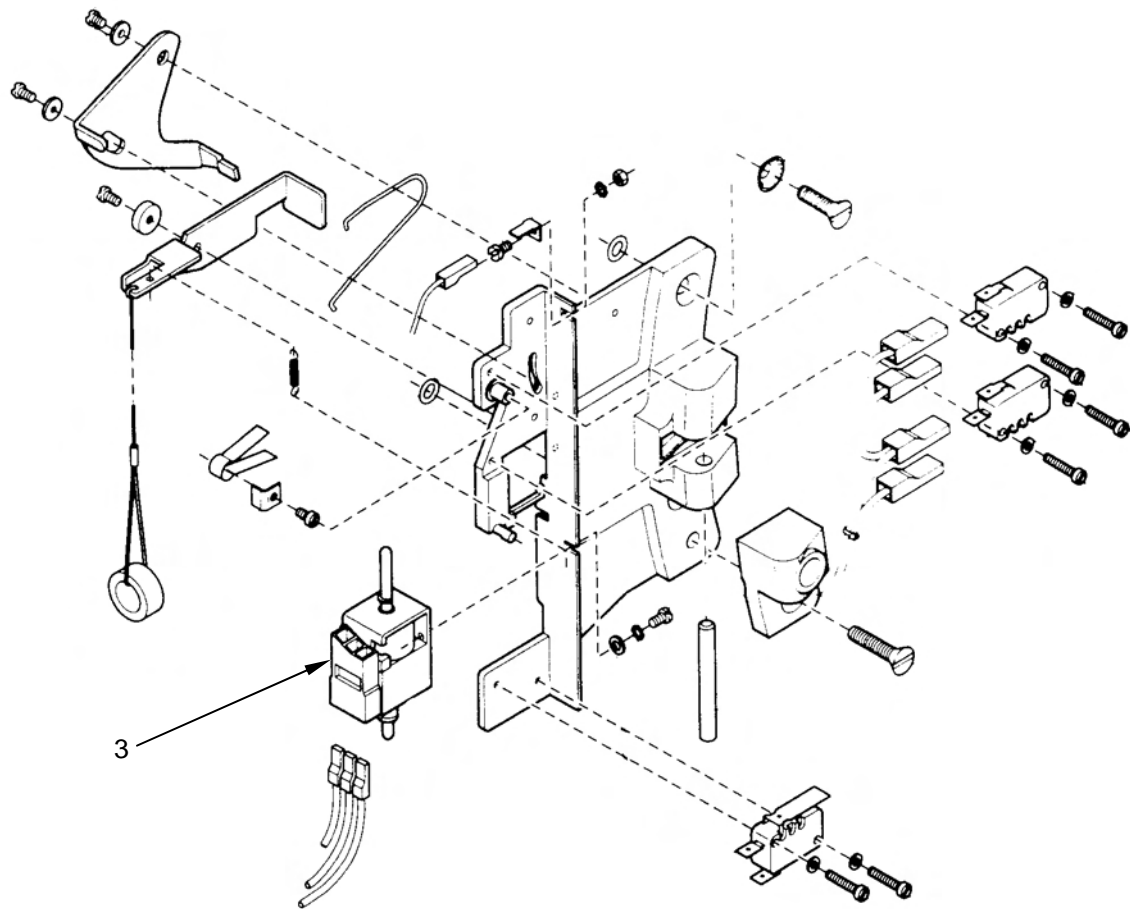


Figure 4. Test the Door Lock Solenoid.

END OF TASK

REPAIR**Replace the Door Handle Assembly****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Ensure washer has completed its full wash cycle and has drained.
2. Switch washer circuit breaker to OFF.
3. Open washer door.
4. Remove the screws (Figure 5, Item 2) retaining the door handle assembly (Figure 5, Item 1), and remove the door handle assembly.
5. Install the replacement door handle assembly (Figure 5, Item 1), and retain with screws.
6. Close washer door, and operate.

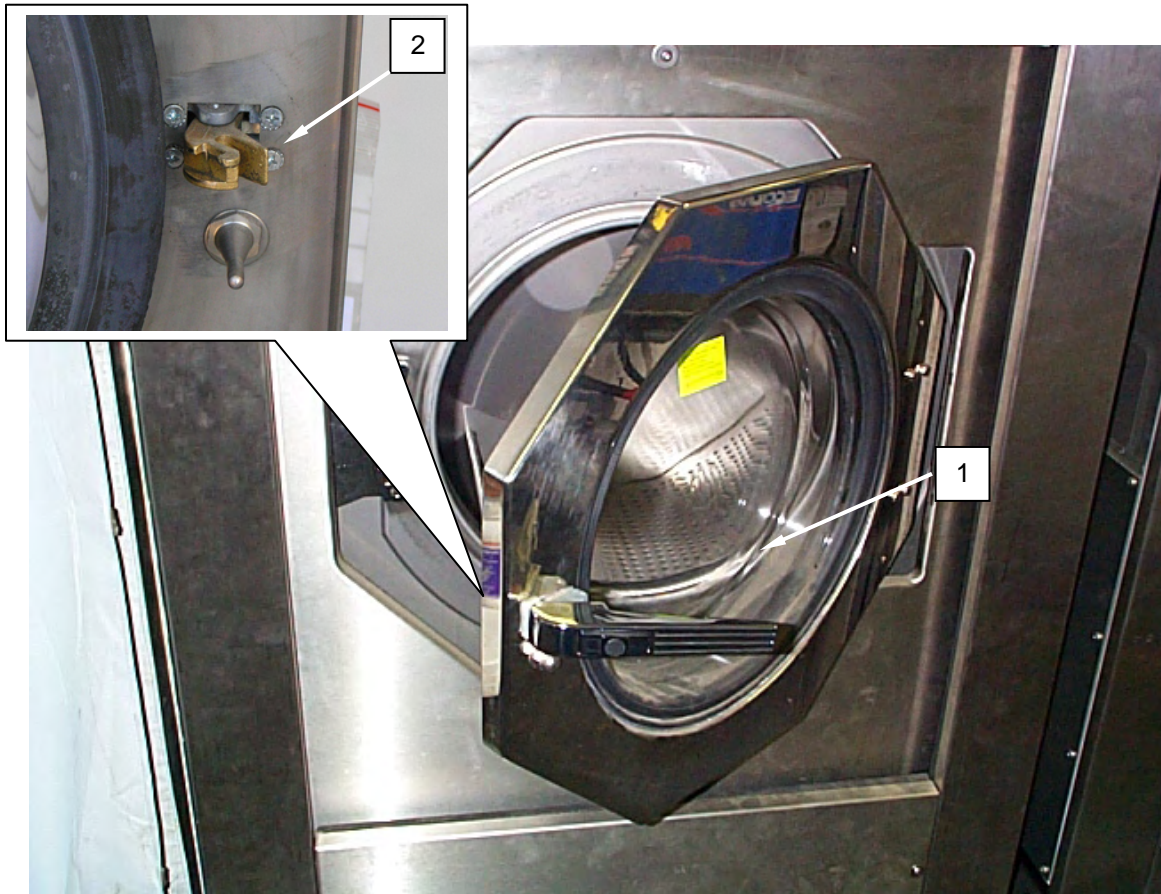


Figure 5. Replace the Door Handle Assembly (Sheet 1 of 2)

REPAIR - CONTINUED

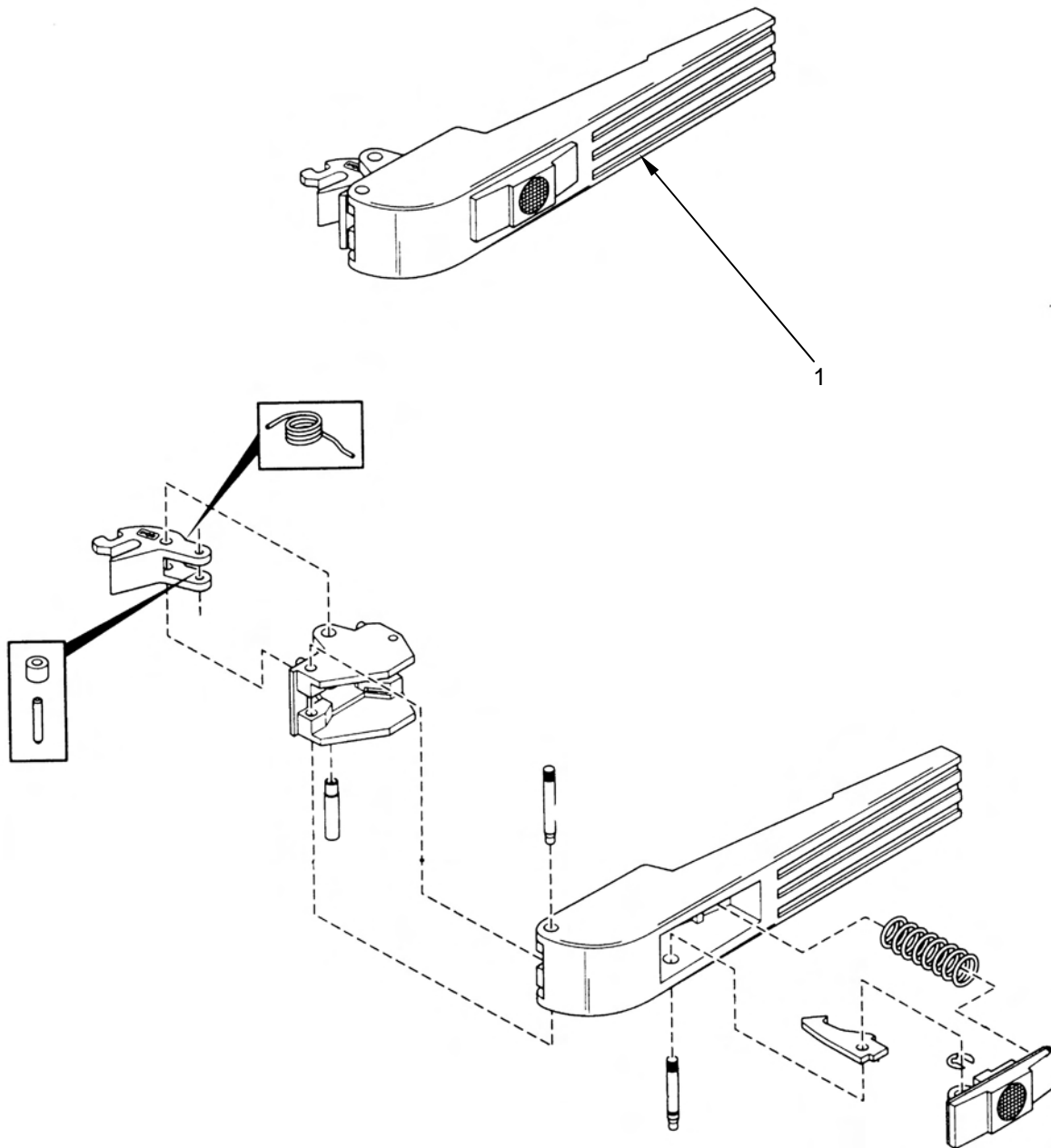


Figure 5. Replace the Door Handle Assembly (Sheet 2 of 2).

END OF TASK

REPAIR - CONTINUED**Replace the Door Unlocked Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 6, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 6, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from unlock switch (Figure 6, Item 3).
7. Remove screws retaining switch (Figure 6, Item 3) to door strike assembly (Figure 6, Item 2), and remove switch.
8. Install replacement switch (Figure 6, Item 3) onto door strike assembly (Figure 6, Item 2), and retain with screws.
9. Connect wiring to replacement switch (Figure 6, Item 3) as tagged.
10. Install door strike assembly (Figure 6, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 6, Item 1).
12. Install washer in accordance with the procedures in WP 0055.
13. Close washer door, and operate.

REPAIR - CONTINUED

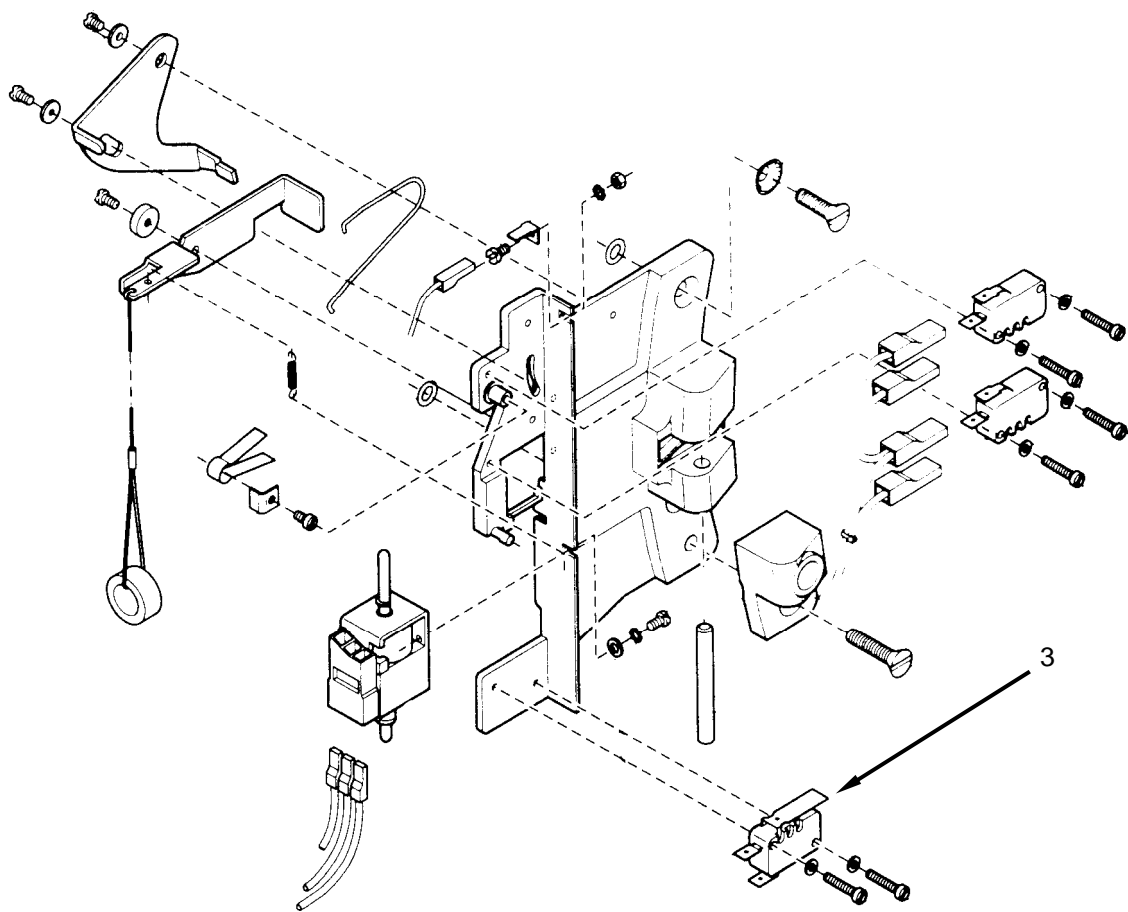


Figure 6. Replace the Door Unlocked Switch.

END OF TASK

REPAIR - CONTINUED**Replace the Door Latched Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 7, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 7, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from latched switch (Figure 7, Item 3).
7. Remove screws retaining switch (Figure 7, Item 3) to door strike assembly (Figure 7, Item 3), and remove switch.
8. Install replacement switch (Figure 7, Item 3) onto door strike assembly (Figure 7, Item 2), and retain with screws.
9. Connect wiring to replacement switch (Figure 7, Item 3) as tagged.
10. Install door strike assembly (Figure 7, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 7, Item 1).
12. Install washer in accordance with the procedures in WP 0055.
13. Close washer door, and operate.

REPAIR - CONTINUED**Replace the Door Locked Switch****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 8, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 8, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from lock switch (Figure 8, Item 3).
7. Remove screws retaining switch (Figure 8, Item 3) to door strike assembly (Figure 8, Item 1), and remove switch.
8. Install replacement switch (Figure 8, Item 3) onto door strike assembly (Figure 8, Item 2), and retain with screws.
9. Connect wiring to replacement switch (Figure 8, Item 3) as tagged.
10. Install door strike assembly (Figure 8, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 8, Item 1).
12. Install washer in accordance with the procedures in WP 0055.
13. Close washer door, and operate.

REPAIR - CONTINUED

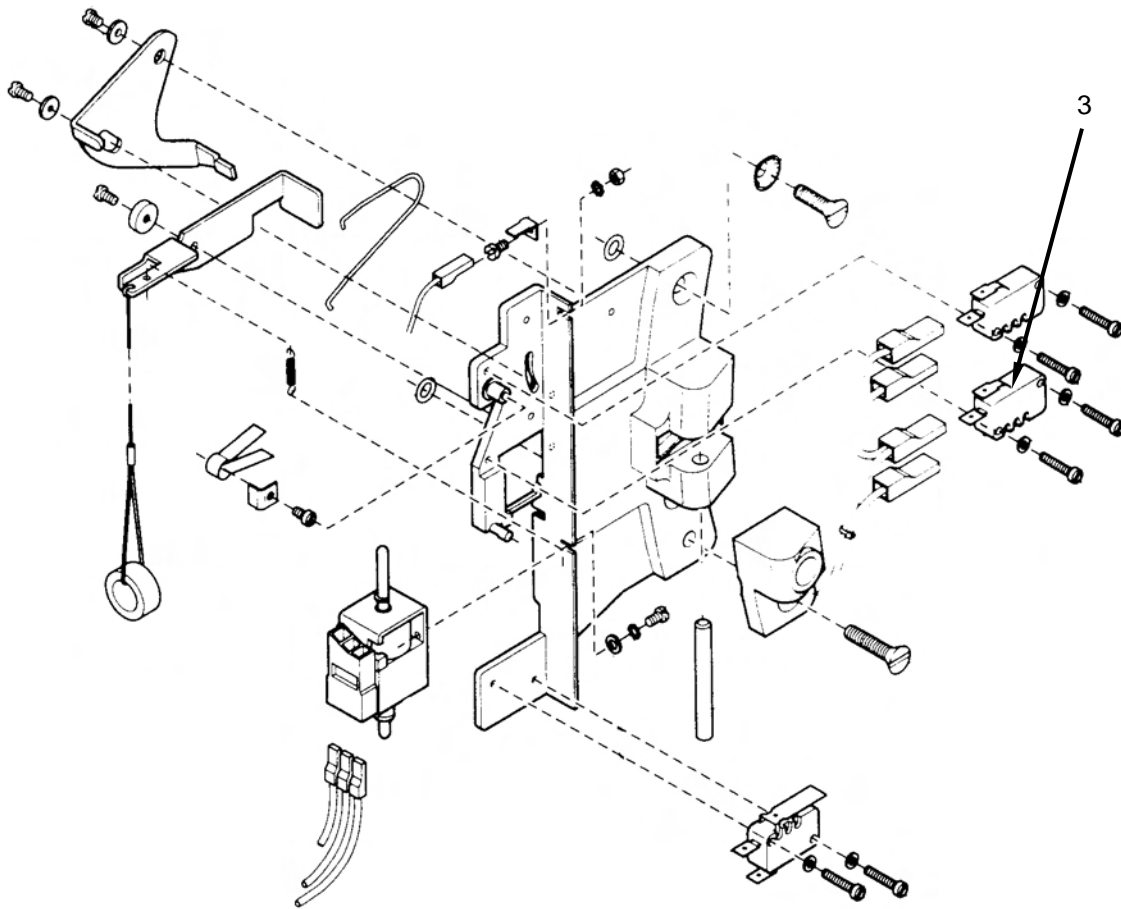
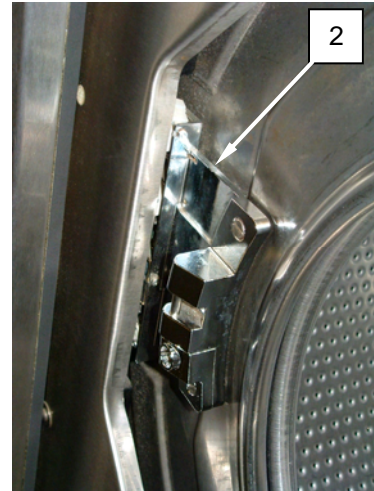
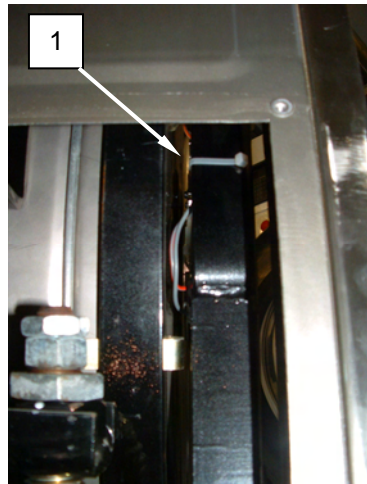


Figure 8. Replace the Door Locked Switch.

END OF TASK

REPAIR - CONTINUED**Replace the Door Lock Solenoid****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove left access panel exposing washer interior.
3. Cut wire tie (Figure 9, Item 1) retaining switch wiring.
4. Open washer door.
5. Remove screws retaining door strike assembly (Figure 9, Item 2), and remove door strike assembly.
6. Tag and disconnect wiring from solenoid (Figure 9, Item 3).
7. Remove screws retaining solenoid (Figure 9, Item 3) to door strike assembly (Figure 9, Item 2), and remove solenoid.
8. Install replacement solenoid (Figure 9, Item 3) onto door strike assembly (Figure 9, Item 2), and retain with screws.
9. Connect wiring to replacement solenoid (Figure 9, Item 3) as tagged.
10. Install door strike assembly (Figure 9, Item 2), and retain with screws.
11. Retain wiring with wire tie (Figure 9, Item 1).
12. Install washer in accordance with procedures in WP 0055.
13. Close washer door, and operate.

REPAIR – CONTINUED

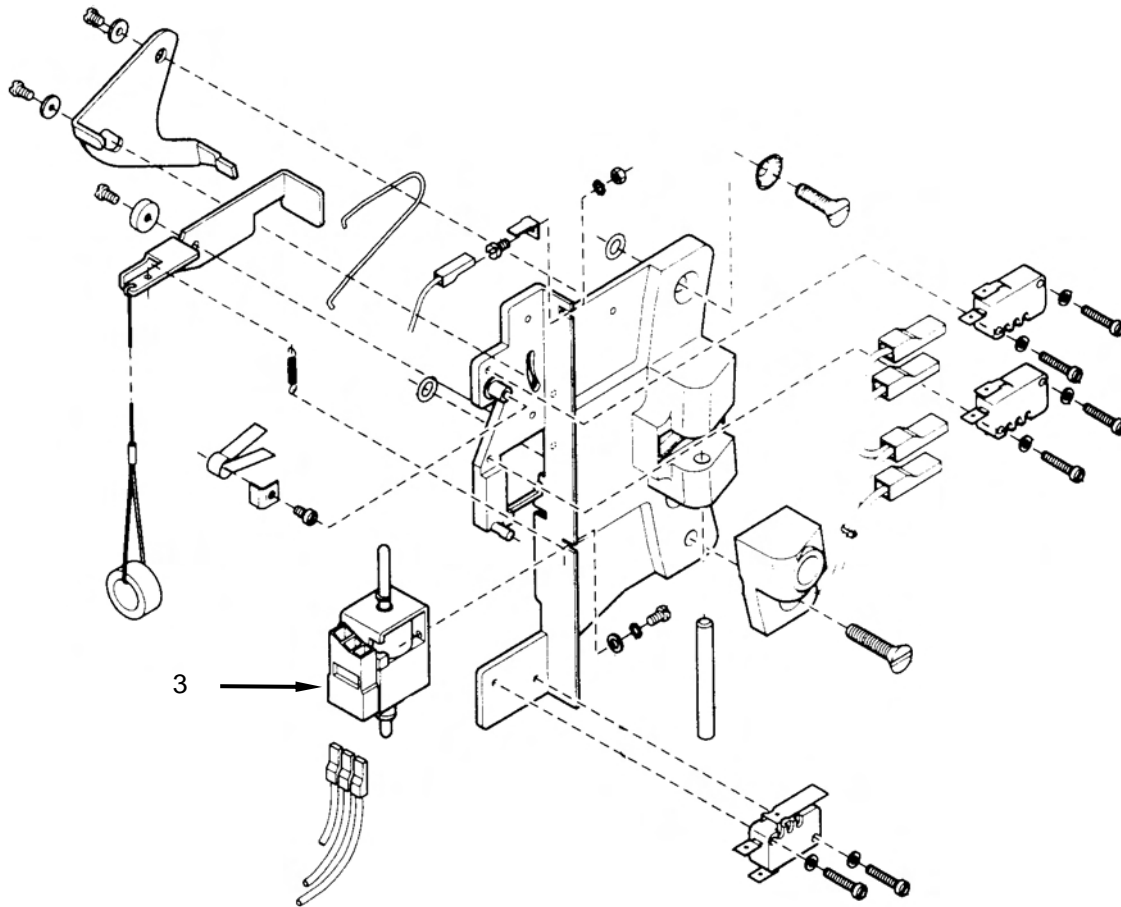


Figure 9. Replace The Door Lock Solenoid.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER CONTROLS
TEST, REPAIR****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

TEST**Test Circuit Card Assembly Fuse****WARNING**

Ensure that all washer electrical power to the washer is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel after power has been shut down. Serious injury or death can result from electrocution if proper safety precautions are not observed.

CAUTION

Use caution when handling components such as printed circuit boards. Do not remove the board from the anti-static packaging until you are ready to install it. Touch the metal cabinet of the washer in order to be properly grounded prior to handling the board. Failure to observe adequate precautions may result in static discharge damage to the replacement board.

1. Disconnect washer power cord.
2. Open control panel using washer key.
3. Remove the fuse (Figure 1, Item 1).

TEST - CONTINUED**NOTE**

Visual inspection of the fuse may reveal an obviously open fuse element, but a fuse that may look good might be open as well. Always remove fuse from holder and test for continuity.

4. Use a multimeter to test fuse for continuity (zero ohms). Replace an open fuse.
5. Install the fuse.
6. Close and lock control panel.
7. Connect washer power cord and monitor for normal operation.

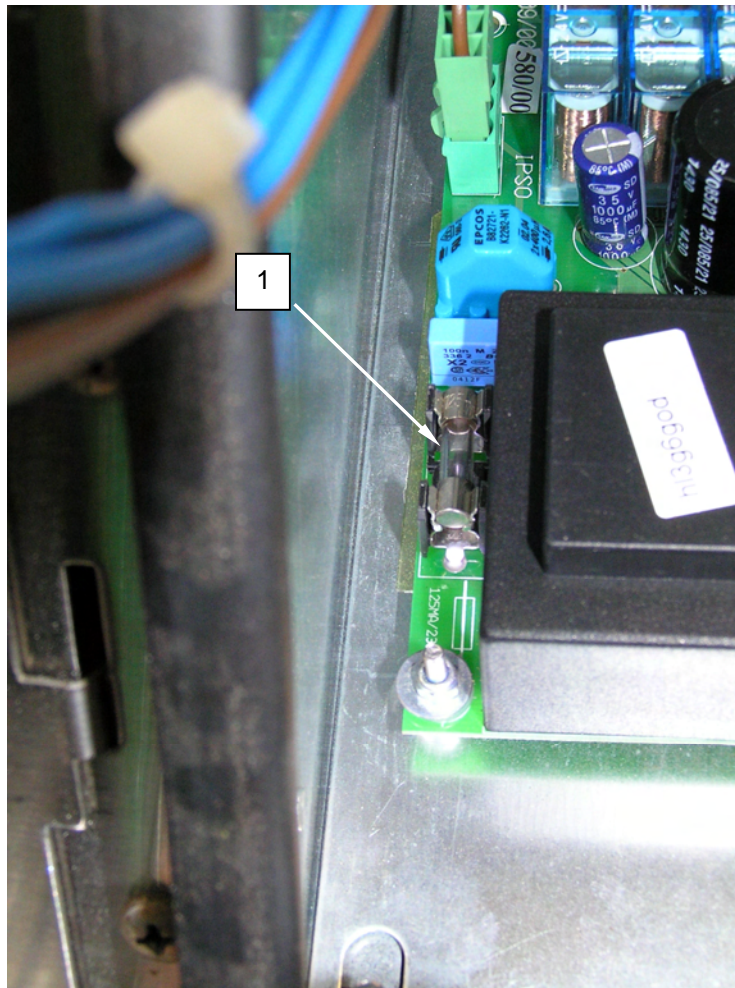


Figure 1. Test Circuit Card Assembly Fuse.

END OF TASK

TEST - CONTINUED**Test Soap Dispenser Printed Circuit Board Fuse****WARNING**

Ensure that all washer electrical power to the washer is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

CAUTION

Use caution when handling components such as printed circuit boards. Make sure you are properly grounded when installing a replacement fuse. Failure to observe adequate precautions may result in failure of the board or fuse.

1. Disconnect washer power cord
2. Remove screws and washers retaining the electrical connection plate (Figure 2, Item 1) and remove the electrical connection plate.
3. Use a flat blade screwdriver to remove the fuse holder cap (Figure 2, Item 2) from the soap dispenser printed circuit board (Figure 2, Item 3) and remove the fuse from the cap.

NOTE

Visual inspection of the fuse may reveal an obviously open fuse element, but a fuse that may look good might be open as well. Always remove fuse from holder and test for continuity.

4. Use a multimeter to test fuse for continuity (zero ohms). Replace an open fuse.
5. Install the fuse into the fuse holder cap (Figure 2, Item 2) and install the fuse holder cap into the soap dispenser PC board (Figure 2, Item 3).
6. Install electrical connection plate (Figure 2, Item 1) and retain with screws and washers.
7. Connect washer power cord and monitor for normal operation.

TEST - CONTINUED

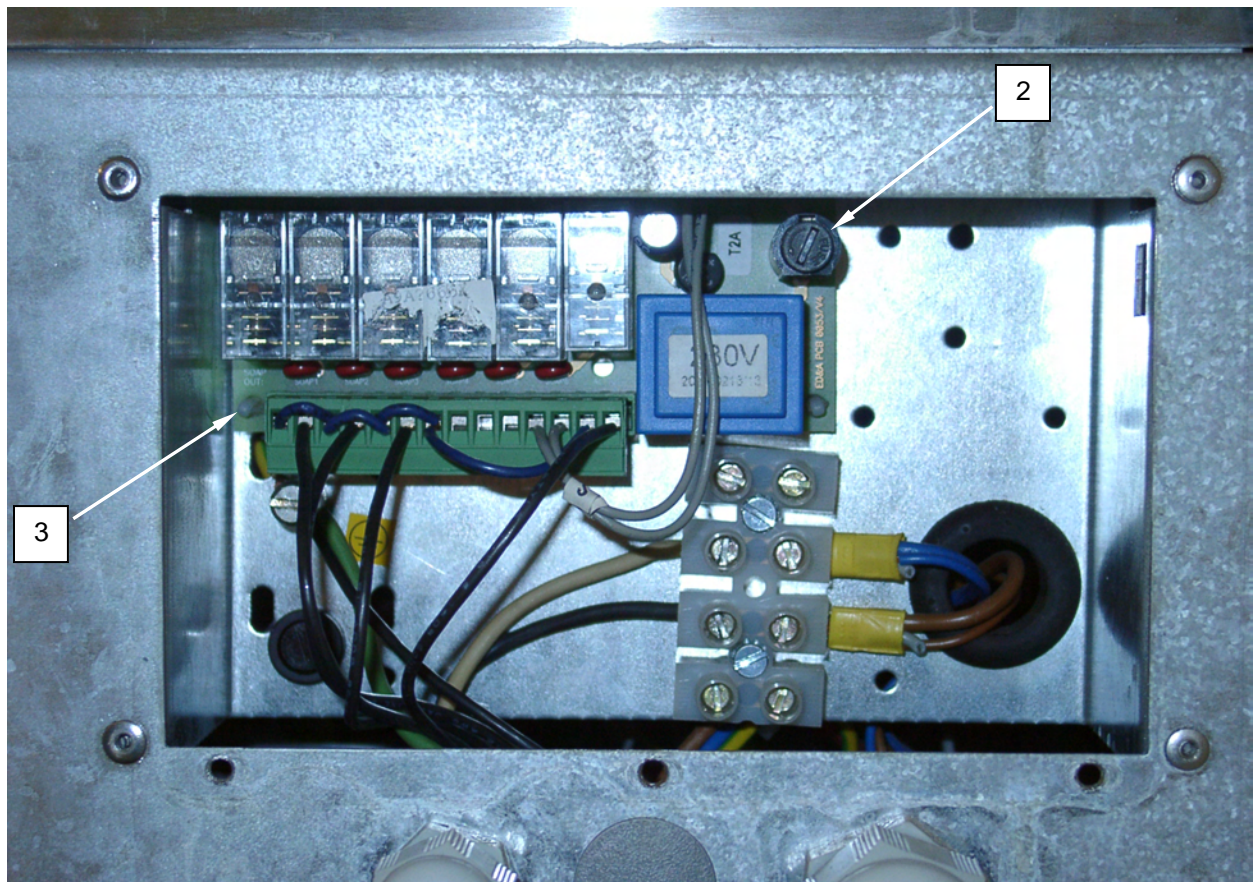
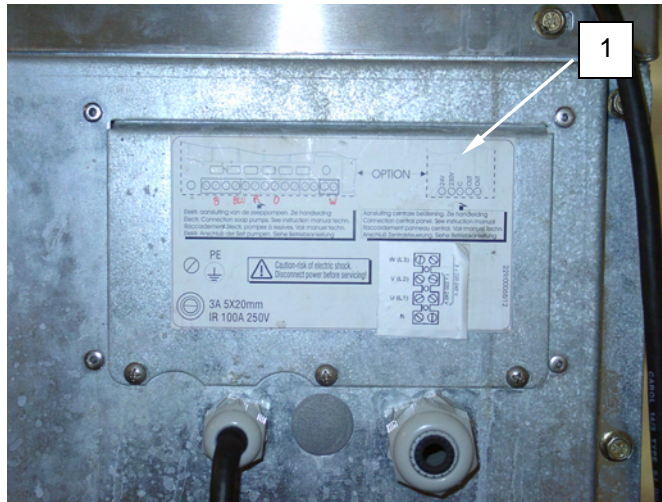


Figure 2. Test Soap Dispenser Printed Circuit Board Fuse.

END OF TASK

REPAIR**Replace the Control Panel Overlay****WARNING**

Ensure that all electrical power to the washer is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect washer power cord.
2. Remove emergency stop knob (Figure 3, Item 1).
3. Carefully peel damaged overlay (Figure 3, Item 2) from washer display.
4. Ensure display area is clean, and no adhesive residue or fragments of the old overlay are present.
5. Install replacement overlay (Figure 3, Item 2).
6. Install emergency stop knob (Figure 3, Item 1).
7. Connect washer power cord and monitor for normal operation.



Figure 3. Replace the Microprocessor Display Overlay.

END OF TASK

REPAIR - CONTINUED**Replace the Circuit Card Assembly****WARNING**

Ensure that all electrical power to the washer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect washer power cord.
2. Open control panel.
3. Tag and disconnect wiring from circuit card assembly (Figure 4, Item 1).
4. Remove screws retaining the board Disconnect level sensing tube (Figure 4, Item 2) from circuit card assembly.
5. Connect level sensing tube (Figure 4, Item 2) to replacement circuit card assembly.
6. Install replacement circuit card assembly (Figure 4, Item 1), and retain with screws.
7. Connect wiring as tagged.
8. Close and lock control panel.
9. Connect washer power cord and monitor for normal operation.

REPAIR - CONTINUED

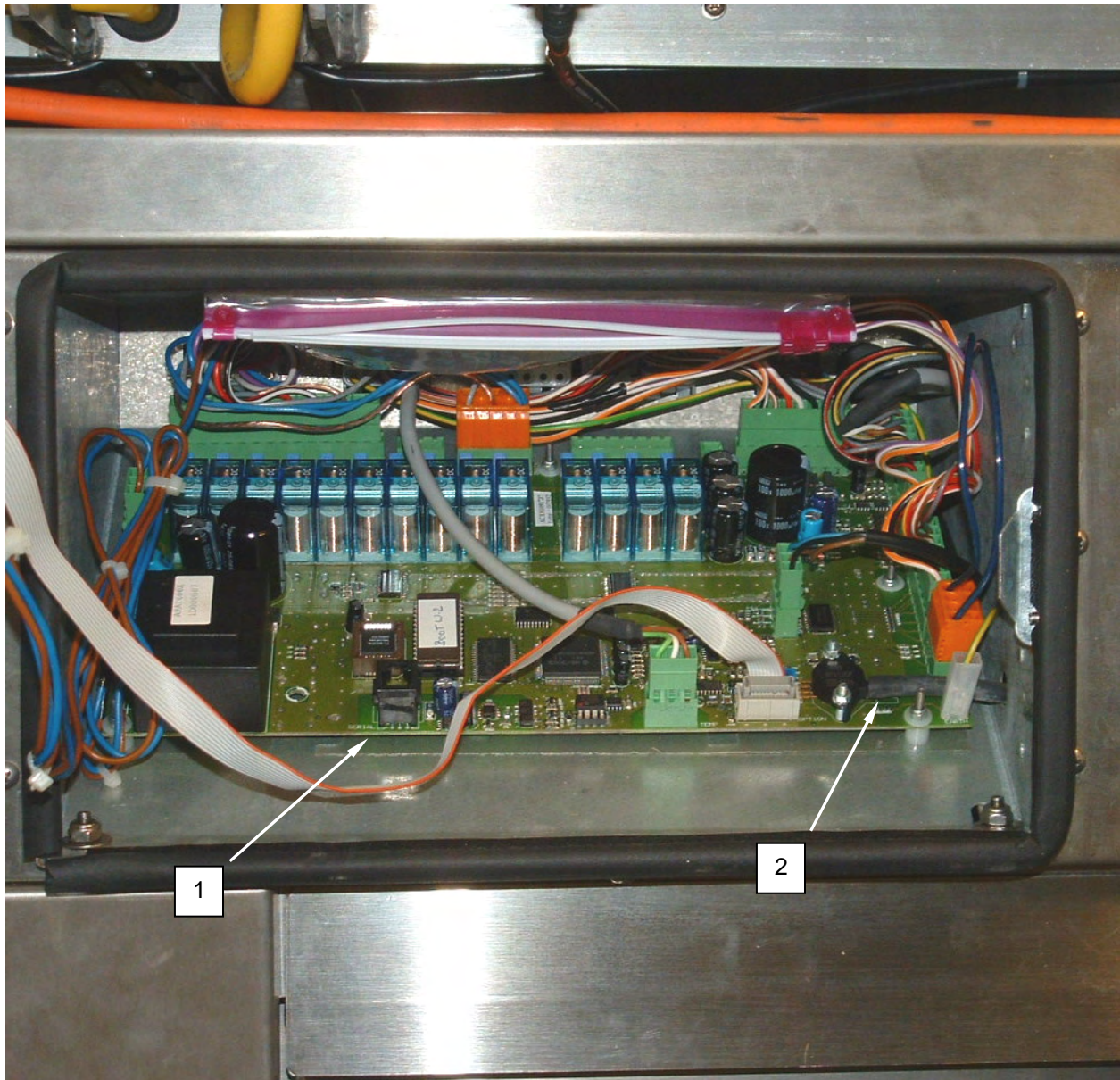


Figure 4. Replace the Circuit Card Assembly.

END OF TASK

REPAIR - CONTINUED**Replace the Soap Dispenser Printed Circuit Board****WARNING**

Ensure that all electrical power to the washer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect washer power cord.
2. Remove screws retaining the electrical connection plate (Figure 5, Item 1), and remove the electrical connection plate.
3. Tag and disconnect wiring from the soap dispenser PC board (Figure 5, Item 2).
4. Remove PC board (Figure 5, Item 2) from the plastic retaining pins and remove board from standoffs.
5. Install the replacement board (Figure 5, Item 2) onto the standoffs and retain with plastic retaining pins.
6. Connect wiring to the replacement PC board (Figure 5, Item 2) as tagged.
7. Install electrical connection plate (Figure 5, Item 1) and retain with screws.
8. Connect washer power cord and monitor for normal operation.

REPAIR - CONTINUED

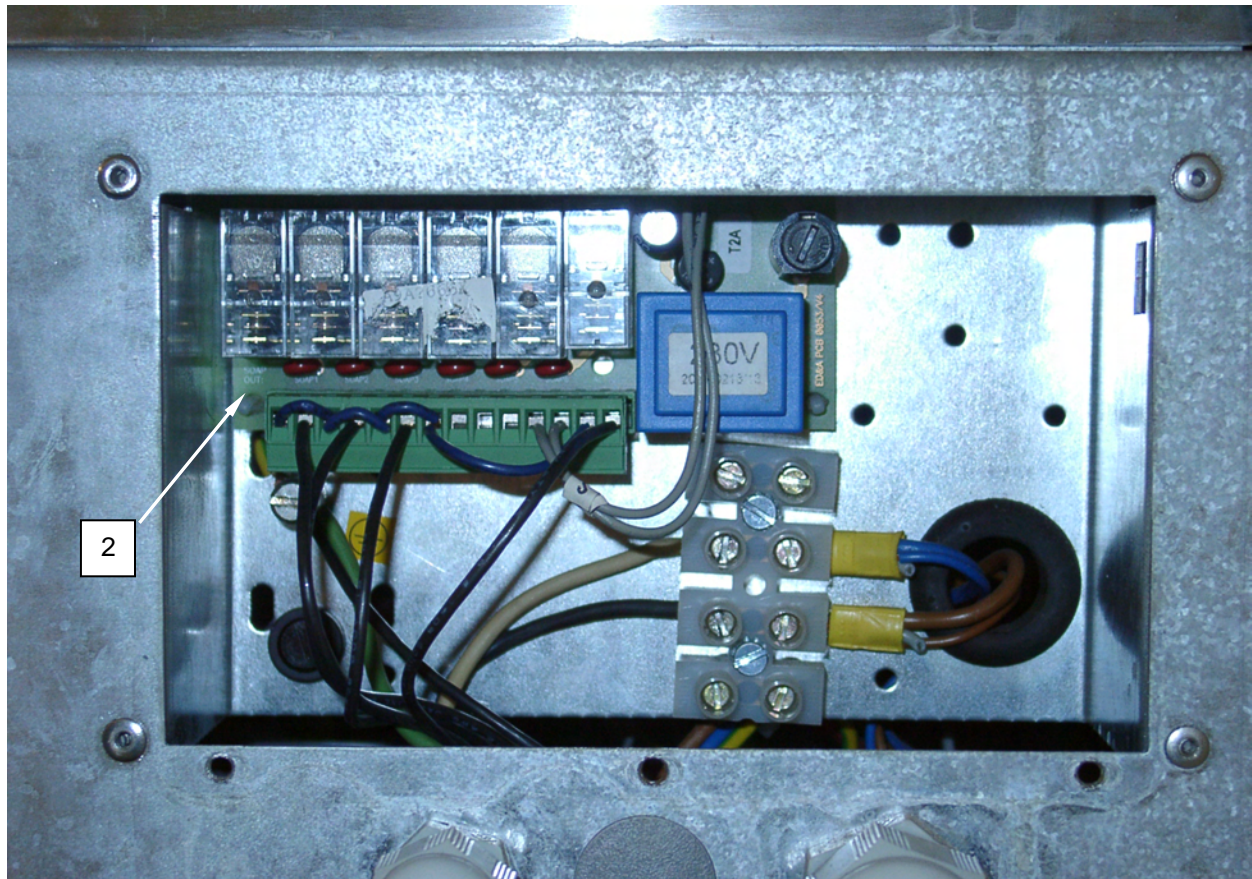
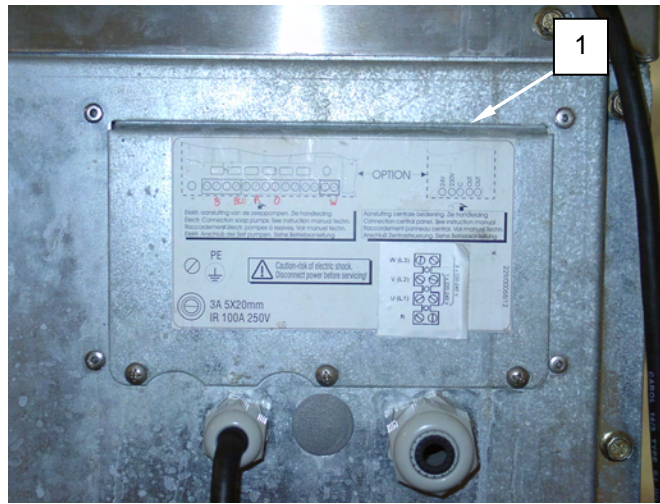


Figure 5. Replace the Soap Dispenser Printed Circuit Board.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**LEVEL SENSING TUBE
INSPECT, SERVICE, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

Compressed air

Equipment Condition

FP-CBL set up

References

WP 0055

INSPECT**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment, which might be damaged by the washer on its way in or out.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove back panel of washer.
3. Inspect the level sensing tube (Figure 1, Item 1) for material damage, wear, pinching, and proper connection.
4. Install washer in accordance with the procedures in WP 0055.

INSPECT - CONTINUED

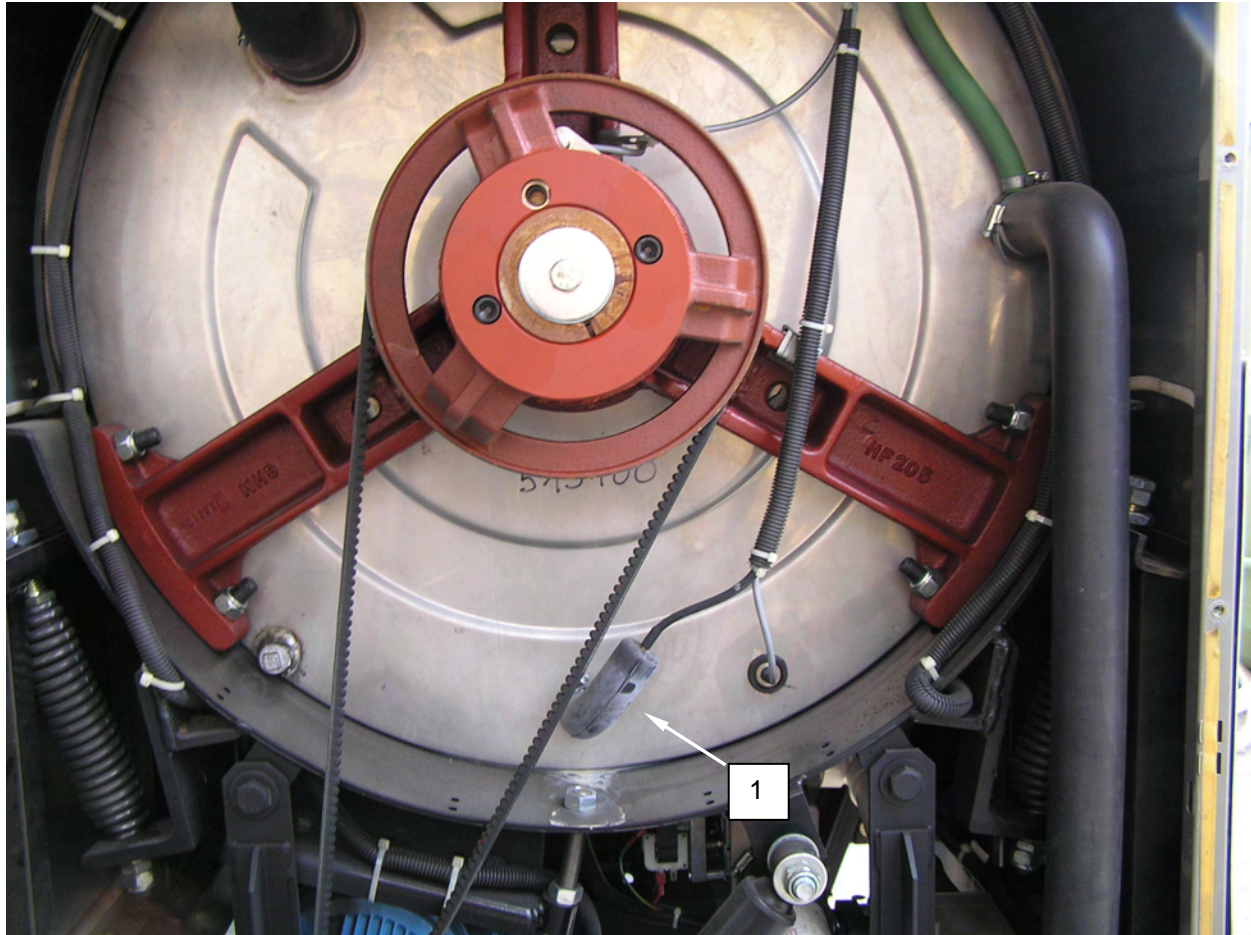


Figure 1. Inspect the Level Sensing Tube.

END OF TASK

SERVICE**Cleaning the Level Sensing Tube**

1. Disconnect washer power cord.
2. Use washer key to open washer control panel.
3. Disconnect level sensing tube (Figure 2, Item 1) from level sensor (Figure 2, Item 2).
4. Use compressed air (40 to 50 psi) to clear level sensing tube (Figure 2, Item 1).
5. Reconnect level sensing tube (Figure 2, Item 1) to level sensor (Figure 2, Item 2).
6. Close and latch washer control panel.
7. Connect power, and monitor for normal operation.

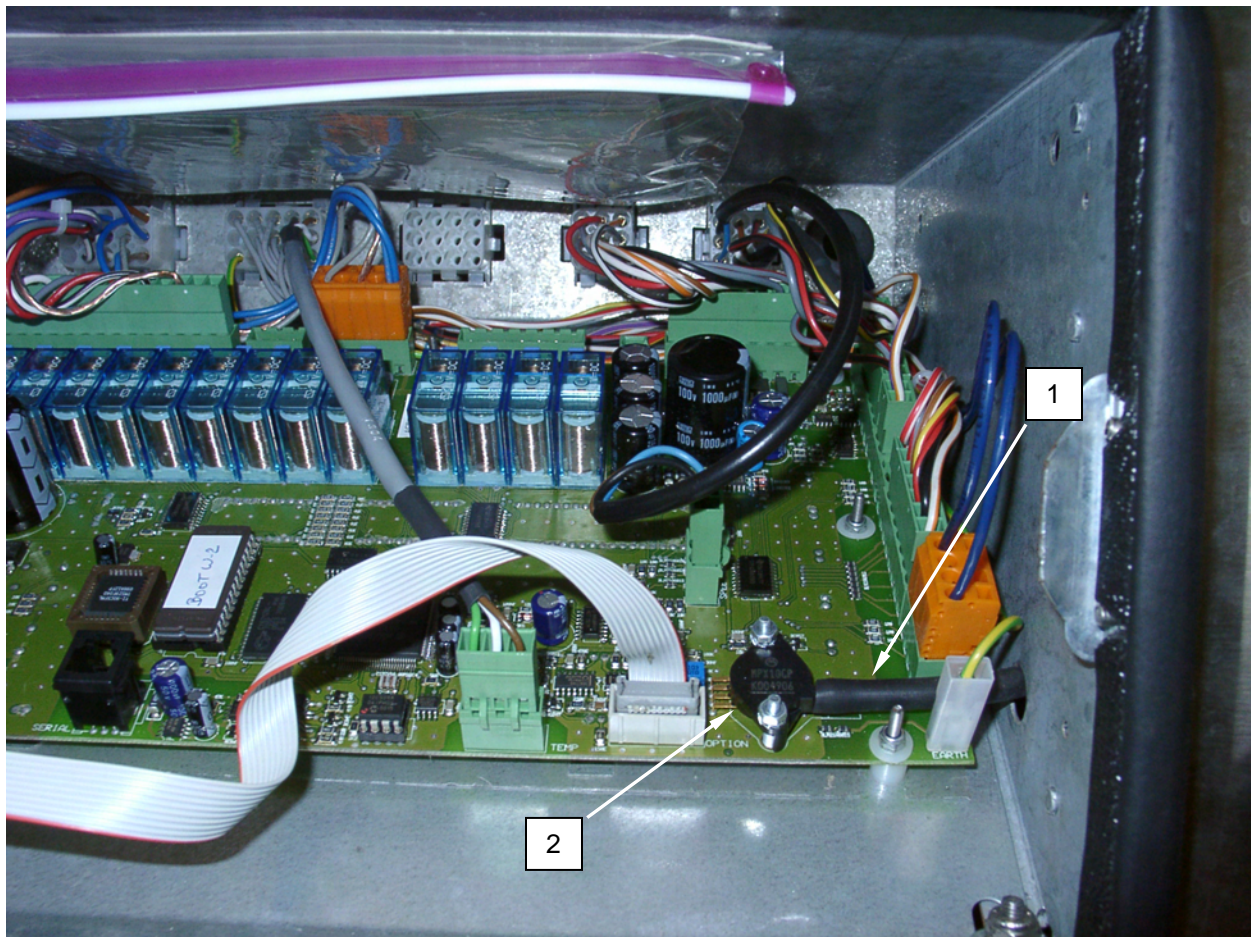


Figure 2. Clean the Level Sensing Tube.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment which might be damaged by the washer on its way in or out.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove back panel of washer.
3. Use the washer key to open the control panel, and disconnect the washer level sensing tube (Figure 3, Item 1) from the level sensor (Figure 3, Item 2).
4. Disconnect washer level sensing tube (Figure 3, Item 1) from washer drum, and remove level sensing tube.
5. Remove wire ties securing level sensing tube in the loom.
6. Separate the wire loom from the level sensing tube.
7. Install replacement washer level sensing tube (Figure 3, Item 1) onto drum.
8. Install loom around level sensing tube (Figure 3, Item 1).
9. Route washer level sensing tube (Figure 3, Item 1) close to wiring harness and up into control box.
10. Connect washer level sensing tube (Figure 3, Item 1) to level sensor (Figure 3, Item 2) in control box.
11. Install wire ties as necessary to secure level sensing tube (Figure 3, Item 1).
12. Close and secure the washer control panel.
13. Install back panel on washer.

REPLACE - CONTINUED

14. Install washer in accordance with the procedures in WP 0055.

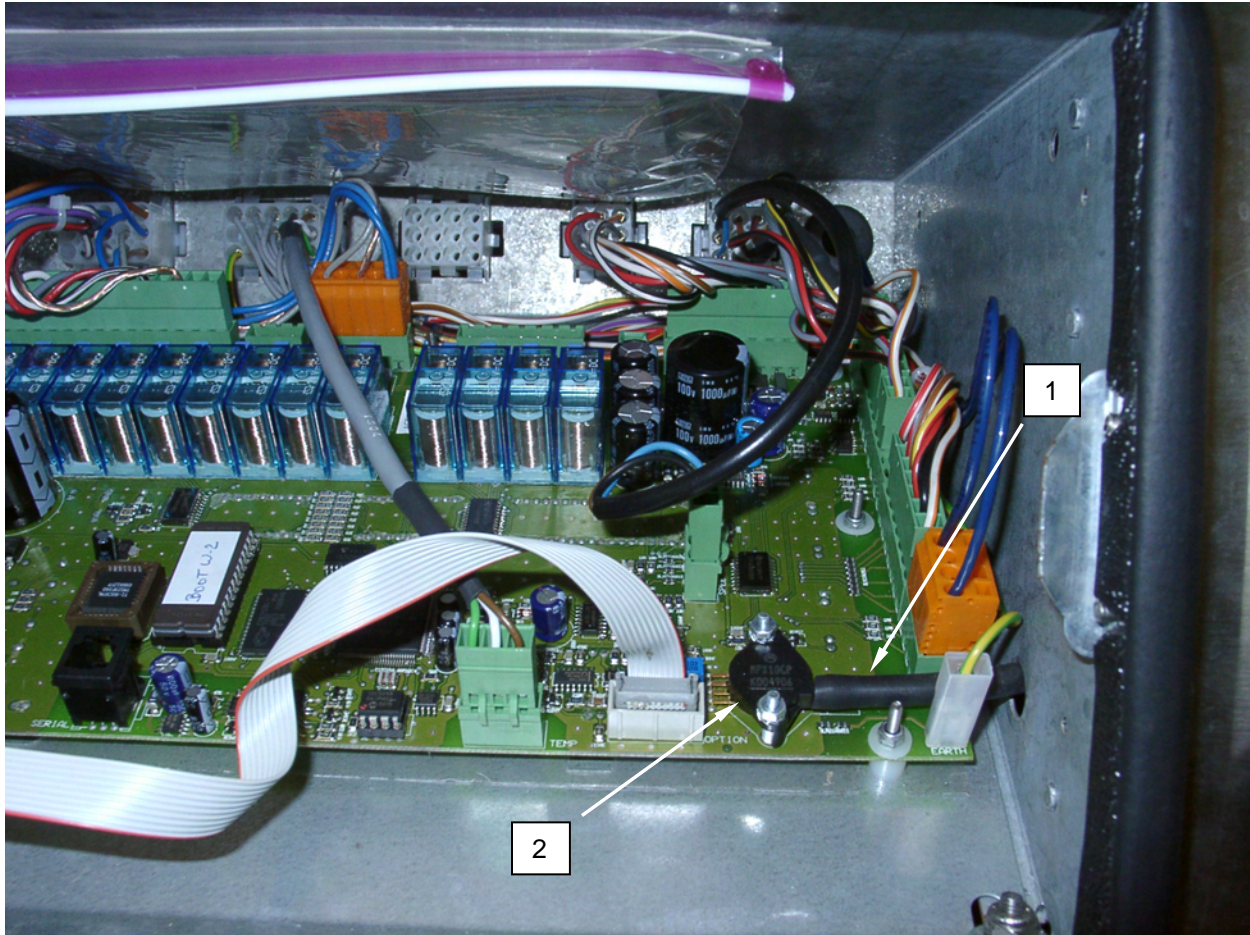


Figure 3. Replace the Level Sensing Tube (Sheet 1 of 2).

REPLACE - CONTINUED

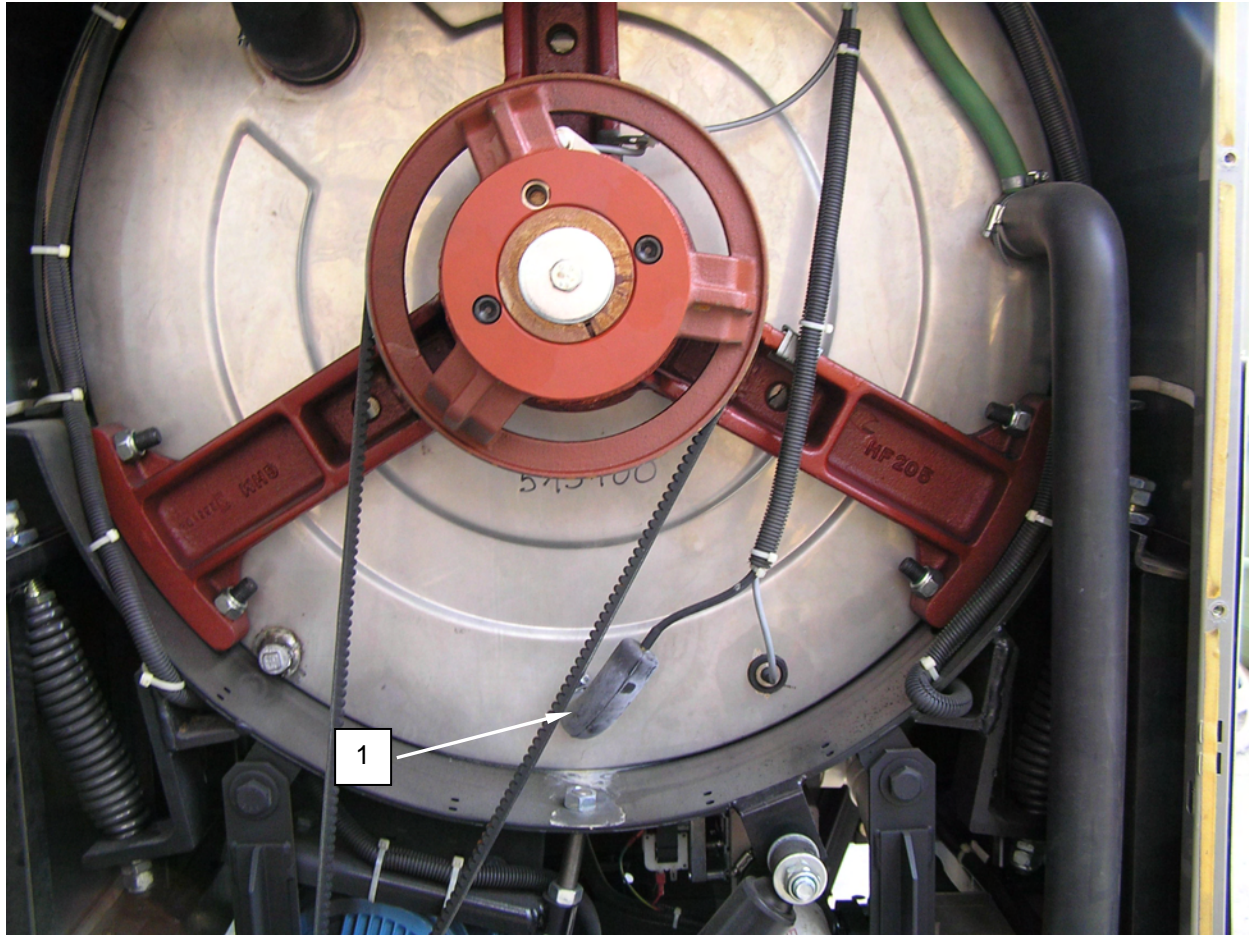


Figure 3. Replace the Level Sensing Tube (Sheet 2 of 2).

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**TEMPERATURE SENSOR
REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (2)

Materials/Parts

Strap, Tiedown, Electrical Component, Medium – 6
in. (WP 0101, Item 59)

Equipment Condition

FP-CBL set up

References

WP 0055

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer in accordance with the procedures in WP 0055.
2. Open washer control panel and remove back panel of washer.
3. Disconnect temperature sensor (Figure 1, Item 1) from circuit board in the washer control panel.
4. Remove wire ties securing temperature sensor to loom.
5. Remove the temperature sensor from the loom.

REPLACE - CONTINUED

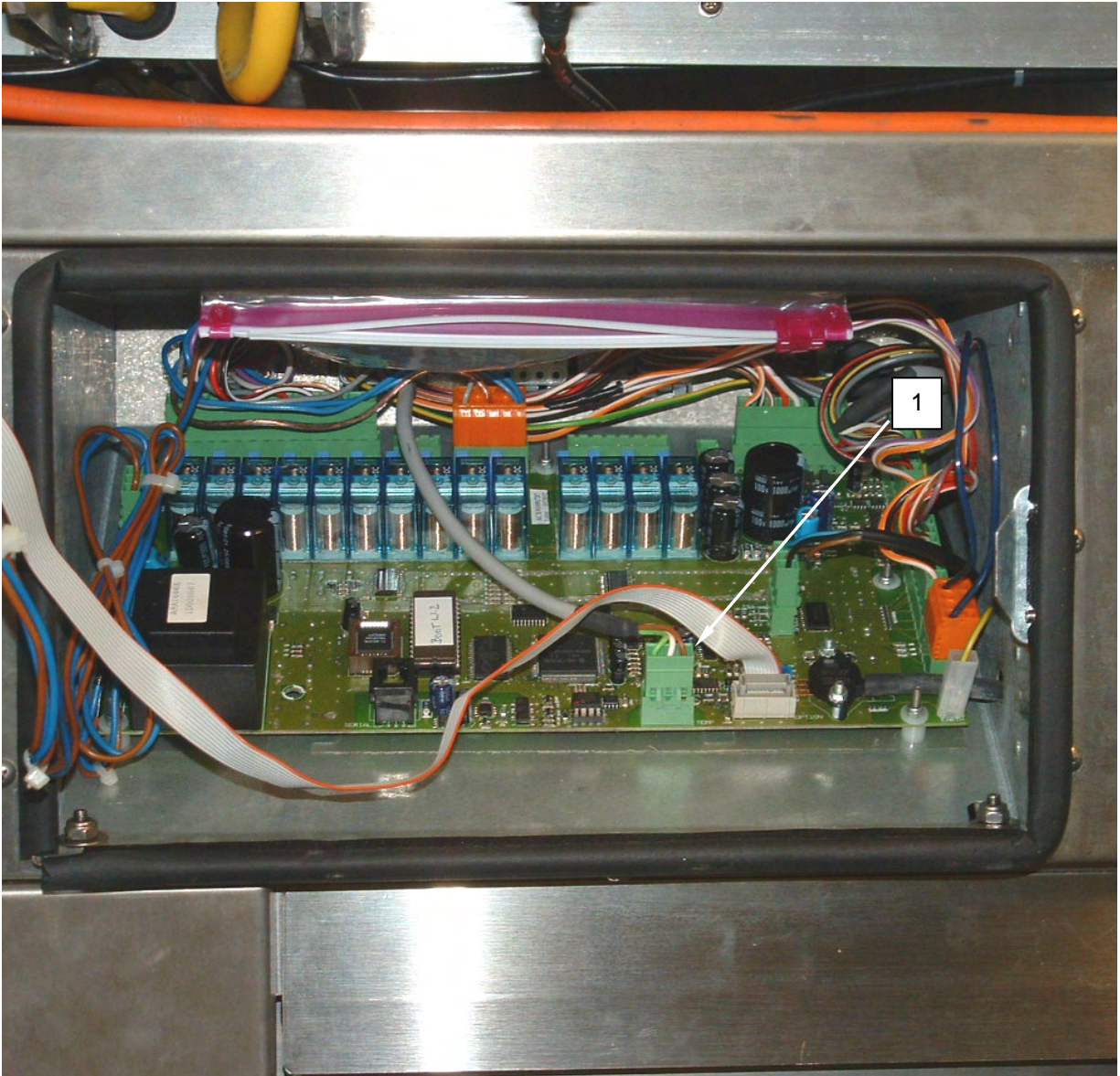


Figure 1. Replace the Temperature Sensor.

6. Pull temperature sensor (Figure 2, Item 1) from grommet seal.
7. Install replacement temperature sensor (Figure 2, Item 1) in grommet seal and use tie wraps as you insert the temperature sensor.
8. Pull temperature sensor through top panel and over printed circuit board and connect to the board.
9. Close and secure washer control panel.
10. Install washer top and back panel.
11. Install washer in accordance with the procedures in WP 0055.

REPLACE - CONTINUED

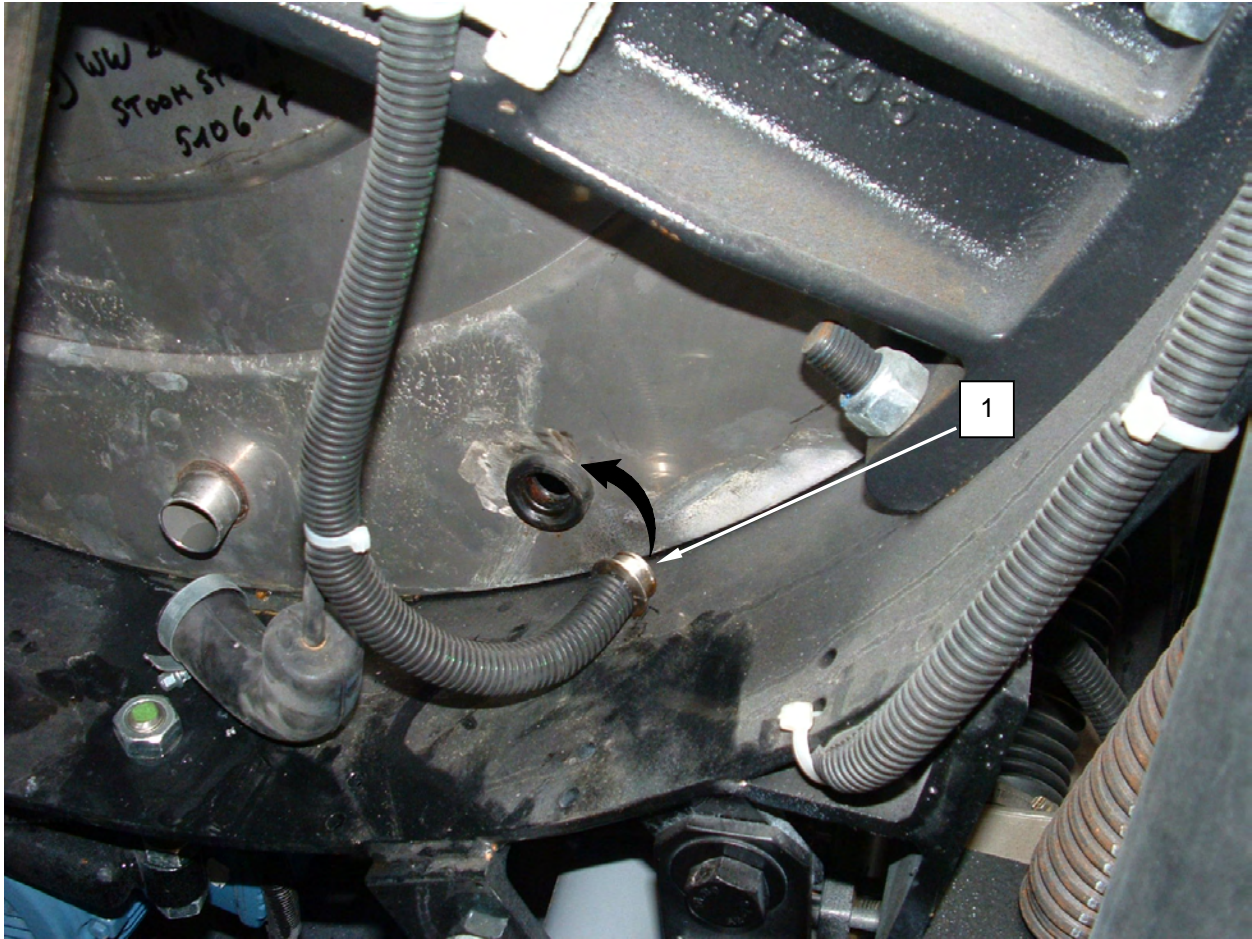


Figure 2. Replace the Temperature Sensor.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**SPEED DETECTOR
REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (2)

Materials/Parts

None required.

Equipment Condition

FP-CBL set up

References

WP 0055

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove washer top panel.
3. Separate the connector that connects the speed detector (Figure 1, Item 1) to the top of the washer frame.
4. Remove locknuts retaining detector (Figure 1, Item 1) to the bracket and remove detector.

REPLACE - CONTINUED**CAUTION**

To avoid equipment damage, ensure that there is at least 1/16-inch clearance between the speed detector and the washer drum pulley.

5. Install replacement detector (Figure 1, Item 1) and retain with locknuts. Ensure that there is at least a 1/16-inch gap between the end of the speed detector and drum.
6. After installing the replacement speed detector, slowly turn the washer drum pulley at least two rotations to ensure that there is no contact between the speed detector and the pulley.
7. Connect the connector to the speed detector.
8. Install top panel of washer.
9. Install washer in accordance with the procedures in WP 0055.

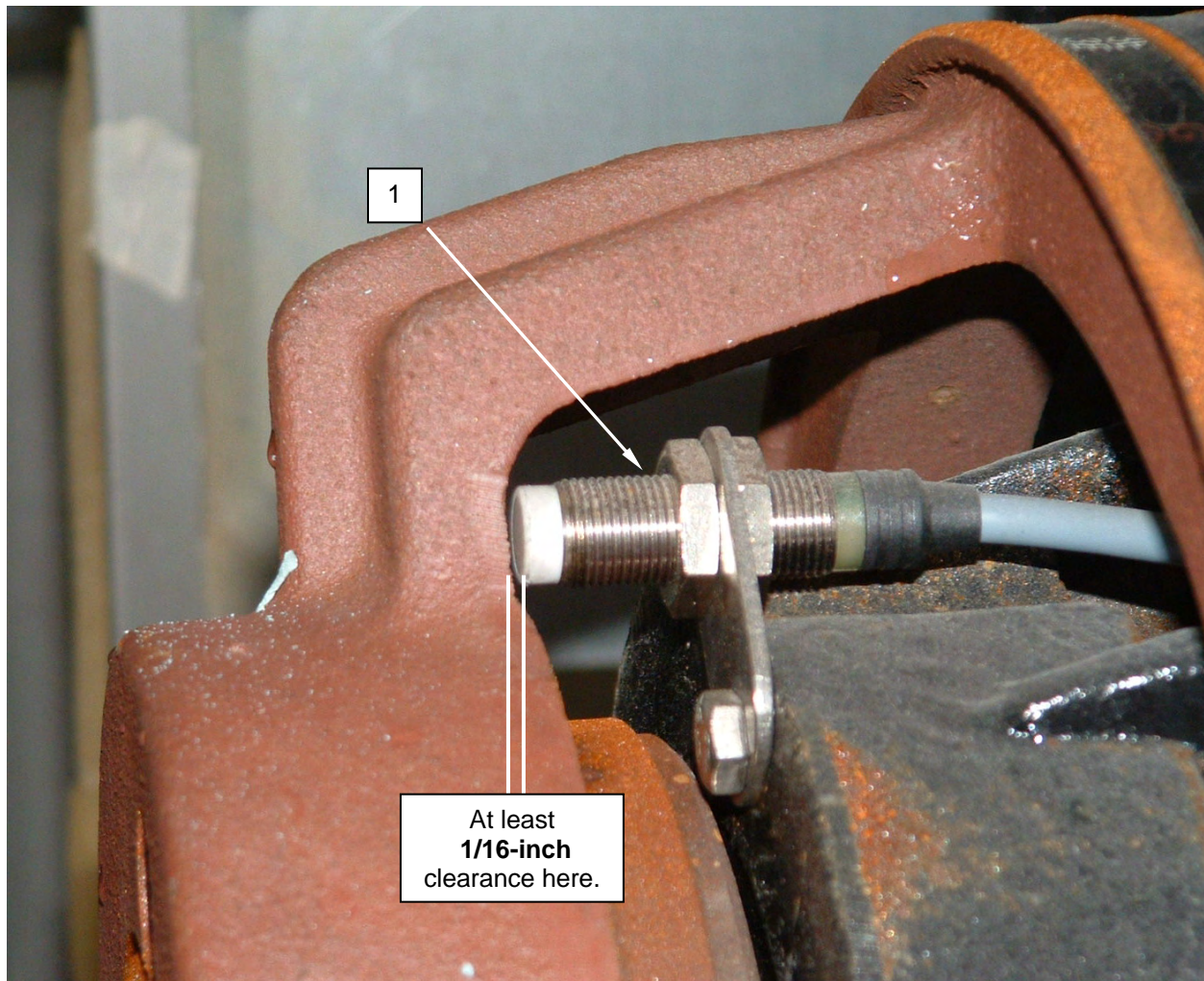


Figure 1. Replace the Washer Speed Detector.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**BALANCE SWITCH
TEST, ADJUST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

ReferencesWP 0055

TEST**WARNING**

Ensure that all washer electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch all circuit breakers in main breaker panel and dryer breaker panel to OFF.
2. Shut down external power from generators, shore, or local grid sources if supplying power to FP-CBL only. Disconnect all FP-CBL power cables from power source.
3. Disconnect all power cables from exterior power input panels of FP-CBL.
4. Remove the screw retaining the washer right front panel (Figure 1, Item 1) and remove the right front panel.
5. Open the control panel using key.
6. Tag and disconnect wiring from balance switch (Figure 1, Item 2) on the circuit card assembly (Figure 1, Item 3).
7. Ensure that switch trigger spring (Figure 1, Item 3) is not disturbed, and use a multimeter to test for 0 ohms resistance.
8. Deflect switch trigger spring (Figure 1, Item 3) and use a multimeter to test for an open circuit.
9. Replace the balance switch (Figure 1, Item 2) that fails either test.
10. Reconnect wiring to the circuit card assembly (Figure 1, Item 4) as tagged.
11. Install the washer right front panel (Figure 1, Item 1) and retain with screw.
12. Close and lock control panel.

TEST - CONTINUED

13. Connect power and monitor for normal operation.

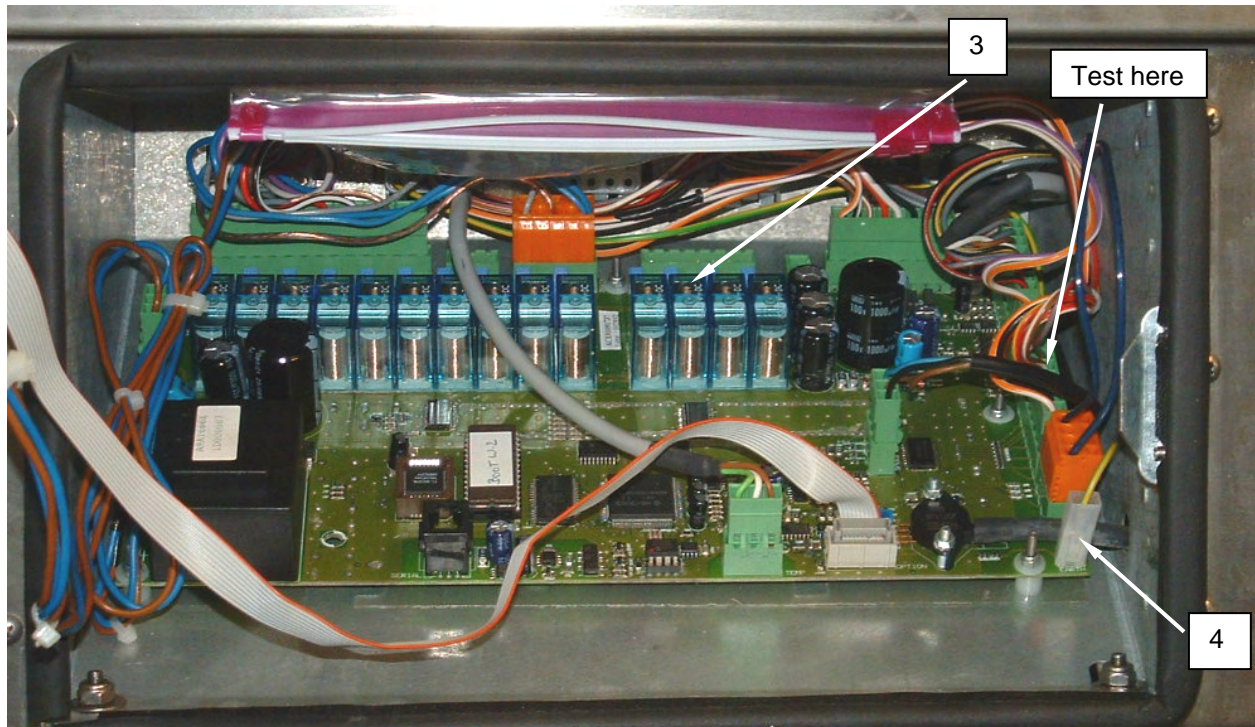
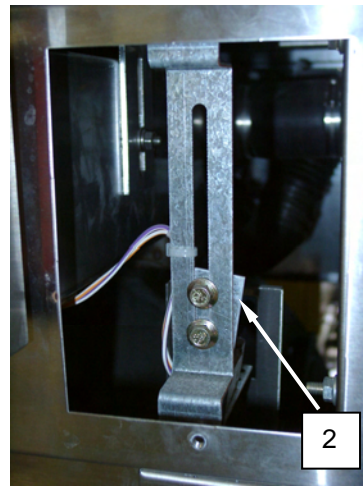
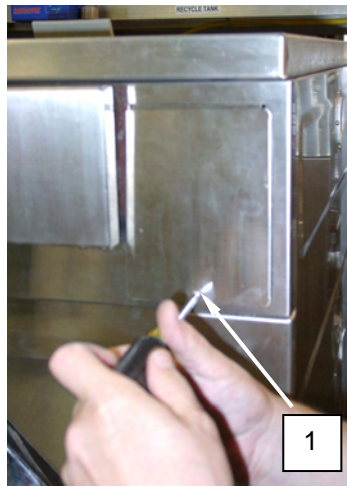


Figure 1. Test the Washer Balance Switch (Sheet 1 of 2).

TEST - CONTINUED

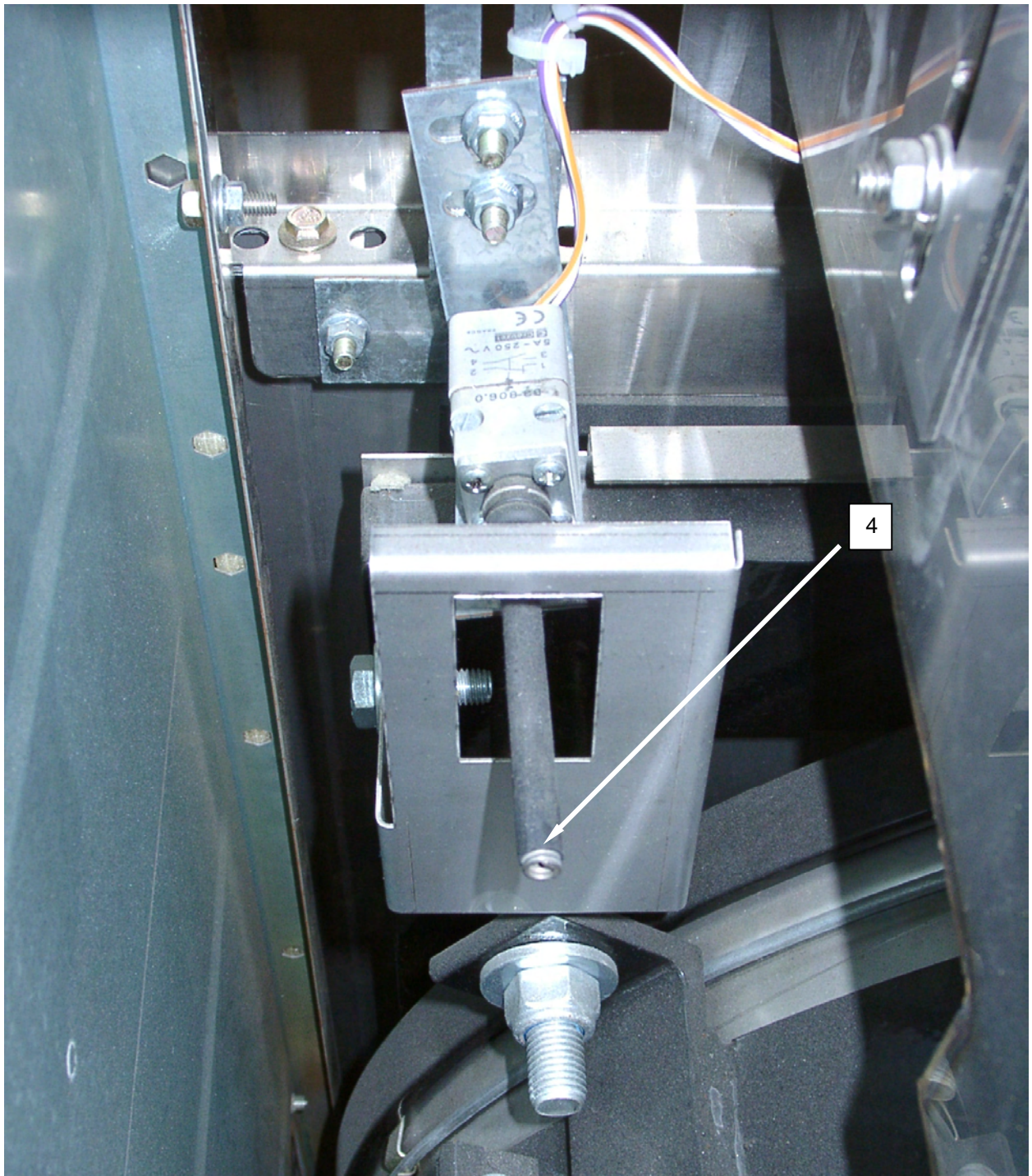


Figure 1. Test the Washer Balance Switch (Sheet 2 of 2).

END OF TASK

ADJUST

1. Disconnect washer power cord.
2. Remove the screw retaining the washer right front panel (Figure 2, Item 1), and remove the right front panel.

CAUTION

Loosen balance switch screws but **DO NOT REMOVE THEM**. If the screws or the balance switch fall into the washer, the washer must be removed and disassembled to retrieve the parts.

3. Loosen the screws (Figure 2, Item 2) retaining the balance switch, and adjust the balance switch to locate the trigger spring (Figure 2, Item 3) in the horizontal center of the trigger spring window (Figure 2, Item 4), and approximately 1/3 the distance from the bottom of the trigger spring window.
4. Tighten the balance switch retaining screws (Figure 2, Item 2).
5. Install the washer right front panel (Figure 2, Item 1) and retain with screw.
6. Connect washer power cord and monitor for normal operation.

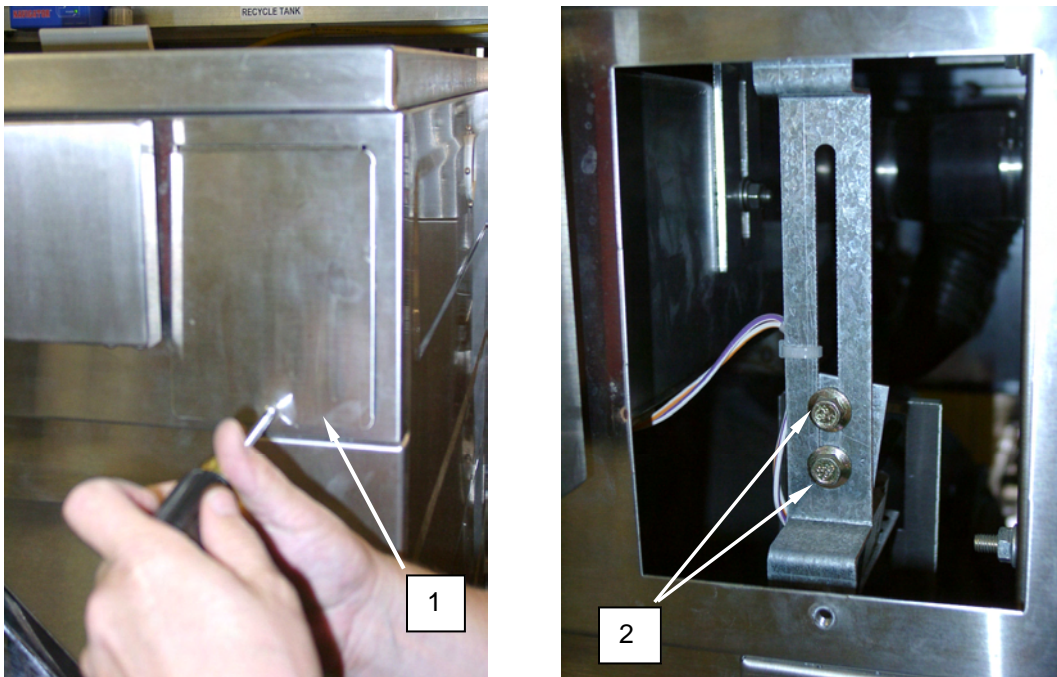


Figure 2. Adjust the Balance Switch (Sheet 1 of 2).

ADJUST - CONTINUED

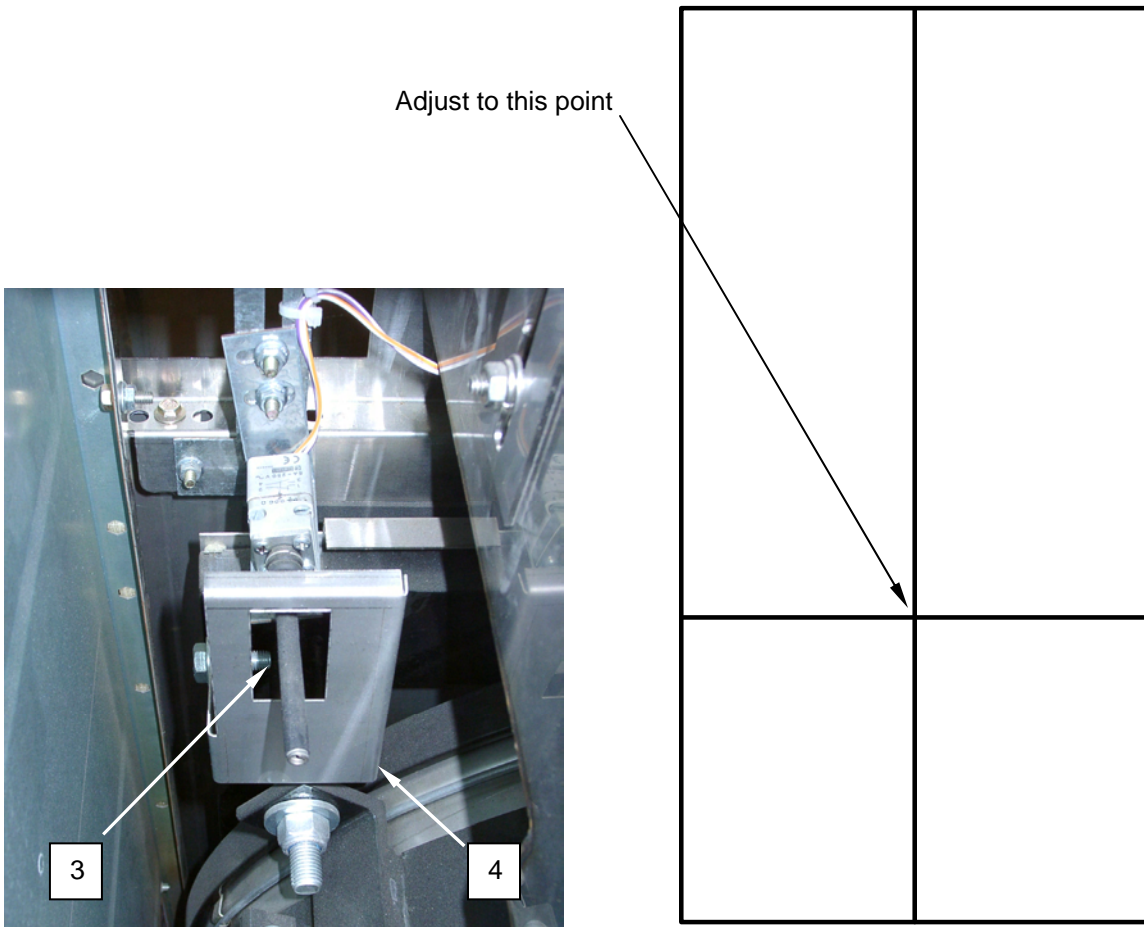


Figure 2. Adjust the Balance Switch (Sheet 2 of 2).

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer in accordance with the procedures in WP 0055.
2. Remove top panel of washer.

NOTE

Wiring may be cut and spliced, or may be disconnected at the circuit card assembly.

3. Tag and disconnect wiring from balance switch (Figure 3, Item 1).
4. Remove screws retaining balance switch (Figure 3, Item 1), and remove balance switch.
5. Install replacement balance switch (Figure 3, Item 1), and retain with screws. Adjust as necessary.
6. Reconnect wiring as tagged.
7. Install washer top panel.
8. Install washer in accordance with the procedures in WP 0055.

REPLACE - CONTINUED

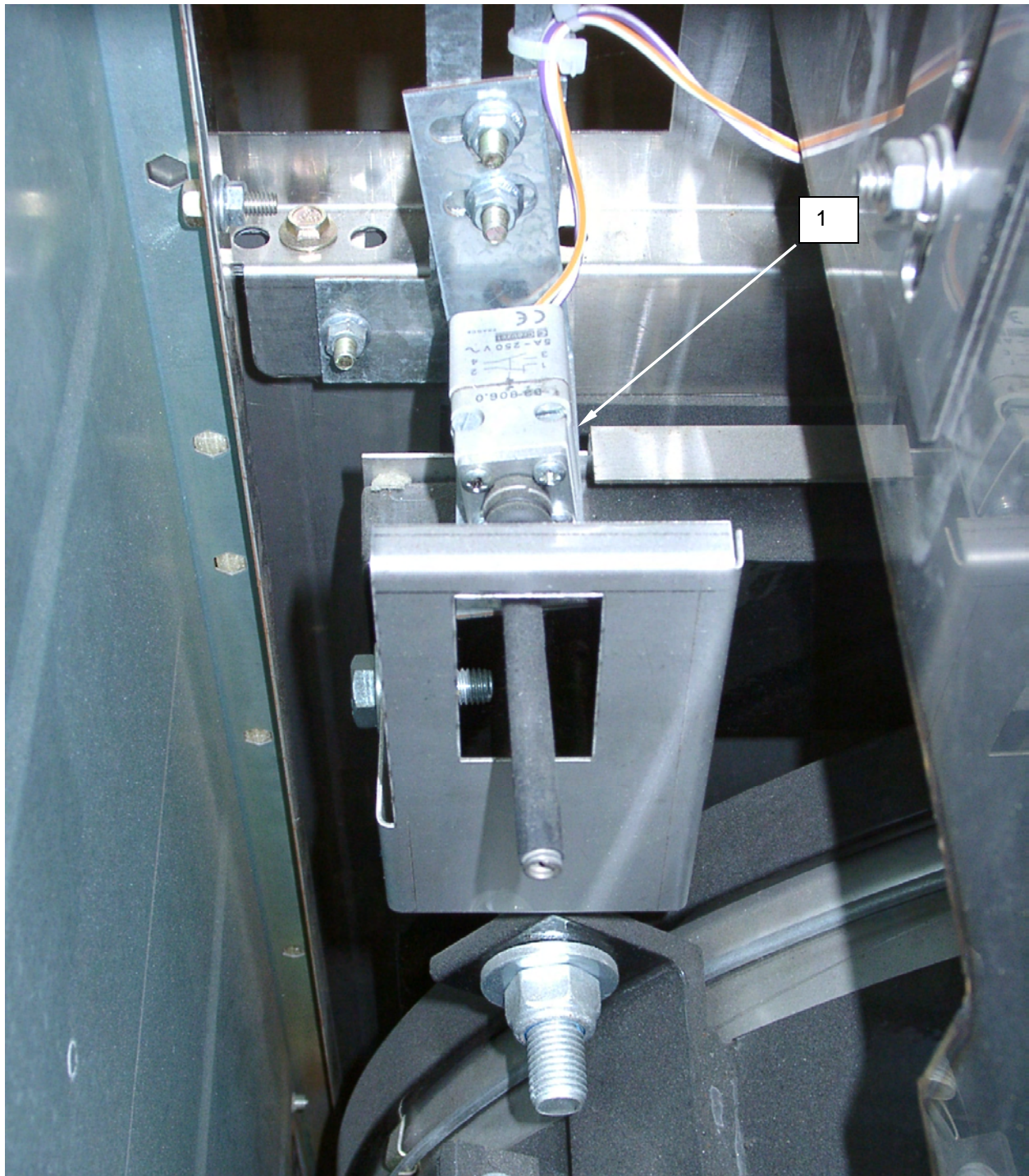


Figure 3. Replace the Washer Balance Switch.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER EMERGENCY STOP SWITCH
TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment ConditionFP-CBL set up

TEST**WARNING**

Ensure that all washer electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch the washer circuit breaker to OFF.
2. Unlock and open control panel (Figure 1, Item 1) using key.
3. Tag and disconnect wiring from switch (Figure 1, Item 2).

NOTE

The emergency stop switch is a double pole – double throw (DPDT) switch controlling two separate circuits. Both legs of the switch must be tested separately.

4. Depress switch (Figure 1, Item 2) to open circuit, and use a multimeter to test for infinite resistance.
5. Reset switch (Figure 1, Item 2) and use a multimeter to test for zero ohms resistance.
6. Replace a switch (Figure 1, Item 2) that fails either test.
7. Reconnect wiring as tagged.
8. Close and lock control panel (Figure 1, Item 1).
9. Reconnect power and monitor for normal operation.

TEST - CONTINUED

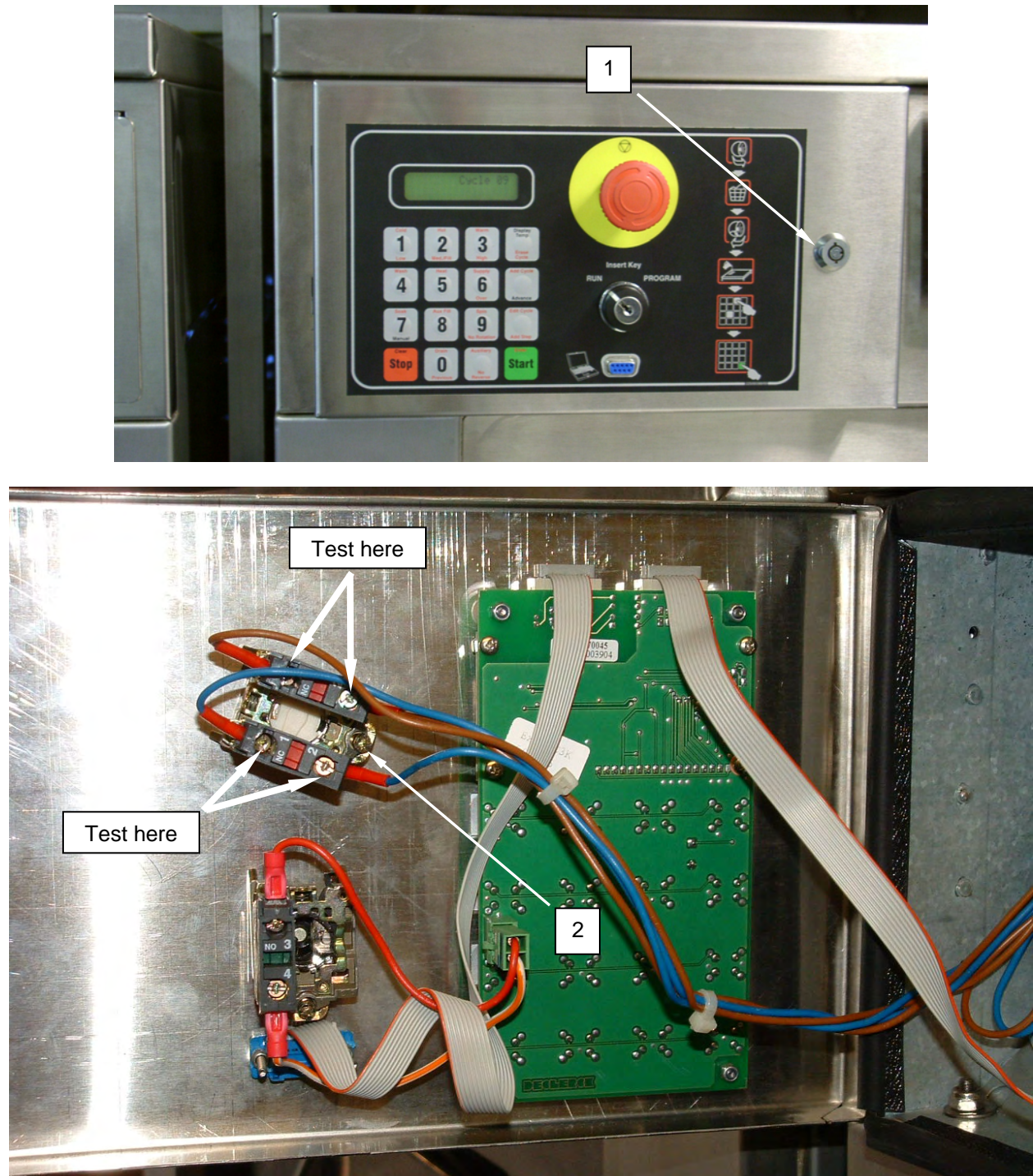


Figure 1. Test the Washer Emergency Stop Switch.

END OF TASK

REPLACE**WARNING**

Ensure that all washer electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch the washer circuit breaker to OFF.
2. Unscrew operating knob (Figure 2, Item 2).
3. Unlock and open control panel (Figure 2, Item 1).
4. Tag and disconnect wiring from switch (Figure 2, Item 3).
5. Use a screwdriver to remove screw (Figure 2, Item 4) securing the switch (Figure 2, Item 3) to control panel.
6. Lift the black retaining clip from the back of the emergency stop switch and pull out the emergency stop knob.

NOTE

When installed, the switch may be free to rotate within the limits imposed by the wiring.

7. Install the halves of the replacement switch (Figure 2, Item 3), into the control panel (Figure 2, Item 1), and lock halves together. Ensure the internal locking assembly has the word "TOP" facing up and align it with the switch.
8. Use a screwdriver to secure the retaining catch on the switch.
9. Reconnect wiring as tagged.
10. Close and lock control panel (Figure 2, Item 1).
11. Install operating knob (Figure 2, Item 2).
12. Reconnect power and monitor for normal operation.

REPLACE - CONTINUED

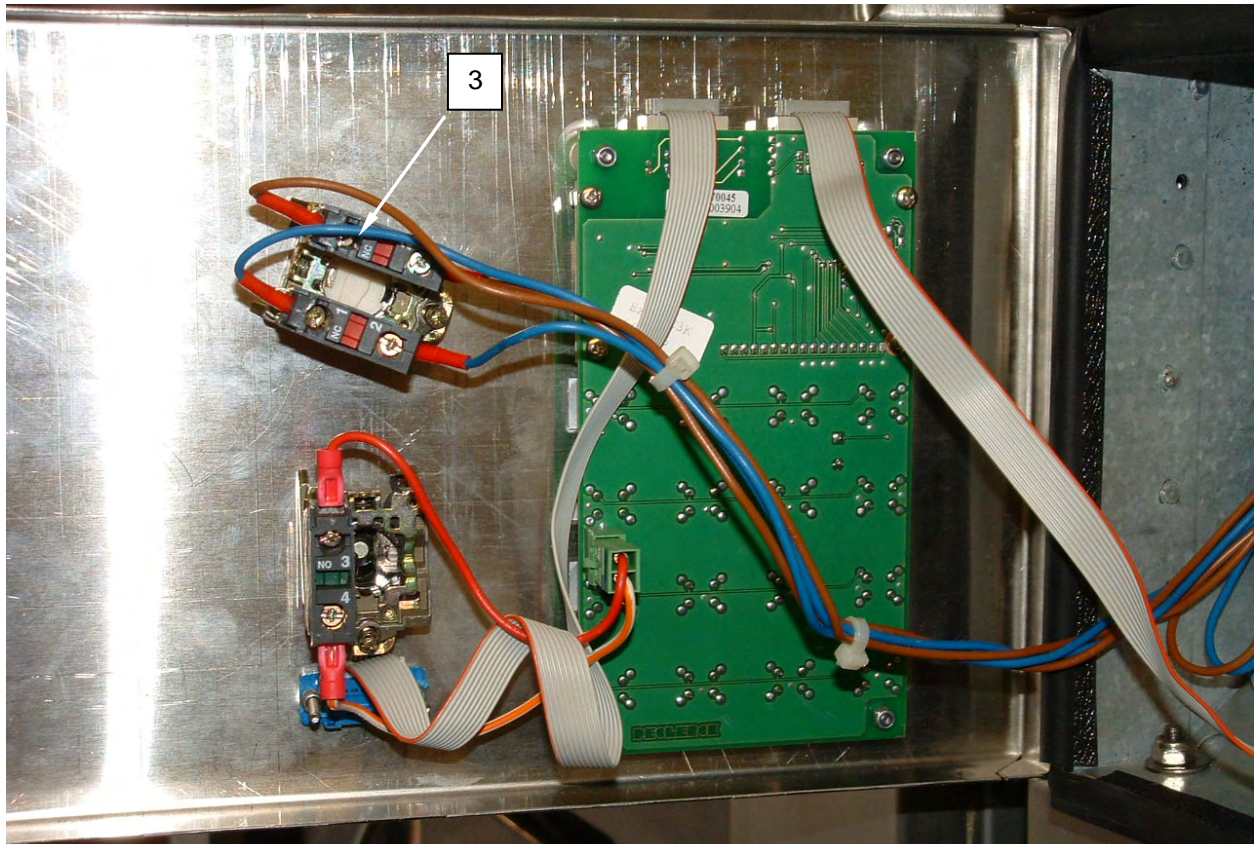


Figure 2. Replace the Washer Emergency Stop Switch (Sheet 1 of 2).

REPLACE - CONTINUED

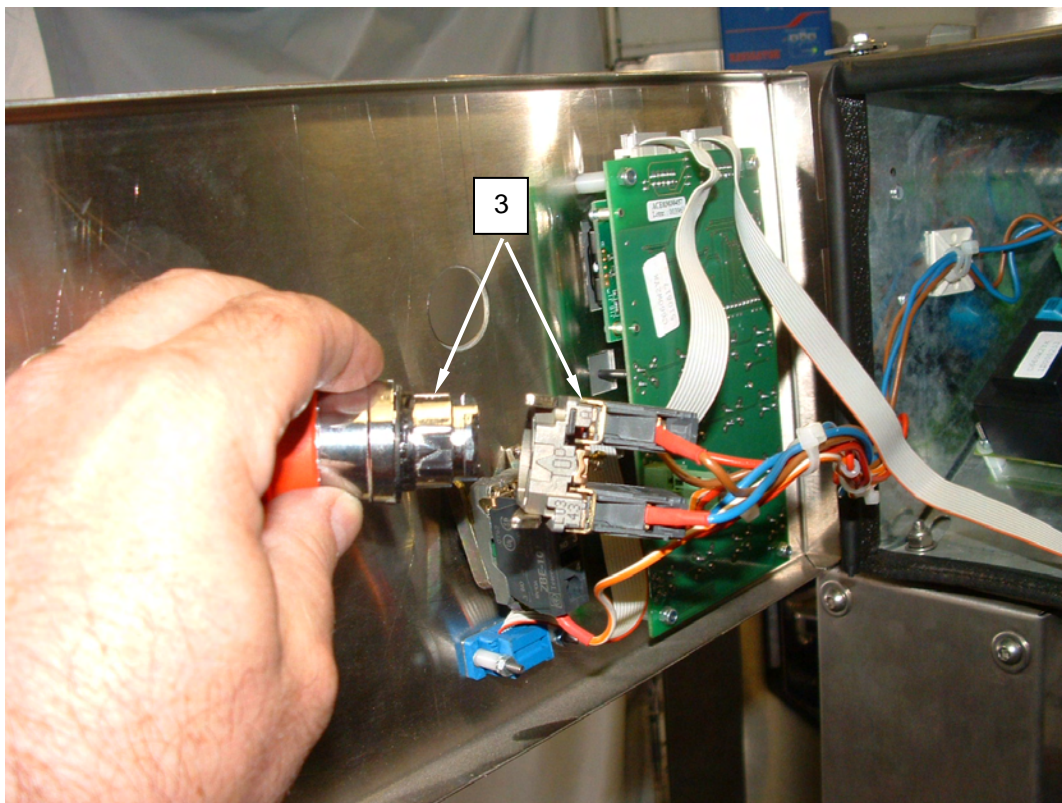
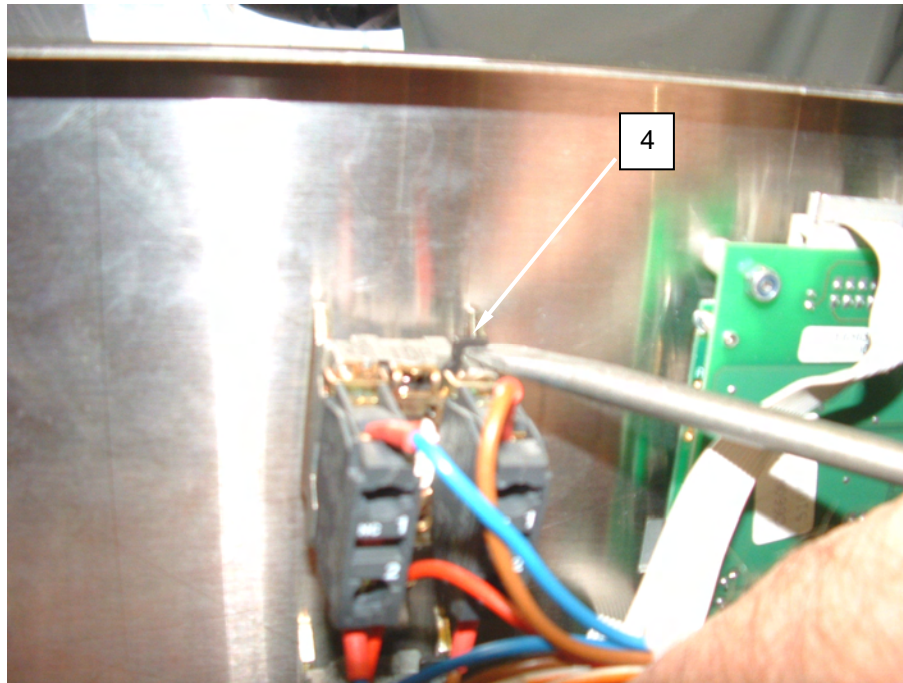


Figure 2. Replace the Washer Emergency Stop Switch (Sheet 2 of 2).

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER MAIN DRAIN VALVE
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

References

WP 0055

TEST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box should be locked and tagged by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. To test the valve motor (Figure 1, Item 3), tag and disconnect wiring.
3. Use a multimeter to check for 135 to 145 ohms resistance between valve motor leads (Figure 1, Item 2).
4. Use a multimeter to check for infinite resistance between each valve motor lead (Figure 1, Item 2) and ground.

TEST - CONTINUED

5. If the motor (Figure 1, Item 3) is open or as shorted to ground, replace the washer main drain valve IAW the procedures shown in the REPLACE paragraph of this work package.
6. To test the valve mechanism, loosen and remove the clamps retaining the hoses (Figure 1, Item 1) to the valve (Figure 1, Item 3) and remove the hoses.
7. Ensure the valve (Figure 1, Item 3) opens and closes completely and is free of obstructions.
8. Ensure there is no damage to the valve butterfly or valve bore.
9. Install hoses (Figure 1, Item 1) onto valve (Figure 1, Item 3) and retain with clamps.
10. Reconnect wiring as tagged.
11. Install washer IAW procedures given in WP 0055.

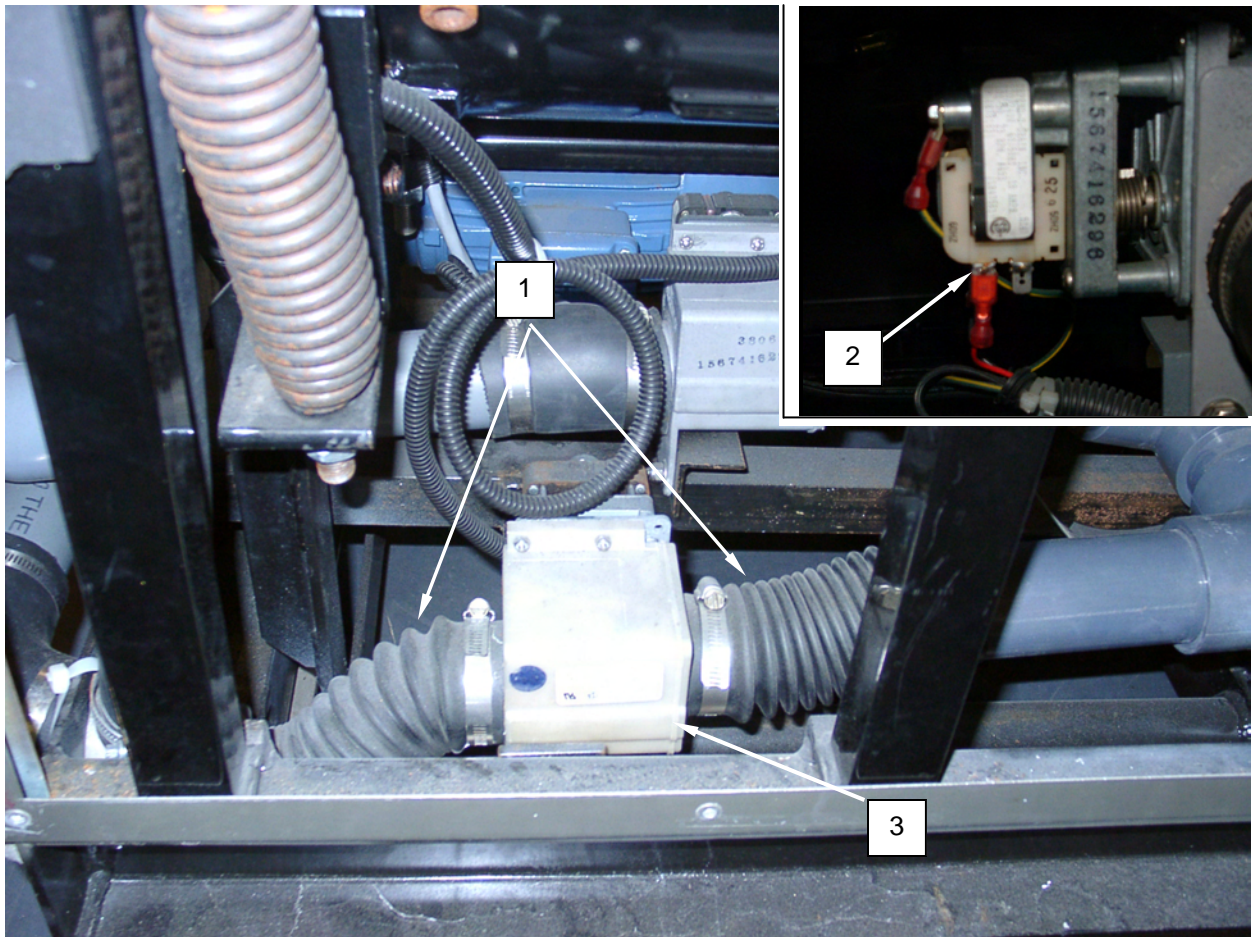


Figure 1. Test the Washer Main Drain Valve.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box should be locked and tagged by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Tag and disconnect wiring from valve motor (Figure 2, Item 2).
3. Loosen and remove the clamps retaining the hoses (Figure 2, Item 1) to the valve (Figure 2, Item 2) and remove the hoses.
4. Remove the screws retaining the valve (Figure 2, Item 2) to the valve bracket and remove the valve.
5. Install the replacement valve (Figure 2, Item 2) and retain with screws.
6. Install hoses (Figure 2, Item 1) onto valve (Figure 2, Item 2) and retain with clamps.

CAUTION

Ensure the wire connections are placed on the 60Hz terminals as marked on the valve motor. Connection to the 50Hz terminals will impair performance and reduce the operating life of the valve motor.

7. Reconnect wiring as tagged.
8. Install washer IAW procedures given in WP 0055.

REPLACE - CONTINUED

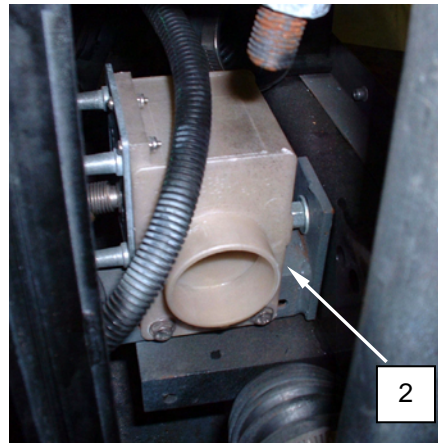
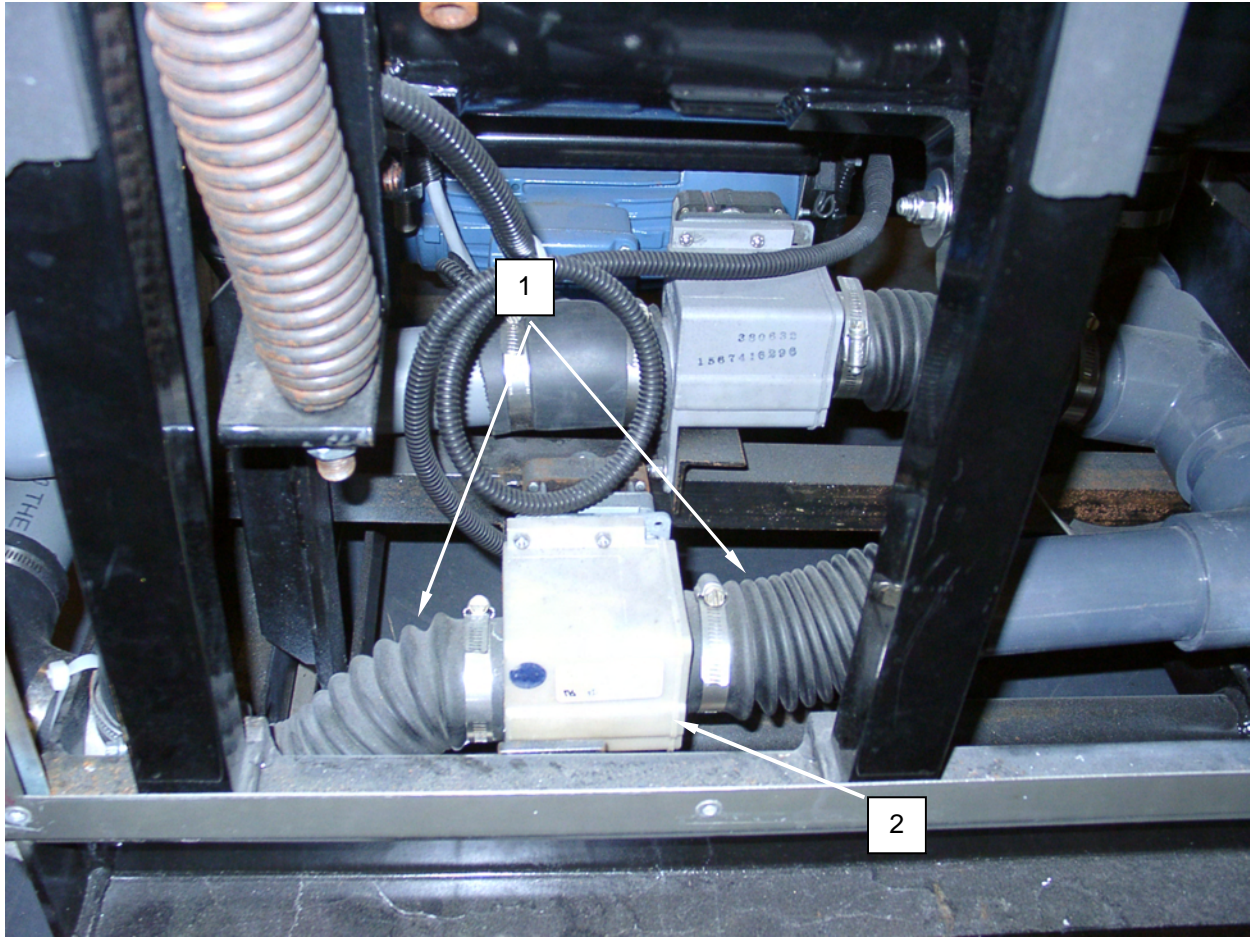


Figure 2. Replace the Washer Main Drain Valve.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER REUSE DRAIN VALVE
TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

ReferencesWP 0055

TEST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Tag and disconnect wiring from valve motor (Figure 1, Item 2).
3. Use a multimeter to check for 100.0 to 120.0 ohms resistance between motor leads (Figure 1, Item 3).
4. Use a multimeter to check for infinite resistance between each motor lead (Figure 1, Item 3) and ground.

TEST - CONTINUED

5. Use a multimeter to check for infinite resistance between each motor lead (Figure 1, Item 3) and ground.
6. Replace an open motor (Figure 1, Item 2) or a motor which has shorted to ground.
7. Loosen and remove the clamps retaining the hoses (Figure 1, Item 1) to the valve (Figure 1, Item 2) and remove the hoses.
8. Ensure the valve (Figure 1, Item 2) opens and closes completely and is free of obstructions.
9. Ensure there is no damage to the valve butterfly or valve bore.
10. Install hoses (Figure 1, Item 1) onto valve (Figure 1, Item 2) and retain with clamps.
11. Reconnect wiring as tagged.
12. Install washer IAW procedures given in WP 0055.

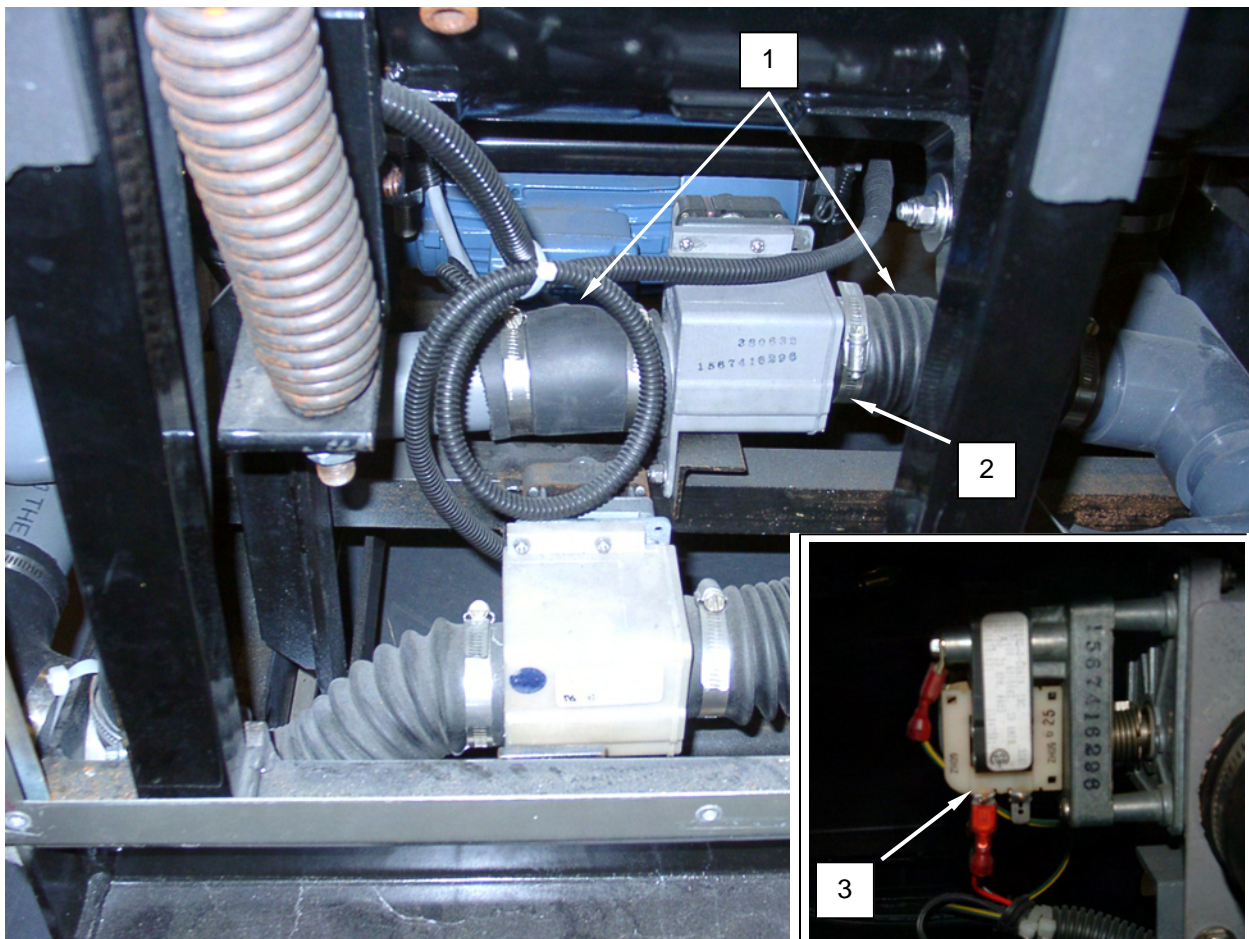


Figure 1. Test the Washer Reuse Drain Valve.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Tag and disconnect wiring from valve motor (Figure 2, Item 1).
3. Loosen and remove the clamps retaining the hoses (Figure 2, Item 2) to the valve (Figure 2, Item 1) and remove the hoses.
4. Remove the screws retaining the valve (Figure 2, Item 1) to the valve bracket and remove the valve.
5. Install the replacement valve (Figure 2, Item 1) and retain with screws.
6. Install hoses (Figure 2, Item 2) onto valve (Figure 2, Item 1) and retain with clamps.

CAUTION

Ensure the wire connections are placed on the 60Hz terminals as marked on the valve motor. Connection to the 50Hz terminals will impair performance and reduce the operating life of the valve motor.

7. Reconnect wiring as tagged.
8. Install washer IAW procedures given in WP 0055.

REPLACE - CONTINUED

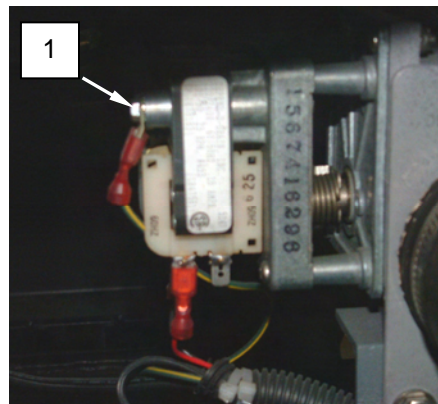
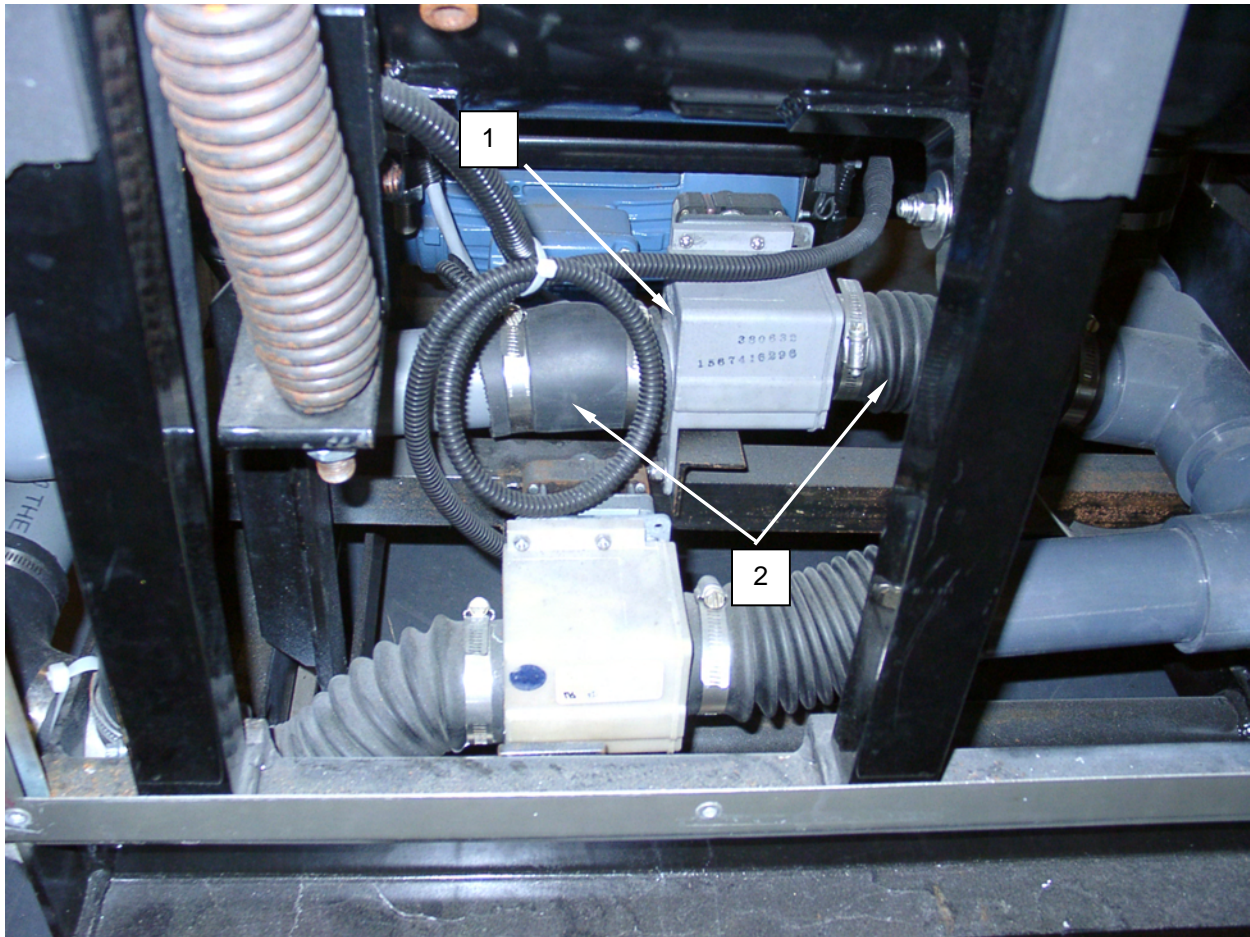


Figure 2. Replace the Washer Reuse Drain Valve.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

**WASHER VARIABLE FREQUENCY DRIVE
TEST, REPLACE**

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (2)

Materials/Parts

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

References

WP 0007
WP 0055

TEST

The variable frequency drive may be tested by running an extract cycle (cycle 36) to fully load the motor. A faulty variable frequency drive will deliver an error. Refer to WP 0007 for washer operating instructions.



Figure 1. Test the Variable Frequency Drive.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

For Washer No. 2, steps 1 and 13 may be omitted. There is also no need to remove the back, side, or top panels to perform this maintenance task.

1. Remove washer IAW procedures given in WP 0055.
2. Remove screws retaining inverter box cover (Figure 2, Item 1), and remove cover.
3. Tag and disconnect wiring from fan (Figure 2, Item 2).
4. Wait at least 10 minutes before proceeding.
5. Release tabs retaining inverter cover (Figure 2, Item 3), and remove cover.
6. Tag and disconnect wiring from inverter (Figure 2, Item 4).
7. Remove nuts retaining inverter (Figure 2, Item 4), and remove inverter.
8. Install replacement inverter (Figure 2, Item 4) and retain with nuts.
9. Release tabs retaining inverter cover (Figure 2, Item 3), and remove cover.

REPLACE - CONTINUED

10. Connect wiring as tagged, and install inverter cover.
11. Connect wiring to fan (Figure 2, Item 2).
12. Install inverter box cover (Figure 2, Item 1), and retain with screws.
13. Install washer IAW procedures given in WP 0055.

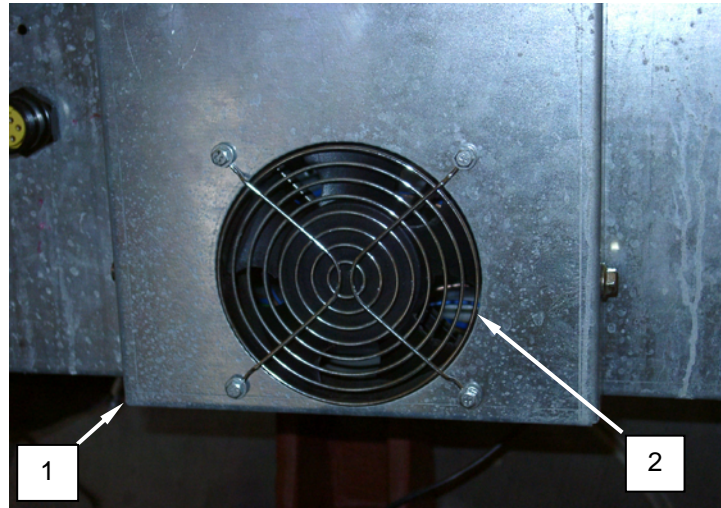


Figure 2. Replace the Washer Variable Frequency Drive (Sheet 1 of 2).

REPLACE - CONTINUED



Figure 2. Replace the Washer Variable Frequency Drive (Sheet 2 of 2).

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**SHOCK ABSORBERS AND SPRINGS
INSPECT, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**Cleaner, Lubricant, and Preservative (WP 0101,
Item 9)
Lubricating Oil, General Purpose (WP 0101, Item
38)**Equipment Condition**

FP-CBL set up

ReferencesWP 0008
WP 0055**INSPECT****Inspect the Washer Shock Absorbers****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

The washer is equipped with three shock absorbers.

1. Remove washer IAW procedures given in WP 0055.

INSPECT - CONTINUED

2. Inspect shock absorbers (Figure 1, Item 1) for physical damage, fluid leakage, or loose bolts.
3. Install washer IAW procedures given in WP 0055.

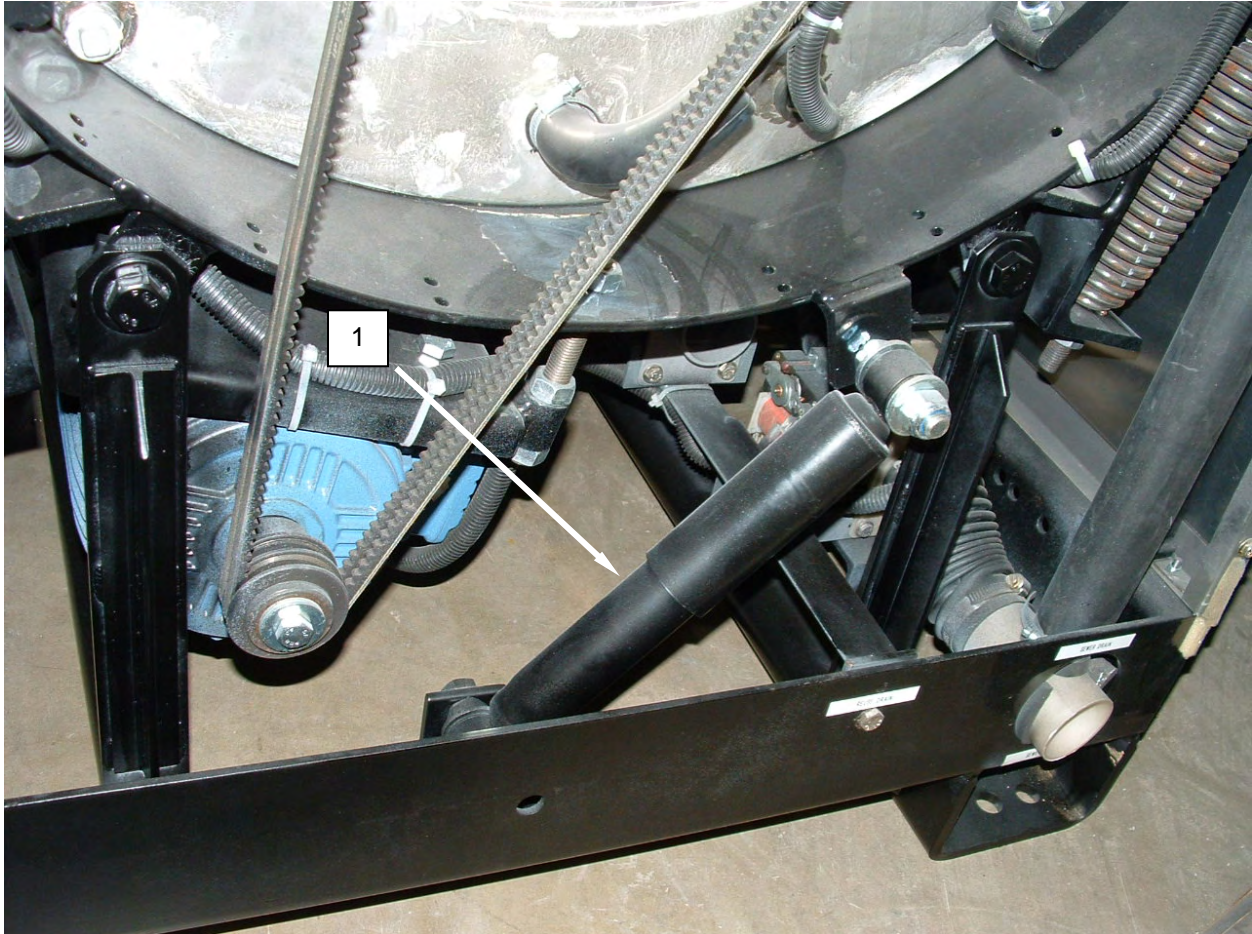


Figure 1. Inspect the Washer Shock Absorbers.

END OF TASK

INSPECT - CONTINUED**Inspect the Washer Springs****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

The washer is equipped with four springs.

1. Remove washer IAW procedures given in WP 0055.
2. Inspect springs (Figure 2, Item 1) for physical damage, corrosion, or loose mounting bolts.
3. Install washer IAW procedures given in WP 0055.

INSPECT - CONTINUED



Figure 2. Inspect the Washer Springs.

END OF TASK

REPLACE**Replace the Washer Shock Absorbers****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

The washer is equipped with three shock absorbers. Replace shock absorbers as a set only.

1. Remove the bolts retaining the left front panel (Figure 3, Item 1) and the right front panel (Figure 3, Item 2), and remove both panels.
2. Remove washer IAW procedures given in WP 0055.

WARNING

Do not proceed with this task unless the drum is fully supported by the shipping brackets. Failure to support the drum may result in serious injury to personnel.

3. Support washer drum (Figure 3, Item 4) with shipping brackets. Refer to WP 0008 as necessary for information on installing the shipping brackets.

REPLACE - CONTINUED**CAUTION**

The shock absorber mounting bolts may be installed by power tools at the manufacturer. Always use the correct tools to loosen the mounting hardware – an open end wrench and a box wrench or socket. If the mounting hardware cannot be removed, refer the procedure to the next higher maintenance level.

4. Apply a penetrating lubricating oil to bolts retaining shock absorber (Figure 3, Item 3). Allow the penetrating oil to soak for about 15 minutes.
5. Remove bolts retaining shock absorber (Figure 3, Item 3), and remove shock absorber.
6. Install replacement shock absorbers (Figure 3, Item 3) and retain with bolts.
7. Remove shipping brackets. Refer to WP 0008 as necessary for information on installing the shipping brackets.
8. Install washer IAW procedures given in WP 0055.
9. Install the left front panel (Figure 3, Item 1) and the right front panel (Figure 3, Item 2), and retain with bolts.

REPLACE - CONTINUED

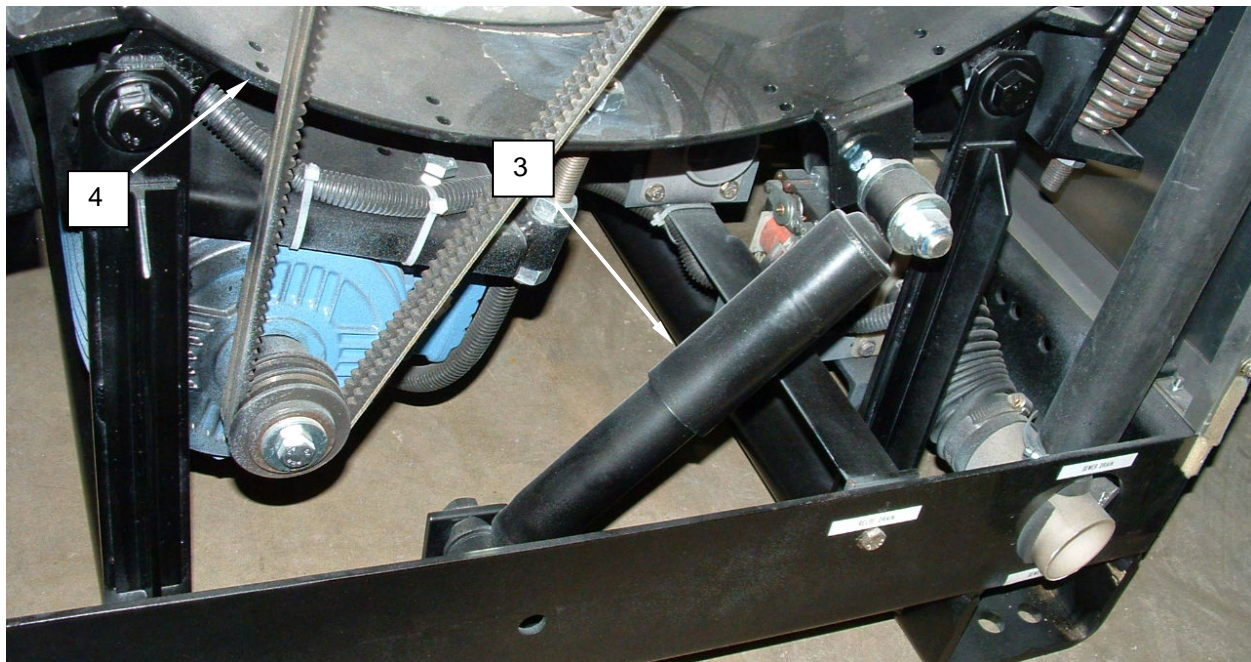
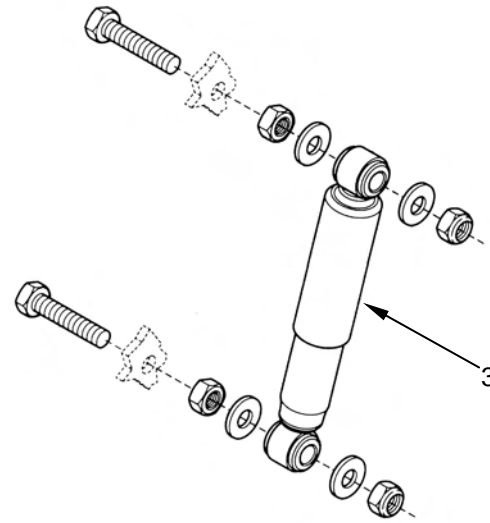
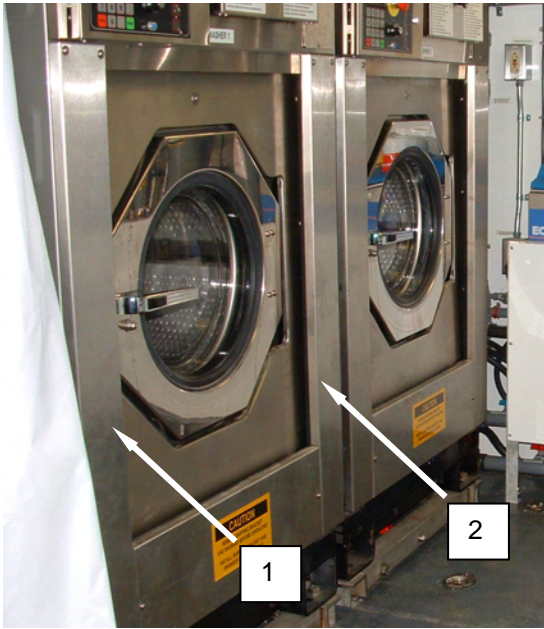


Figure 3. Replace the Washer Shock Absorbers.

END OF TASK

REPLACE - CONTINUED**Replace the Washer Springs****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

Replace the springs one at a time; that is, do not remove any more than one spring at any given time. Removal of more than one spring may allow the washer drum to drop, damaging components. If a spring has broken, replace the broken spring first before replacing any others.

NOTE

The washer is equipped with four springs. Replace springs as a set only.

The front and rear springs are set up differently.

1. Remove washer IAW procedures given in WP 0055.
2. Support washer drum (Figure 4, 5, Item 1) with one shipping bracket installed on the side opposite the spring (Figure 4, 5, Item 3) being replaced. Refer to WP 0008 as necessary for information on installing the shipping brackets.
3. Remove locknuts (Figure 4, 5, Item 2) retaining spring (Figure 4, 5, Item 3), and unscrew spring.
4. Install replacement spring (Figure 4, 5, Item 3).
5. Remove shipping bracket, and adjust springs to approximately 9 ³/₈-inches length.

REPLACE - CONTINUED

6. Install washer IAW procedures given in WP 0055.

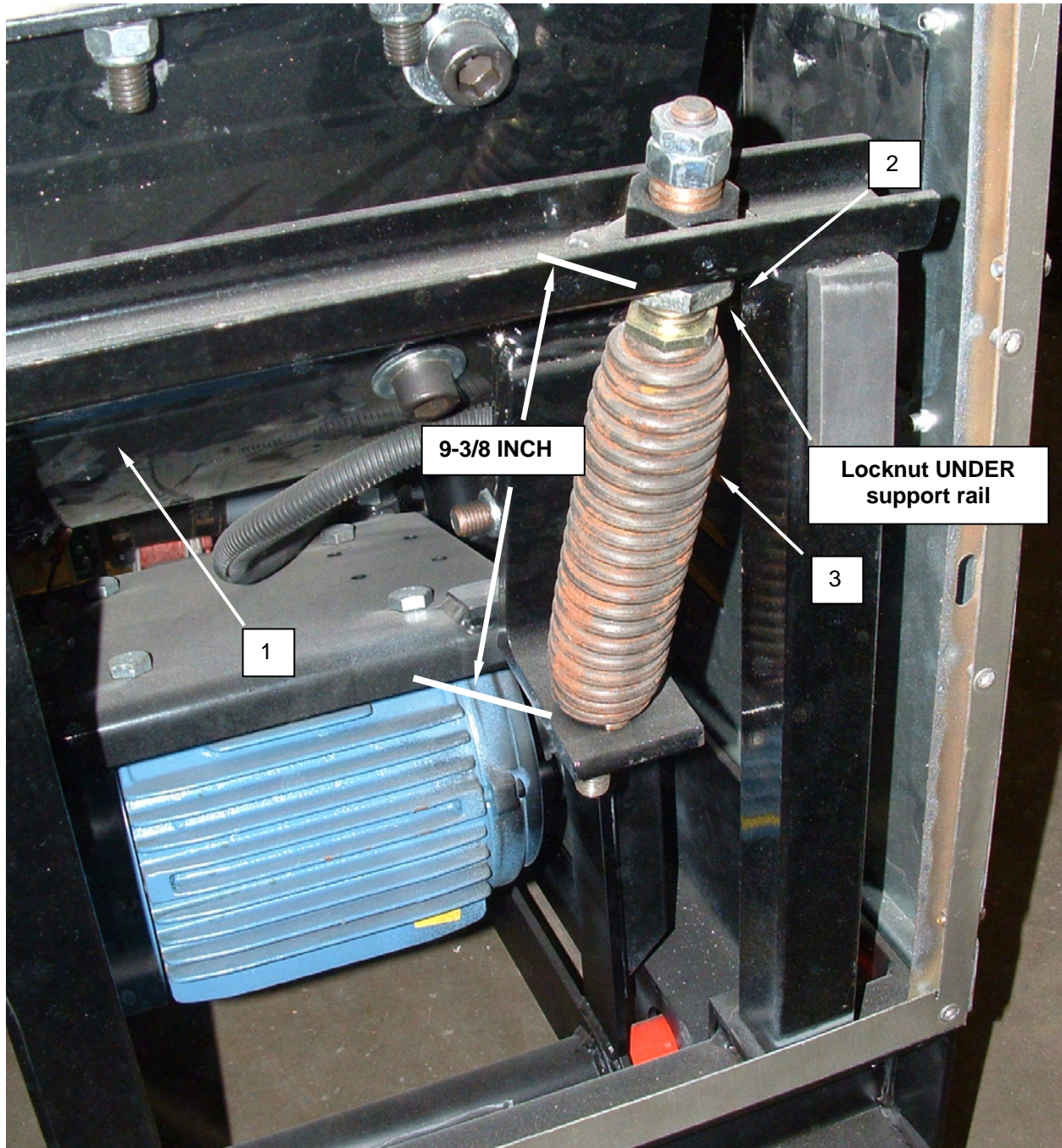


Figure 4. Replace the Washer Front Springs.

REPLACE - CONTINUED

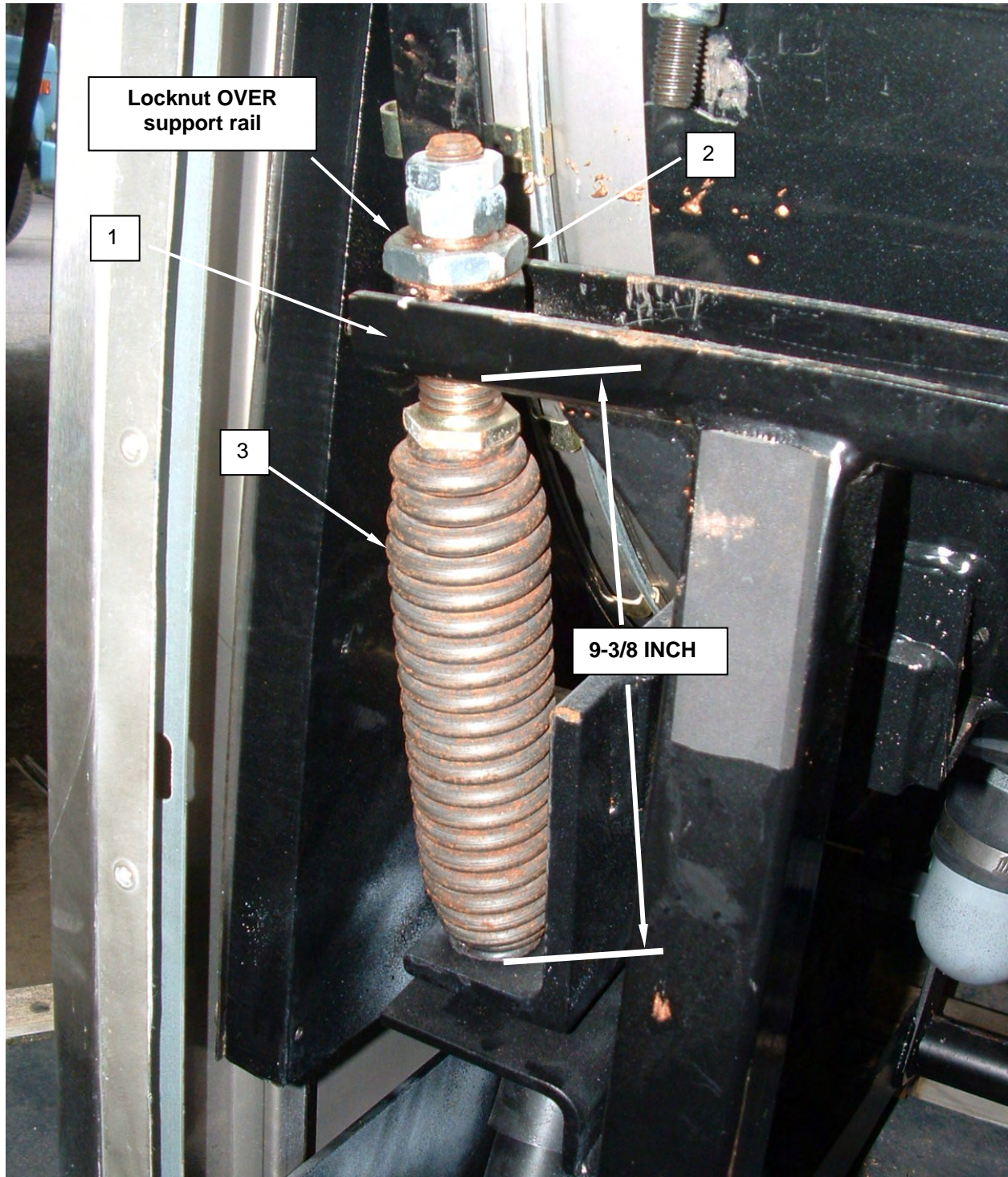


Figure 5. Replace the Washer Rear Springs.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRIVE BELT
INSPECT, ADJUST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (2)

Materials/Parts

None required.

Equipment Condition

FP-CBL set up

References

WP 0055

INSPECT**WARNING**

Ensure that washer electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment which might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Inspect belt (Figure 1, Item 1) for physical damage such as fraying and wear.
3. Ensure belt deflection is approximately ½-inch.
4. Install washer IAW procedures given in WP 0055.

INSPECT - CONTINUED

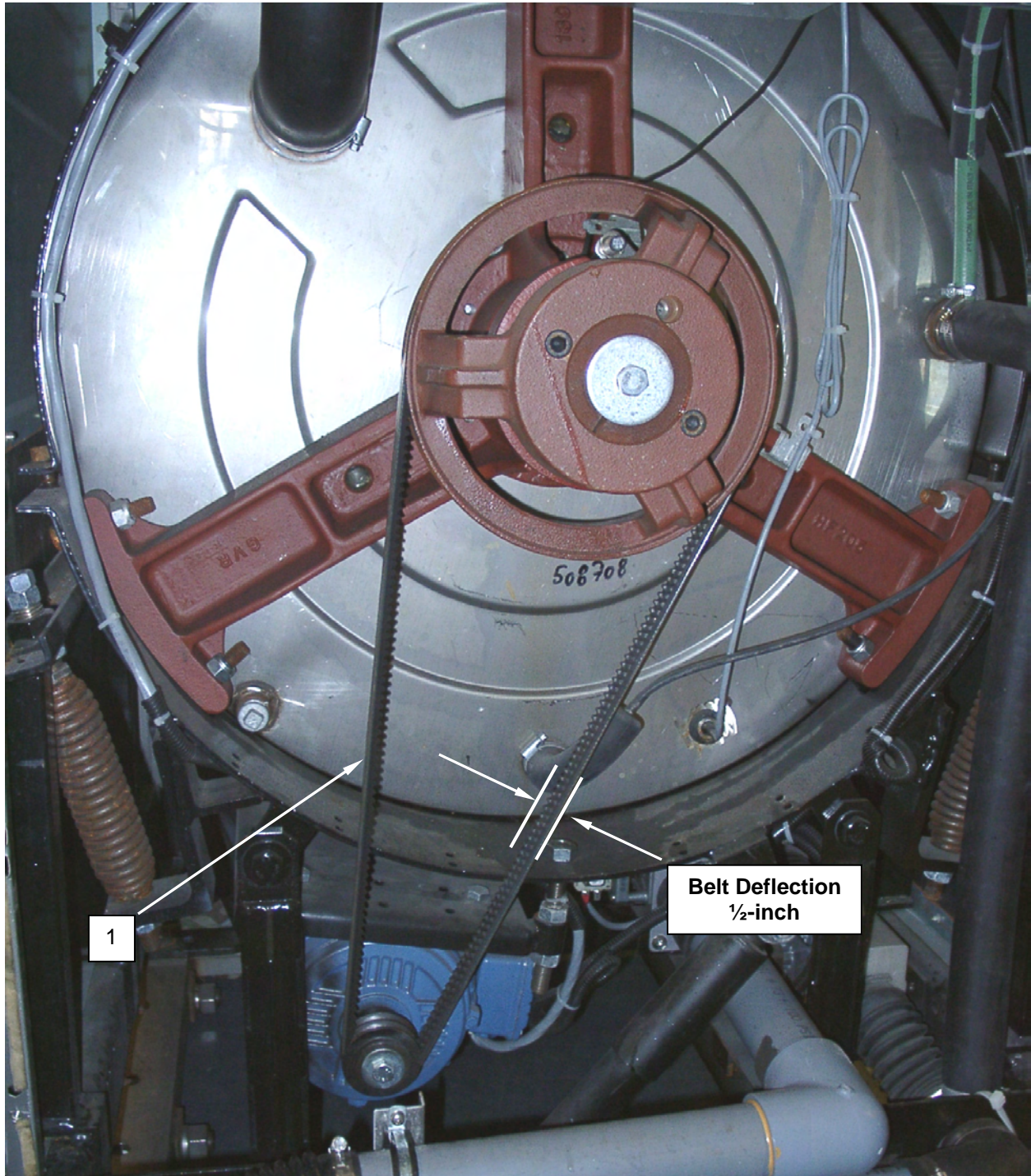


Figure 1. Inspect the Washer Drive Belts.

END OF TASK

ADJUST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Adjust and tighten locknuts on adjustment bolt (Figure 2, Item 1) as necessary.
3. Ensure belt deflection is approximately ½-inch.
4. Install washer IAW procedures given in WP 0055.

ADJUST - CONTINUED

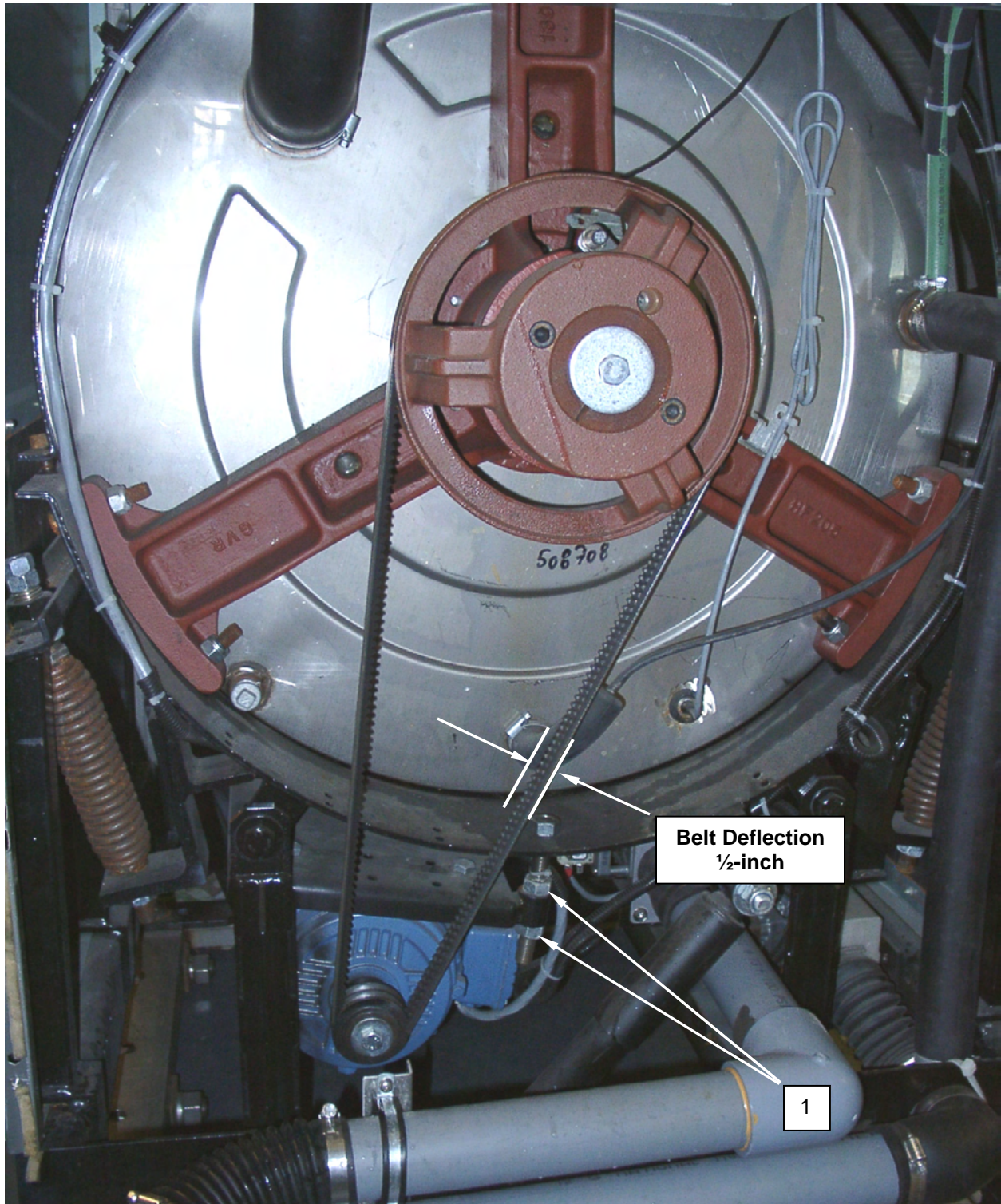


Figure 2. Adjust the Washer Drive Belts.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Adjust and tighten locknuts (Figure 3, Item 3) on adjustment bolt as necessary to relieve tension on belts (Figure 3, Item 2).
3. Remove belt (Figure 3, Item 2) from pulleys (Figure 3, Item 1).
4. Install replacement belt (Figure 3, Item 2) onto pulleys (Figure 3, Item 1).
5. Adjust and tighten locknuts (Figure 3, Item 3) on adjustment bolt as necessary to ensure belt deflection is approximately 1/2-inch.
6. Install washer IAW procedures given in WP 0055.

REPLACE - CONTINUED

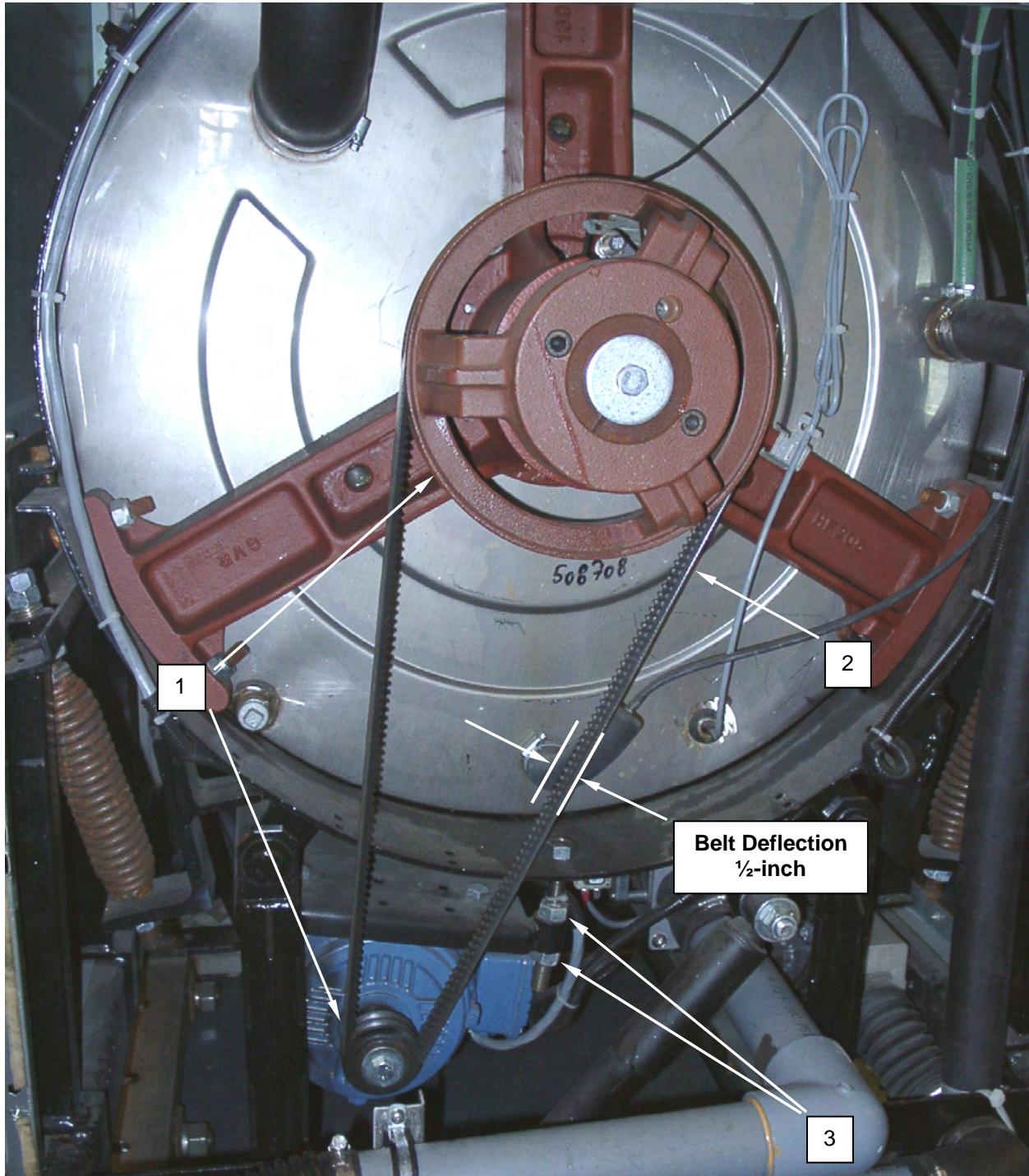


Figure 3. Replace the Washer Drive Belts.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
**MOTOR
TEST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)
Straps, Shipping (included with FP-CBL to secure system during shipment)

Materials/Parts

Wire Markers (WP 0101, Item 64)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (2)

Equipment Condition

FP-CBL set up

References

WP 0055

TEST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove the cover from the variable frequency drive (Figure 1, Item 1) IAW procedures given in WP 0055.
2. Tag and disconnect the wiring from the 1, 2, and 3 terminals (Figure 1, Item 2) on the variable frequency drive.
3. Use a multimeter to test for 1.0 to 3.0 ohms resistance between each wire. Replace motor if resistance exceeds or is outside these limits.

TEST - CONTINUED

4. Reconnect wiring as tagged.
5. Install all removed components IAW procedures given in WP 0055.

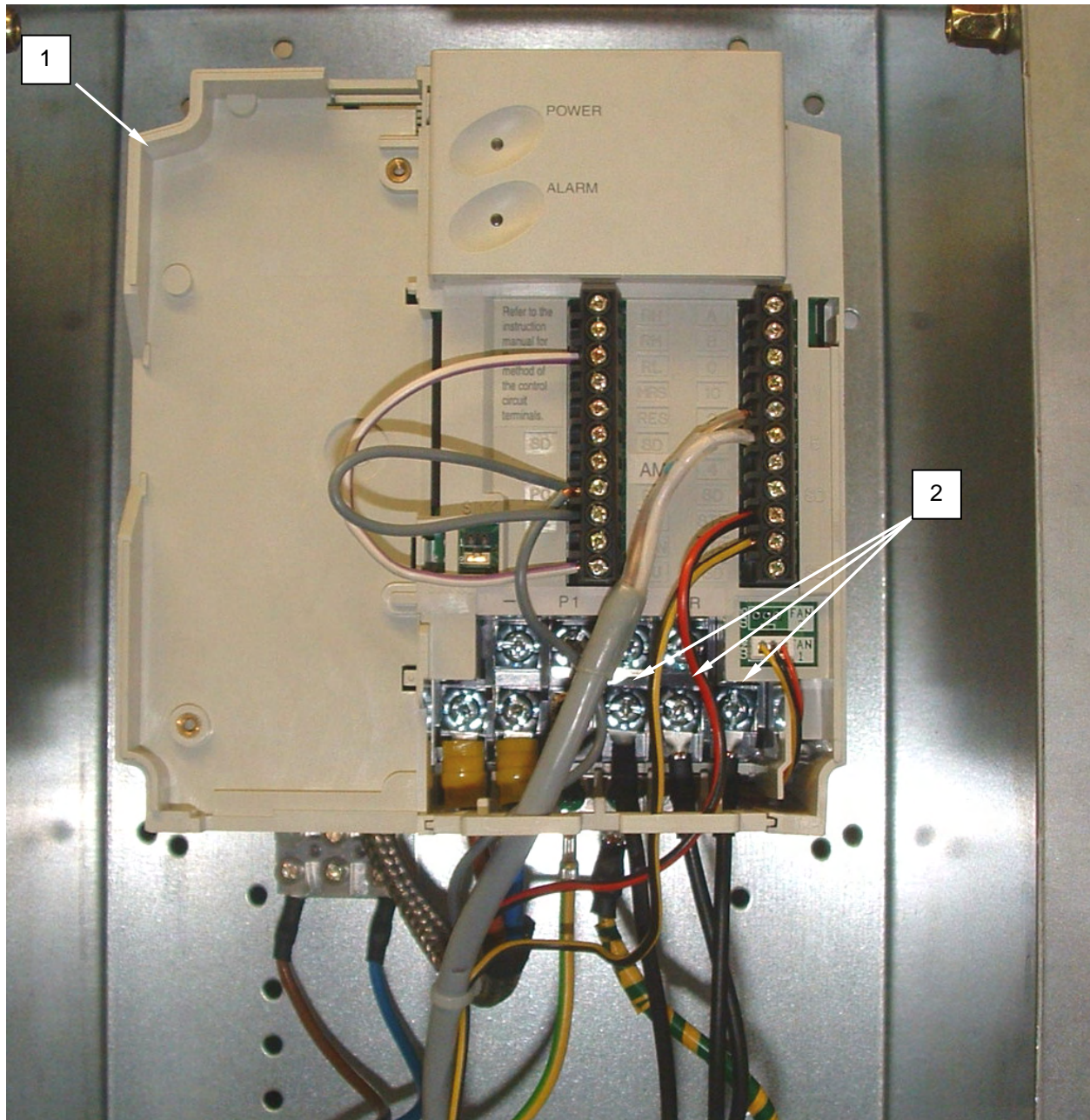


Figure 1. Test the Washer Motor.

END OF TASK

REPLACE**Replace the Washer Motor****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

1. Remove washer IAW procedures given in WP 0055.
2. Adjust and tighten locknuts (Figure 2, Item 2) on adjustment bolt as necessary to relieve tension on belt.
3. Remove belt (Figure 2, Item 5) from pulley (Figure 2, Item 4).
4. Remove the reuse drain line (Figure 2, Item 3) from the reuse drain valve.
5. Disconnect motor fan (Figure 2, Item 1) leads.

REPLACE - CONTINUED

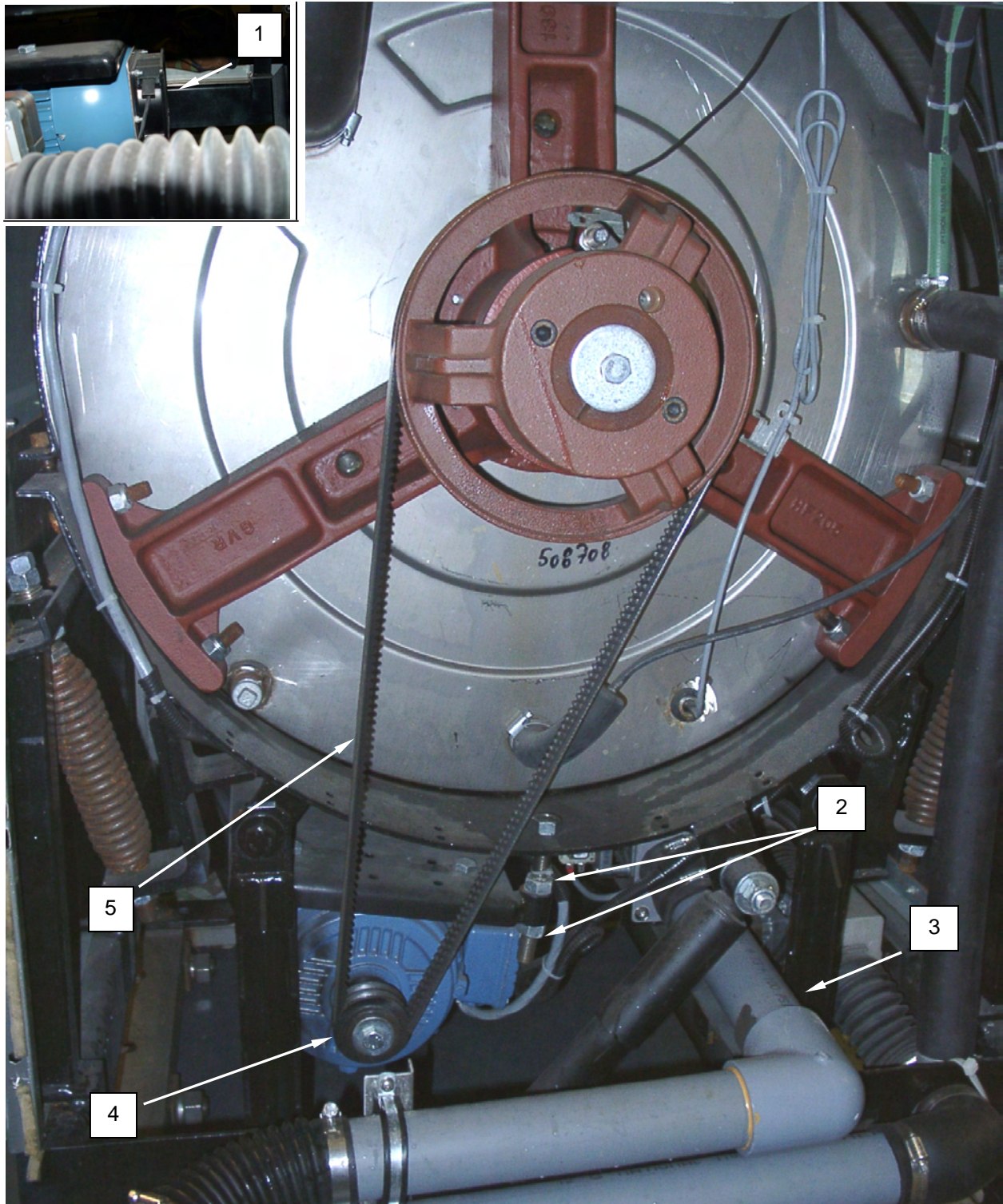


Figure 2. Replace the Washer Motor.

REPLACE - CONTINUED

6. Remove the four screws retaining the junction box (Figure 3, Item 1) cover and remove cover.
7. Tag and disconnect motor leads and ground wire.
8. Remove locknut retaining conduit (Figure 3, Item 2) to the junction box, and remove the conduit.

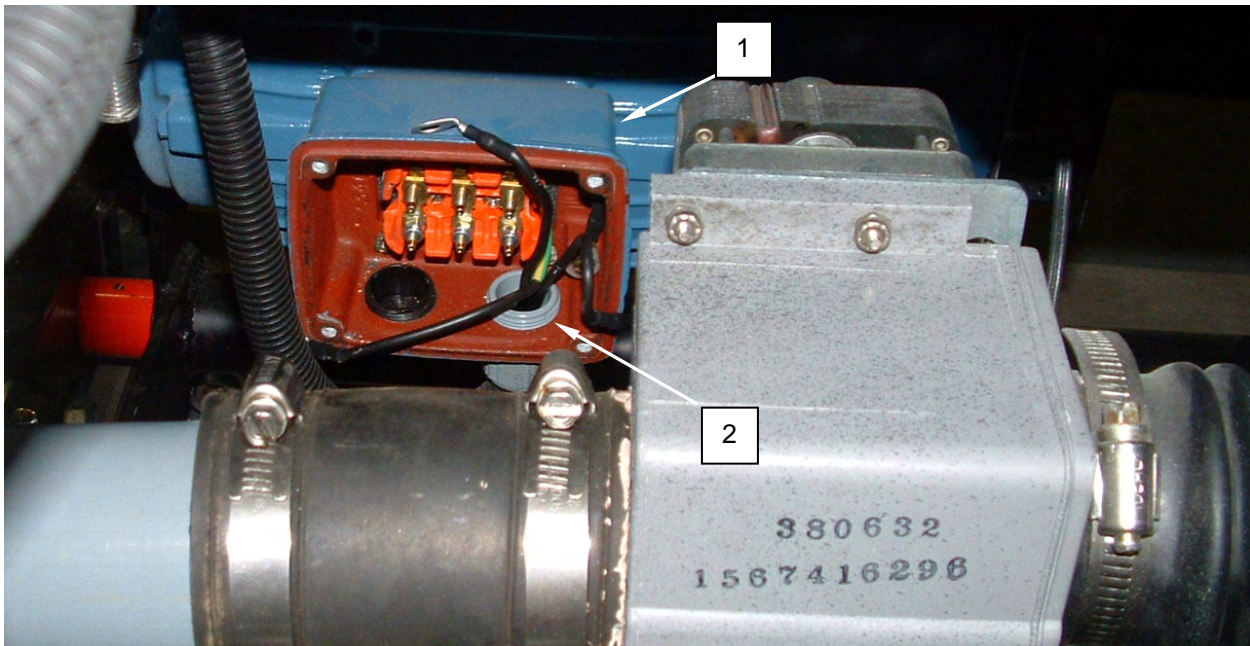
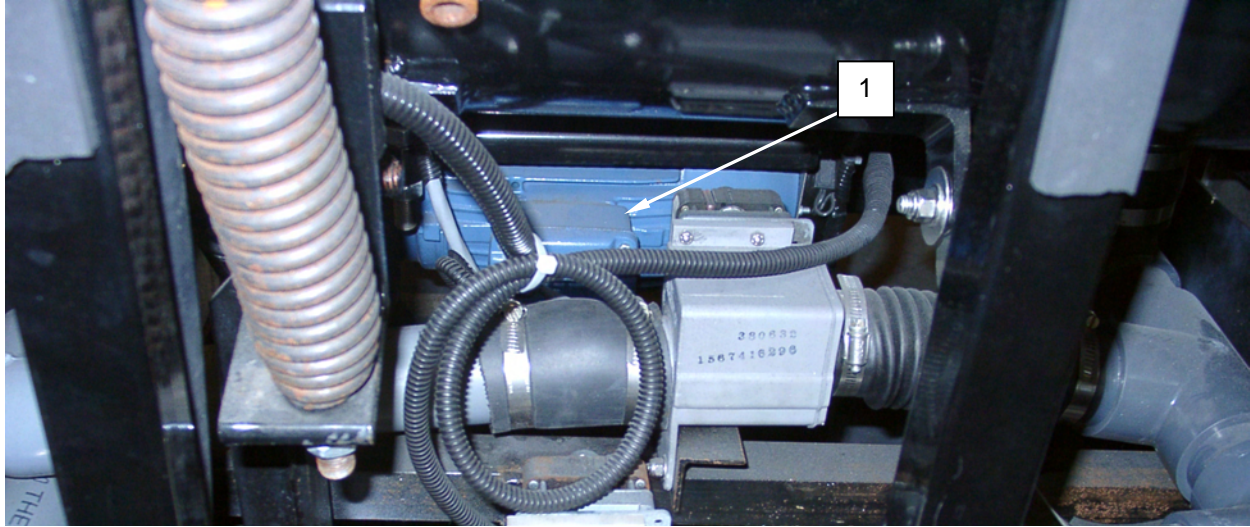


Figure 3. Replace the Washer Motor.

REPLACE - CONTINUED

WARNING

The washer motor is heavy – approximately 70 lbs - and located in a very confined space. Use caution when lifting the motor – two persons are required to lift and remove the motor from the washer. Serious injury may result if safety precautions are not observed.

9. Fasten two 1-inch straps (Figure 4, Item 1) to both drum support rails, looping under the motor (Figure 4, Item 2). Space the straps evenly and tighten straps.
10. Remove bolts, washers, and nuts securing motor (Figure 4, Item 2) to motor mount (Figure 4, Item 3), and slowly release the strap (Figure 4, Item 1) to remove motor. Leave the strap(s) in place.

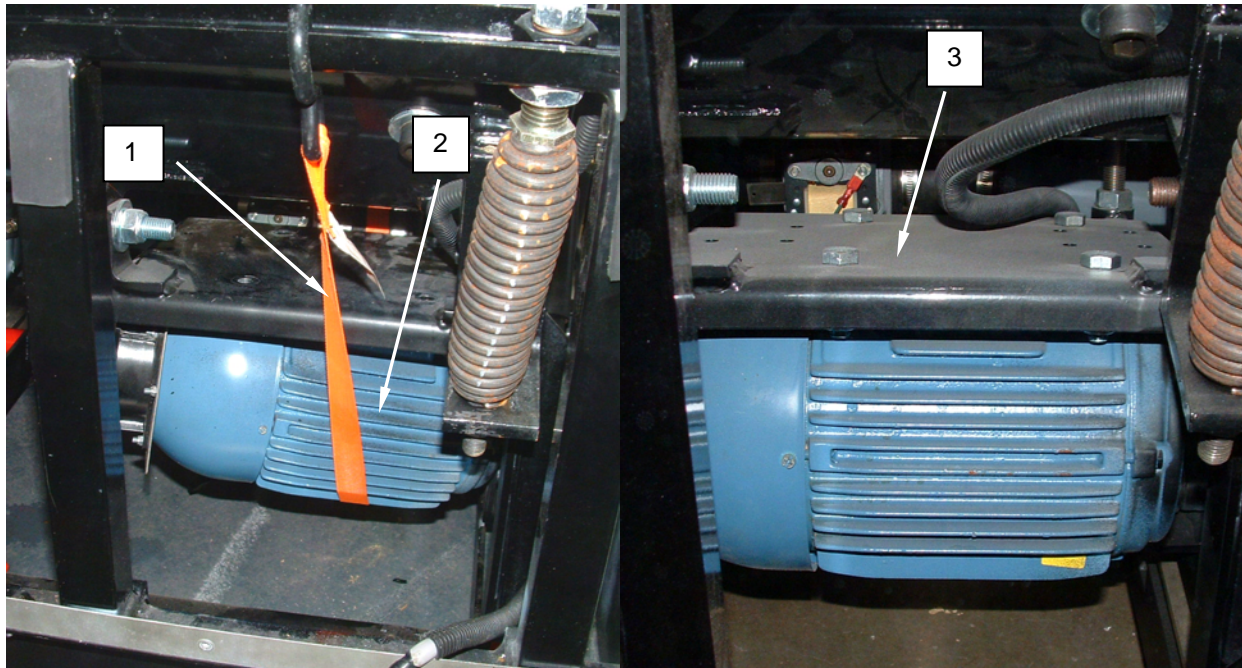


Figure 4. Replace the Washer Motor.

11. Remove pulley (Figure 5, Item 3) from motor (Figure 5, Item 2) and install the pulley on the replacement motor.
12. Lay the replacement motor (Figure 5, Item 2) onto the strap(s) (Figure 5, Item 1) and tighten the strap(s) to lift the motor into place.
13. Install replacement motor (Figure 5, Item 2) onto motor mount (Figure 5, Item 4) and retain with bolts, washers, and nuts.

REPLACE - CONTINUED

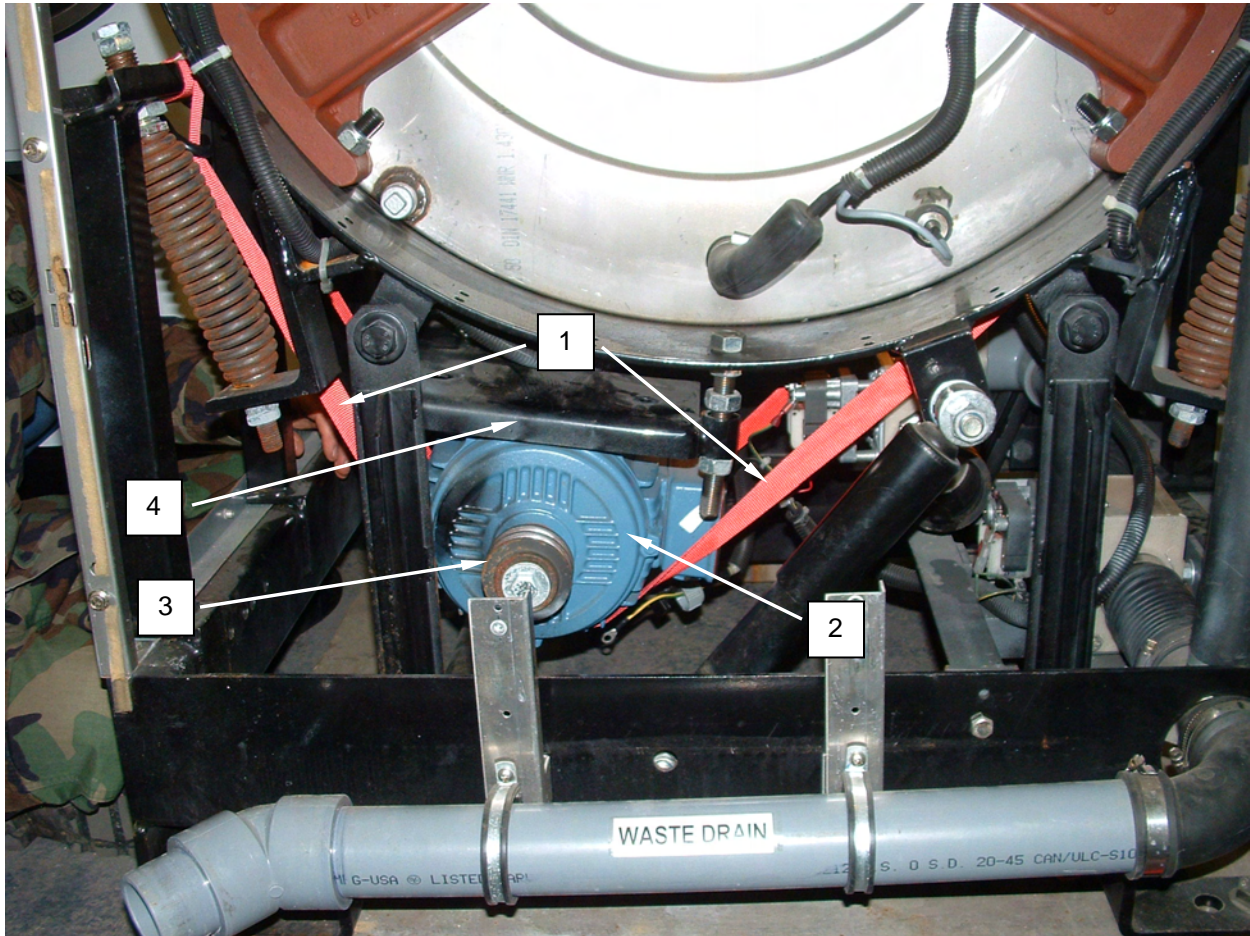
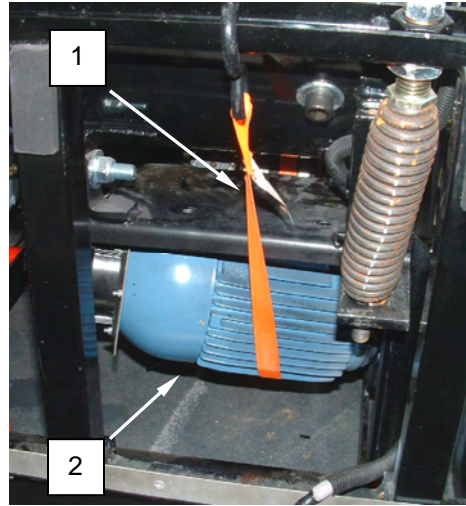


Figure 5. Replace the Washer Motor.

REPLACE - CONTINUED

14. Remove screws retaining junction box (Figure 6, Item 1) cover to replacement motor (Figure 6, Item 4) and remove cover.
15. If necessary, knock out plug from conduit penetration on replacement motor (Figure 6, Item 4).
16. Install conduit (Figure 6, Item 3) into junction box (Figure 6, Item 1) on replacement motor (Figure 6, Item 4), and retain with locknut.
17. Connect wiring to motor (Figure 6, Item 4) and to the motor fan (Figure 6, Item 2) as tagged.
18. Install motor junction box (Figure 6, Item 1) cover and retain with screws.

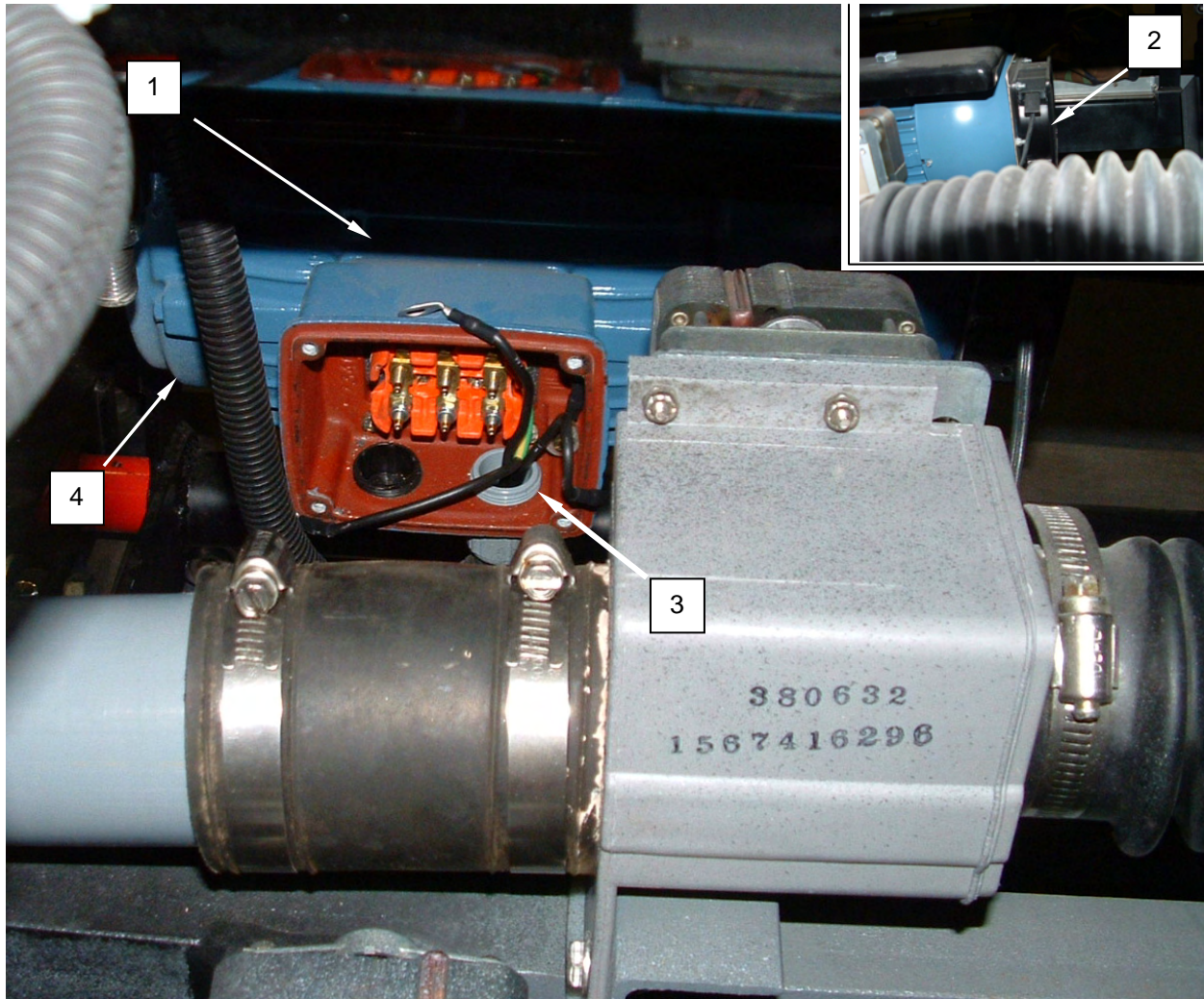


Figure 6. Replace the Washer Motor.

REPLACE - CONTINUED

19. Install belt (Figure 7, Item 4) onto pulley (Figure 7, Item 3).
20. Install reuse drain line (Figure 7, Item 2) onto reuse drain valve. Ensure connecting hose is tightly clamped.
21. Adjust and tighten locknuts (Figure 7, Item 1) on adjustment bolt as necessary to ensure belt deflection is approximately ½-inch.
22. Install washer IAW procedures given in WP 0055.

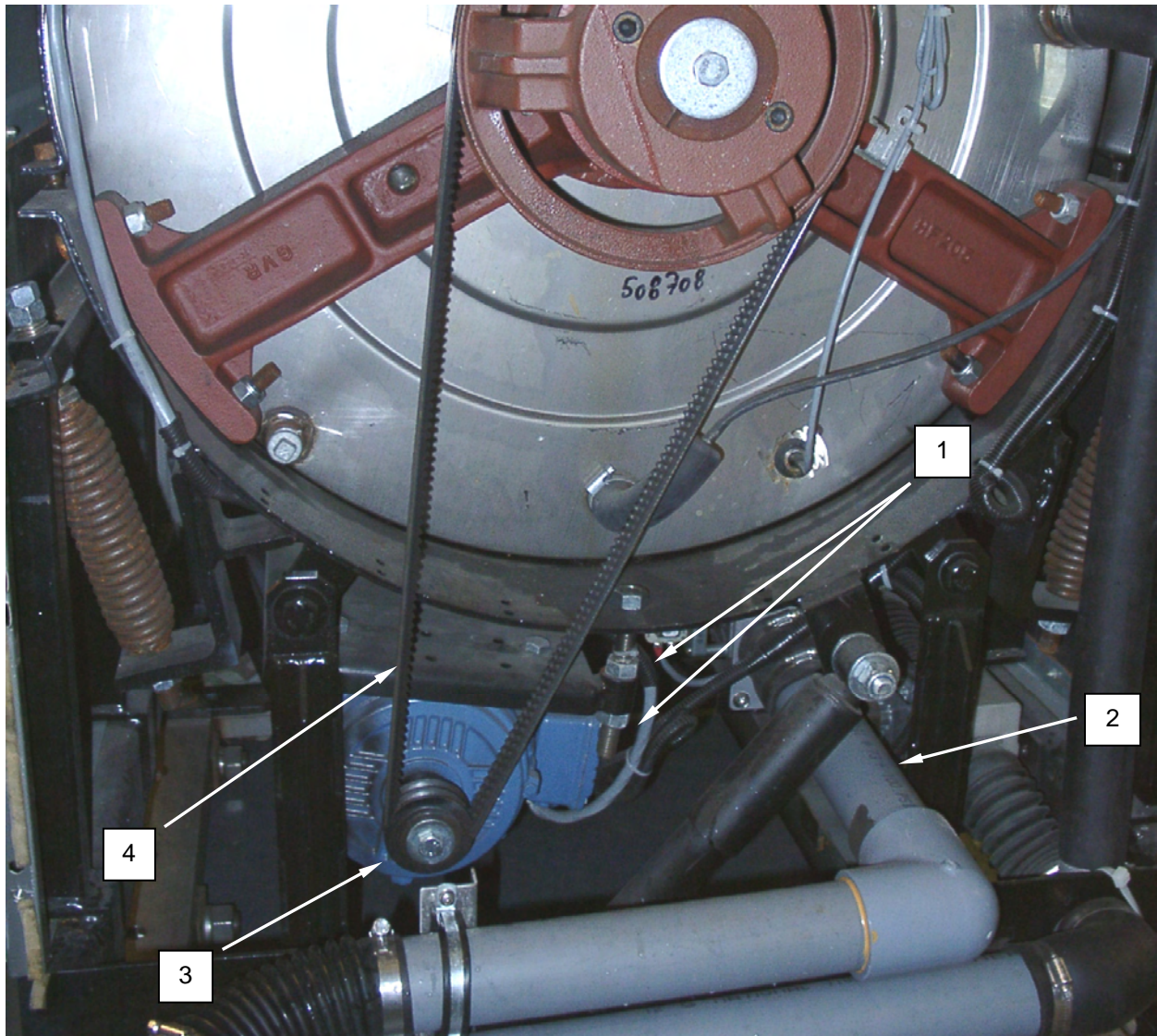


Figure 7. Replace the Washer Motor.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER QD FITTINGS
REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**Tape, Antiseize, ½-inch x 260-inch (WP 0101, Item
60)**Equipment Condition**

FP-CBL set up

REPLACE

1. Disconnect washer power cord and water service to FP-CBL.
2. Relieve water pressure from system by switching the P-1 pump off at circuit breaker No. 7 and 9, closing water supply valve V-57, and opening the water spigot.
3. Disconnect QD fitting (Figure 1, Item 1).
4. Secure the attached piping with one pipe wrench, and use a second pipe wrench to remove the male half of the QD fitting (Figure 1, Item 1) from the washer.
5. Secure the attached piping with one pipe wrench, and use a second pipe wrench to install the replacement male half of the QD fitting (Figure 1, Item 1) onto the washer.
6. Loosen the hose clamp on the female half of the QD fitting (Figure 1, Item 1), and remove the female half of the QD fitting from the hose.
7. Install the replacement female half of the QD fitting (Figure 1, Item 1) onto the hose, and tighten the hose clamp to secure. Connect QD fitting.
8. Restore water service to FP-CBL and check for leakage.
9. Connect washer power cord and monitor for normal operation.

REPLACE - CONTINUED

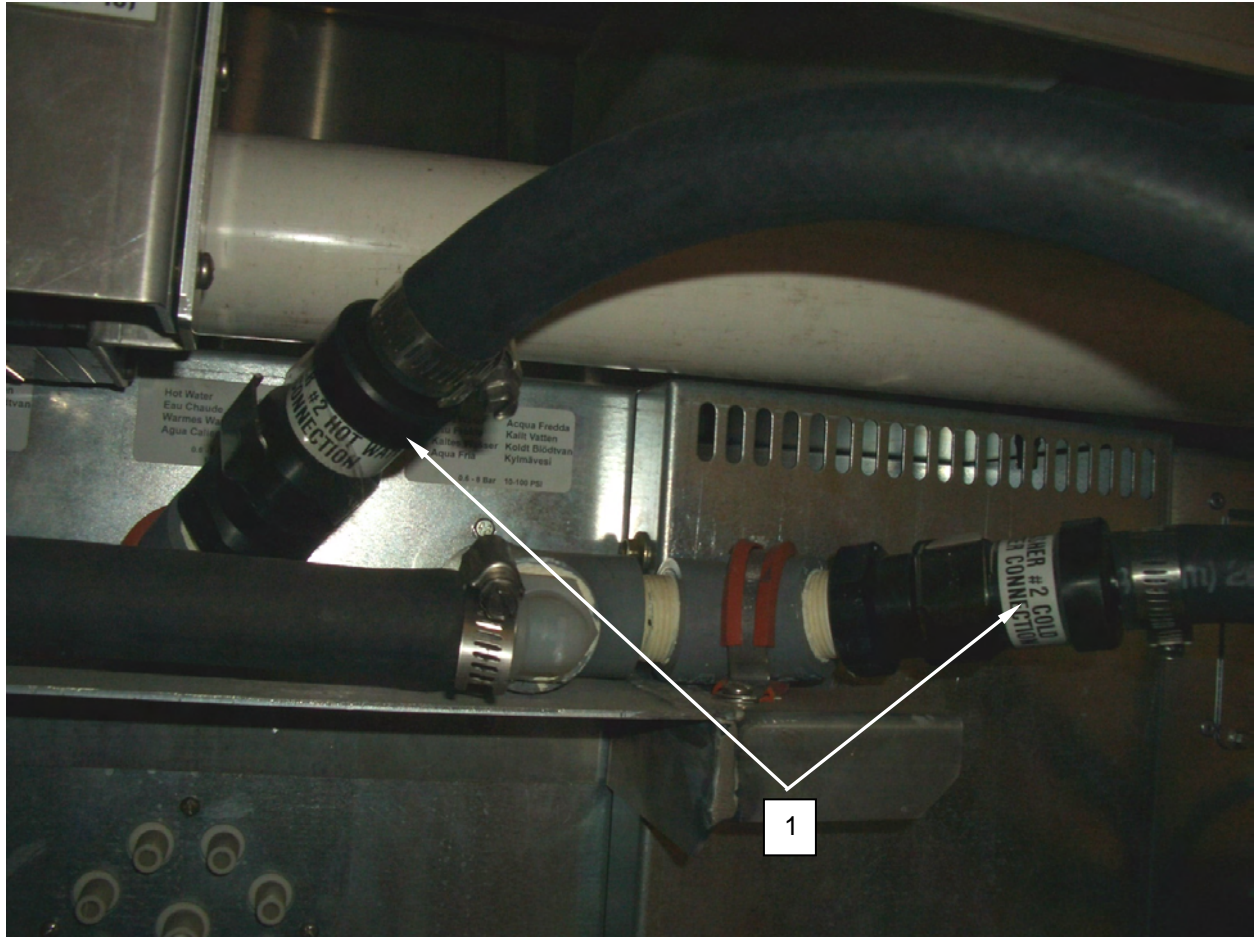


Figure 1. Replace the Washer QD Fittings.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**WASHER VARIABLE FREQUENCY DRIVE FAN
TEST, SERVICE, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

None Required.

Equipment Condition

FP-CBL set up

References

WP 0055

TEST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

For Washer No. 2, steps 1 and 9 may be omitted. There is also no need to remove the back, side, or top panels to perform this maintenance task.

1. Remove washer IAW procedures given in WP 0055.
2. Remove screws retaining inverter box cover (Figure 1, Item 1) and remove cover.
3. Tag and disconnect wiring from fan (Figure 1, Item 2).
4. Use a multimeter to check for 750.0 ohms resistance between motor leads (Figure 1, Item 3).
5. Use a multimeter to check for infinite resistance between each motor lead (Figure 1, Item 3) and ground.

TEST – CONTINUED

6. Replace a fan with an open motor or a motor which has shorted to ground.
7. Reconnect wiring as tagged.
8. Install inverter box cover (Figure 1, Item 1) and retain with screws.
9. Install washer IAW procedures given in WP 0055.

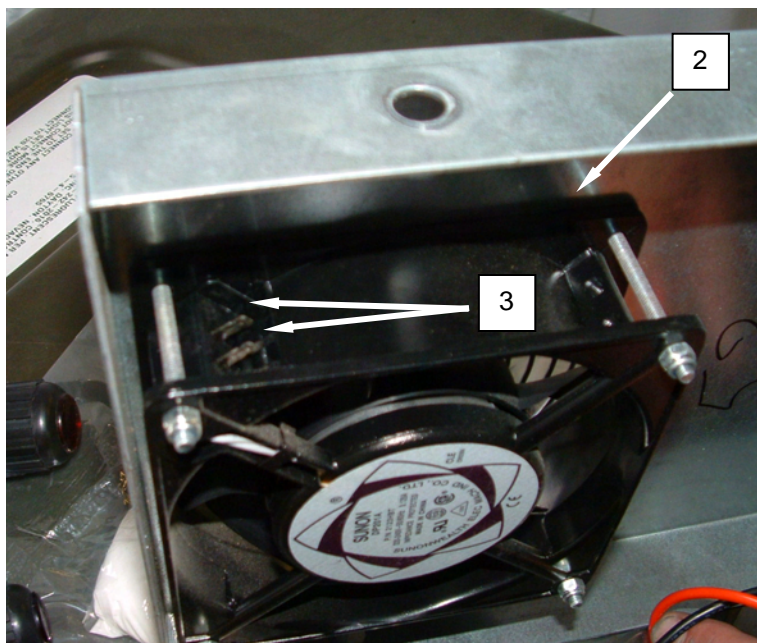


Figure 1. Test the Washer Variable Frequency Drive Cooling Fan.

END OF TASK

SERVICE

1. Disconnect washer power cord.
2. Remove four screws securing grill to washer.
3. Ensure that there is no lint or other debris on the fan that would prevent rotation of fan blades.
4. Clean the fan grill to remove any lint or debris.
5. Secure fan grill to washer with four screws.
6. Reconnect washer power cord.

END OF TASK**REPLACE****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



The washer is extremely heavy. Use caution when lifting and blocking the washer, and do not allow unnecessary personnel in the immediate area while it is being moved. Serious injury or death may result if safety precautions are not observed.

CAUTION

The washer is a large, heavy piece of machinery being moved out of a confined space. Before removal and installation, remove or protect any equipment that might be damaged by the washer on its way in or out.

NOTE

For Washer No. 2, steps 1 and 8 may be omitted. There is also no need to remove the back, side, or top panels to perform this maintenance task.

1. Remove washer IAW procedures given in WP 0055.
2. Remove screws retaining inverter box cover (Figure 2, Item 1) and remove cover.
3. Tag and disconnect wiring from fan (Figure 2, Item 2).
4. Remove screws, washers and nuts retaining fan (Figure 2, Item 2) to cover (Figure 2, Item 1), and remove fan.
5. Install replacement fan (Figure 2, Item 2), and retain with screws, washers, and nuts.
6. Connect wiring to fan (Figure 2, Item 2).
7. Install inverter box cover (Figure 2, Item 1), and retain with screws.

REPLACE – CONTINUED

8. Install washer IAW procedures given in WP 0055.

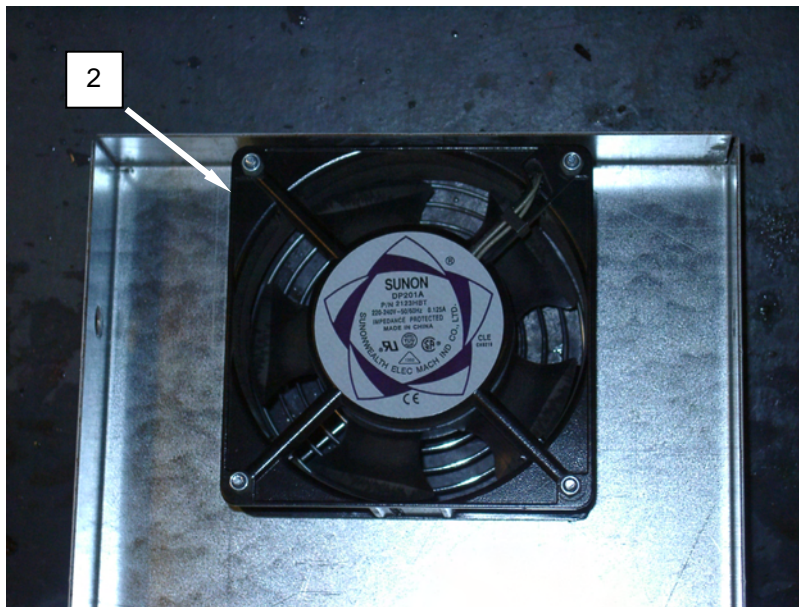
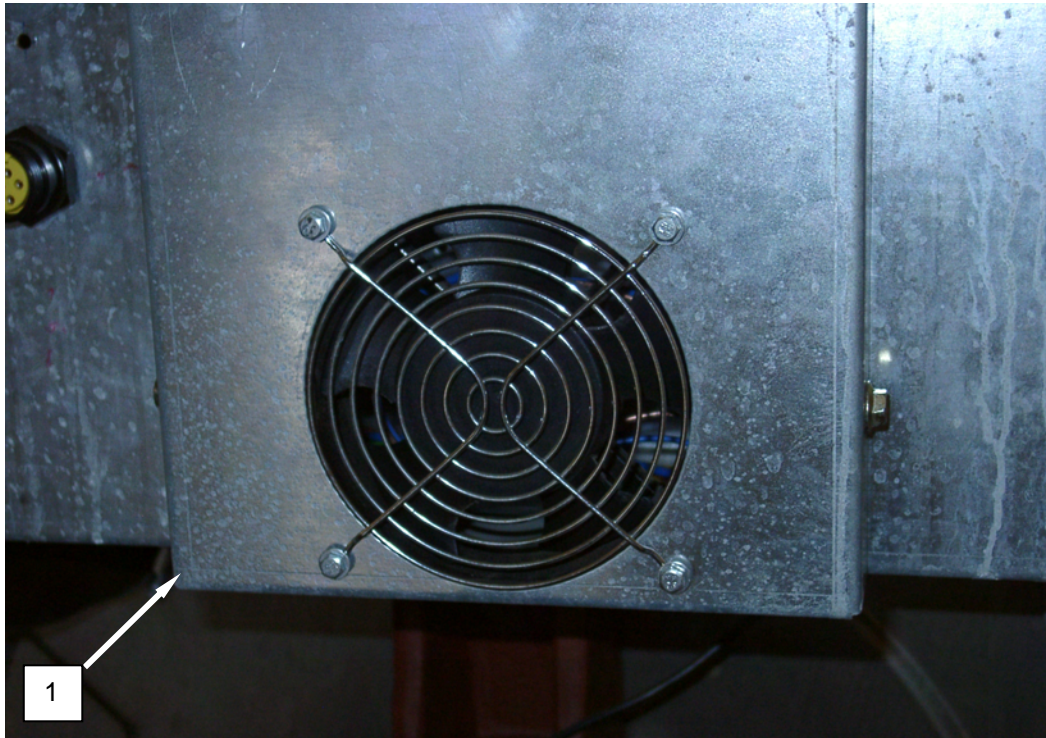


Figure 2. Replace the Washer Variable Frequency Drive Cooling Fan.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE

**DRYER SWITCH, AIRFLOW
DUCT, DRYER
VENT, DRYER
TEST, ADJUST, REPAIR, SERVICE, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Wire Markers (WP 0101, Item 64)
Rag, Wiping (WP 0101, Item 44)

Equipment Condition

FP-CBL set up

TEST**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch dryer circuit breaker to OFF.
2. Remove the switch guard retaining screws and remove switch guard (Figure 1, Item 1).
3. Tag and disconnect wiring from switch (Figure 1, Item 2).
4. Use an ohmmeter to check for 0 ohms resistance across switch terminals when switch lever is raised.
5. Use an ohmmeter to check for infinite ohms resistance across switch terminals when switch lever is depressed.
6. Replace a switch (Figure 1, Item 2) that fails either test.
7. Reconnect wiring as tagged.
8. Install switch guard (Figure 1, Item 1), and retain with screws.
9. Monitor for normal operation.

TEST - CONTINUED

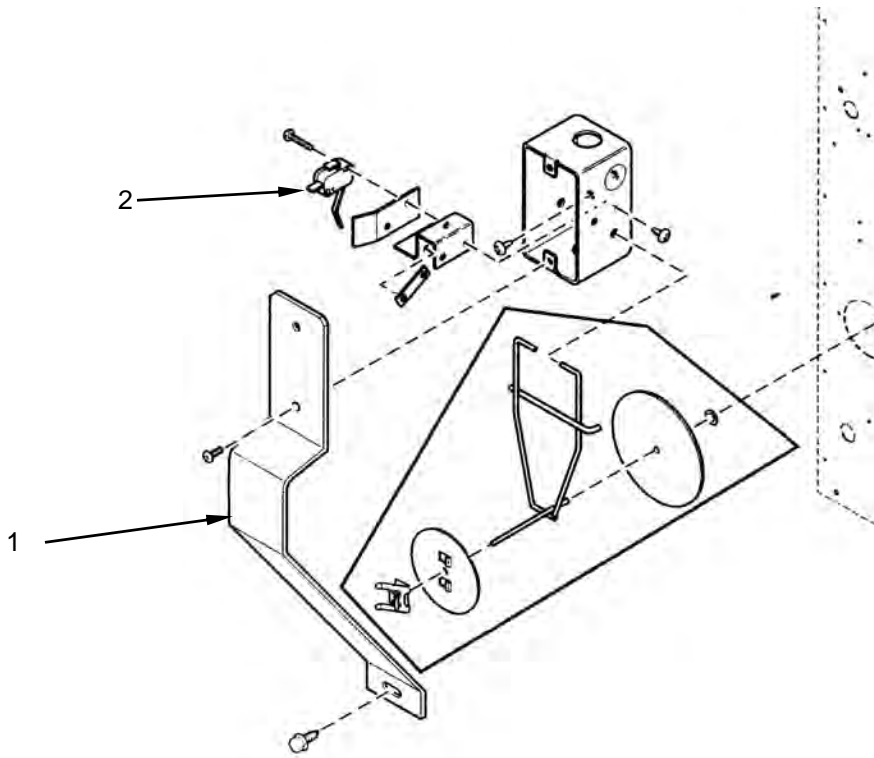
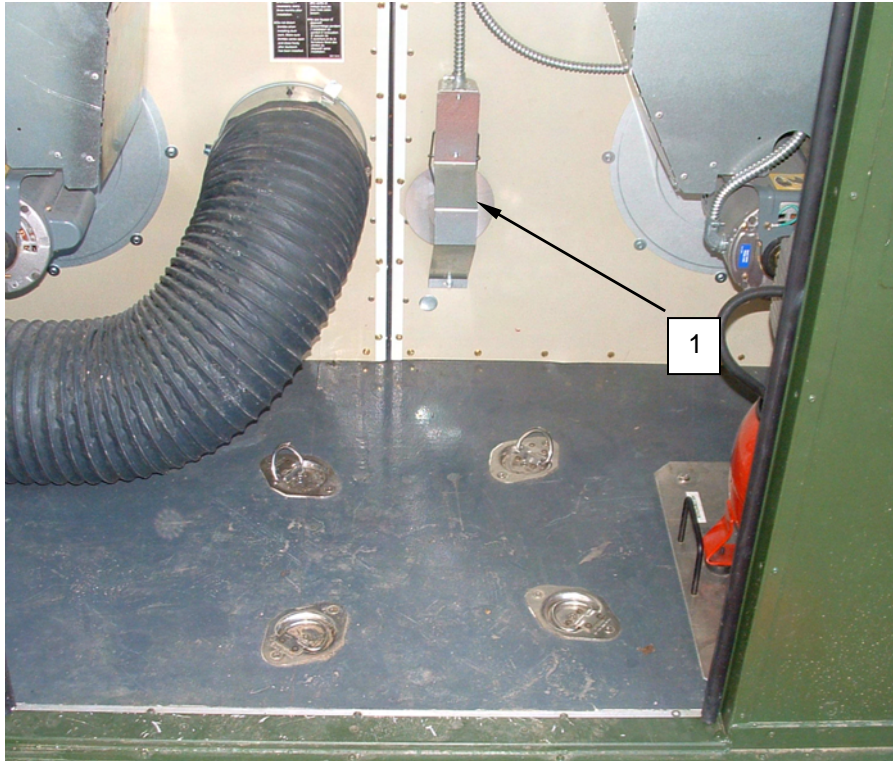


Figure 1. Test the Dryer Airflow Switch.

END OF TASK

ADJUST**WARNING**

Use caution when performing this procedure. Dryer exhaust can be very hot. Failure to observe safety precautions may result in serious burns to personnel.

1. Block dryer exhaust.
2. Start dryer, and note position of counterweight (Figure 2, Item 1).
3. Release counterweight clip (Figure 2, Item 2), and adjust counterweight to a point where the switch will be activated.
4. Clear dryer exhaust.
5. Monitor for normal operation.

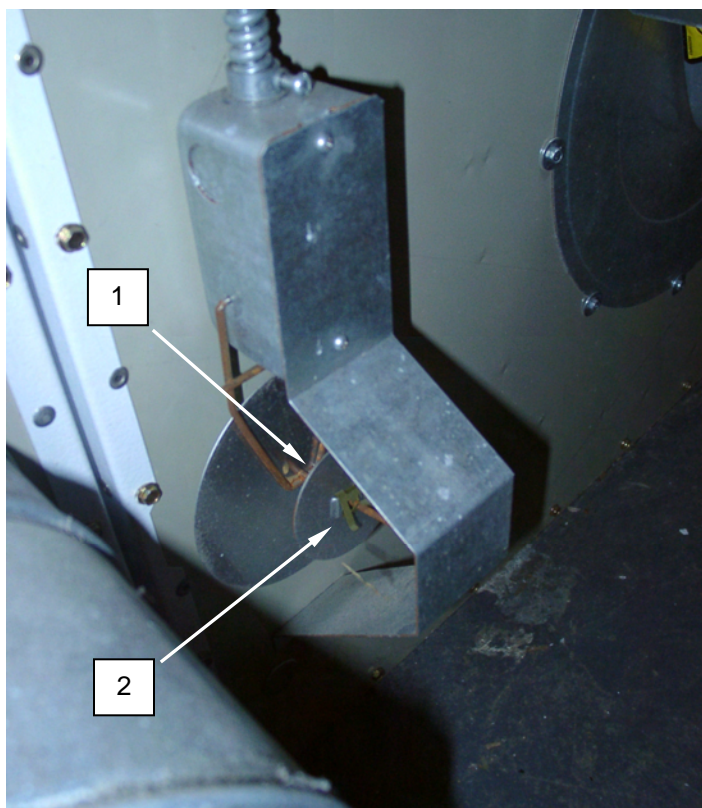


Figure 2. Adjust the Dryer Airflow Switch.

END OF TASK

REPAIR AIRFLOW DRYER SWITCH**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Remove switch guard retaining screws, and remove switch guard (Figure 3, Item 3).
3. Tag and disconnect wiring from switch (Figure 3, Item 1).
4. Remove vane lever assembly and counterweight (Figure 3, Item 2) from the airflow switch box.
5. Remove screws retaining switch (Figure 3, Item 1) to airflow switch box and remove switch.
6. Install switch (Figure 3, Item 1), and retain with screws.
7. Install vane lever assembly and counterweight (Figure 3, Item 2) onto the airflow switch box.
8. Connect wiring to switch (Figure 3, Item 1) as tagged.
9. Install switch guard (Figure 3, Item 3) and retain with screws.
10. Connect power, and monitor for normal operation.

REPAIR - CONTINUED

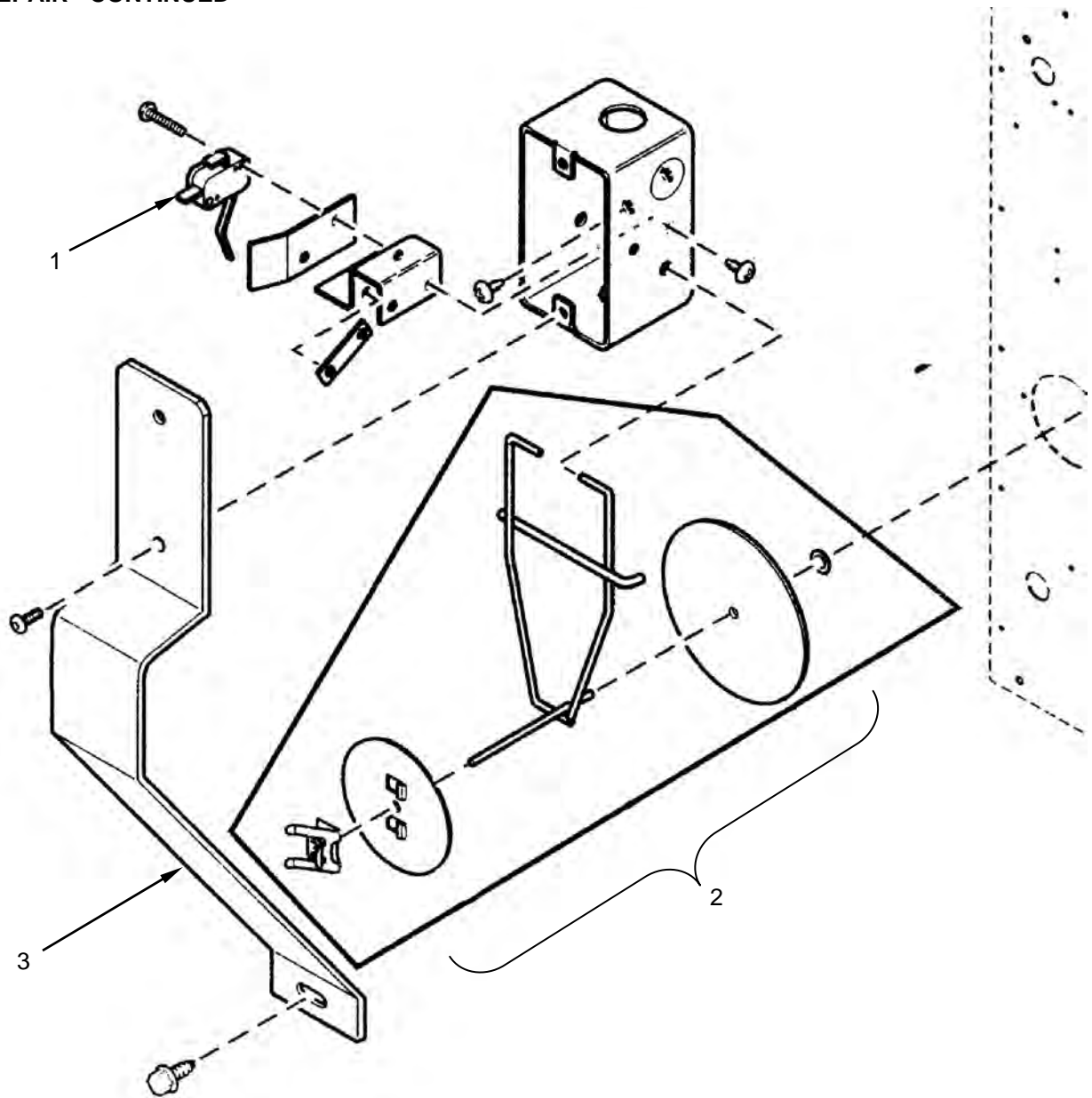


Figure 3. Repair the Dryer Airflow Switch.

END OF TASK

SERVICE**Clean the Dryer Duct and Vents****WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box or individual circuit breaker should be locked and tagged out by personnel following this procedure. Remember that the FP-CBL is a wet environment. Serious injury or death to personnel can result from electrocution if proper safety precautions are not observed.



Dryer lint is highly flammable. Ensure all lint is cleaned from the vents and disposed of promptly in an approved receptacle. Failure to observe safety precautions may result in a dryer fire, with the possibility of serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker OFF.
2. Remove clamps retaining duct (Figure 4, Item 2) to vent (Figure 4, Item 1) and remove duct.
3. Use rags to remove lint and residue from interior of duct and vent (Figure 4, Item 1).
4. Install ducts (Figure 4, Item 2) and retain with clamps.
5. Switch the dryer circuit breaker ON and monitor for normal operation.

SERVICE - CONTINUED

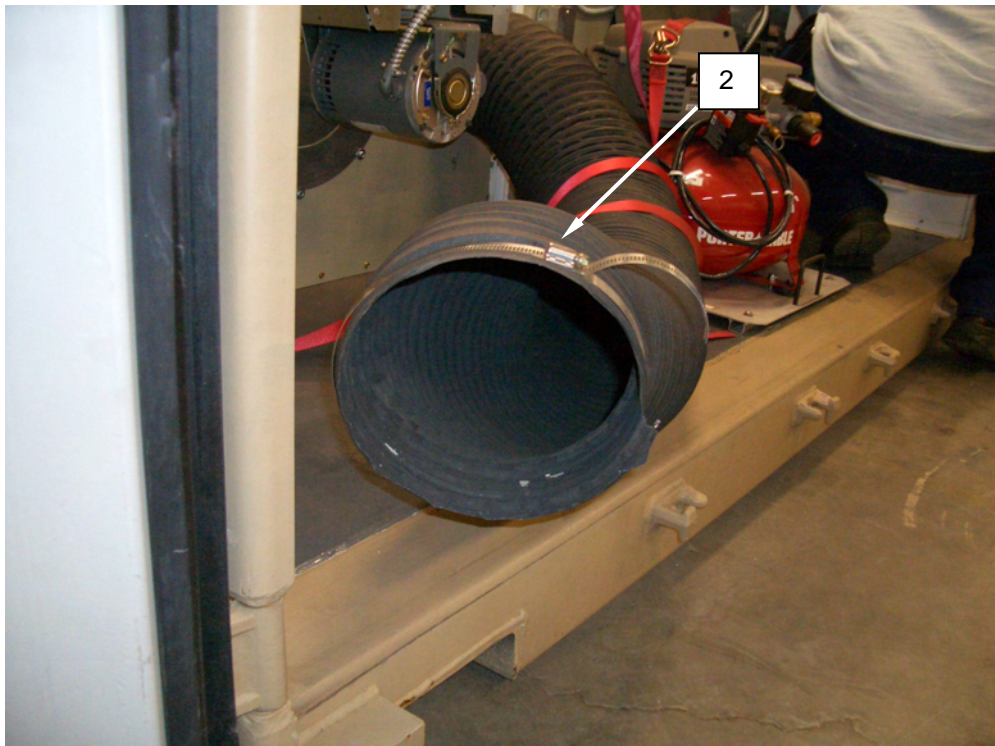


Figure 4. Service Dryer Duct and Dryer Vent.

END OF TASK

REPLACE DRYER DUCT**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The circuit breaker box or individual circuit breaker should be locked and tagged out by personnel following this procedure. Remember that the FP-CBL is a wet environment. Serious injury or death to personnel can result from electrocution if proper safety precautions are not observed.



Dryer lint is highly flammable. Ensure all lint is cleaned from the vents and disposed of promptly in an approved receptacle. Failure to observe safety precautions may result in a dryer fire, with the possibility of serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker OFF.
2. Remove the clamp (Figure 5, Item 1) retaining one end of the damaged duct (Figure 5, Item 2) to dryer vent and remove end of damaged duct from dryer vent.
3. Remove the clamp (Figure 5, Item 3) retaining the opposite end of the damaged duct (Figure 5, Item 2) to the dryer duct collar and remove end of duct from dryer vent collar.
4. Use rags to remove any lint or debris from dryer vent or dryer duct collar.
5. Install one end of new duct on dryer vent and retain with clamp.
6. Install opposite end of new duct on dryer duct collar and retain with clamp.
7. Switch the dryer circuit breaker ON and monitor for normal operation.

REPLACE - CONTINUED

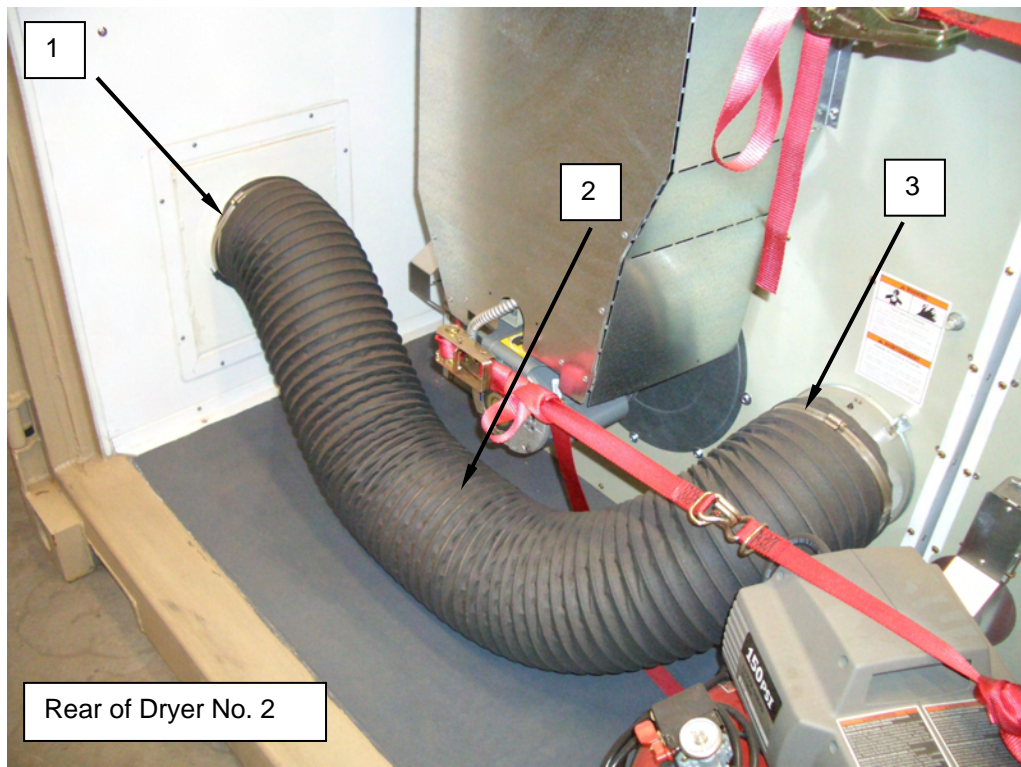
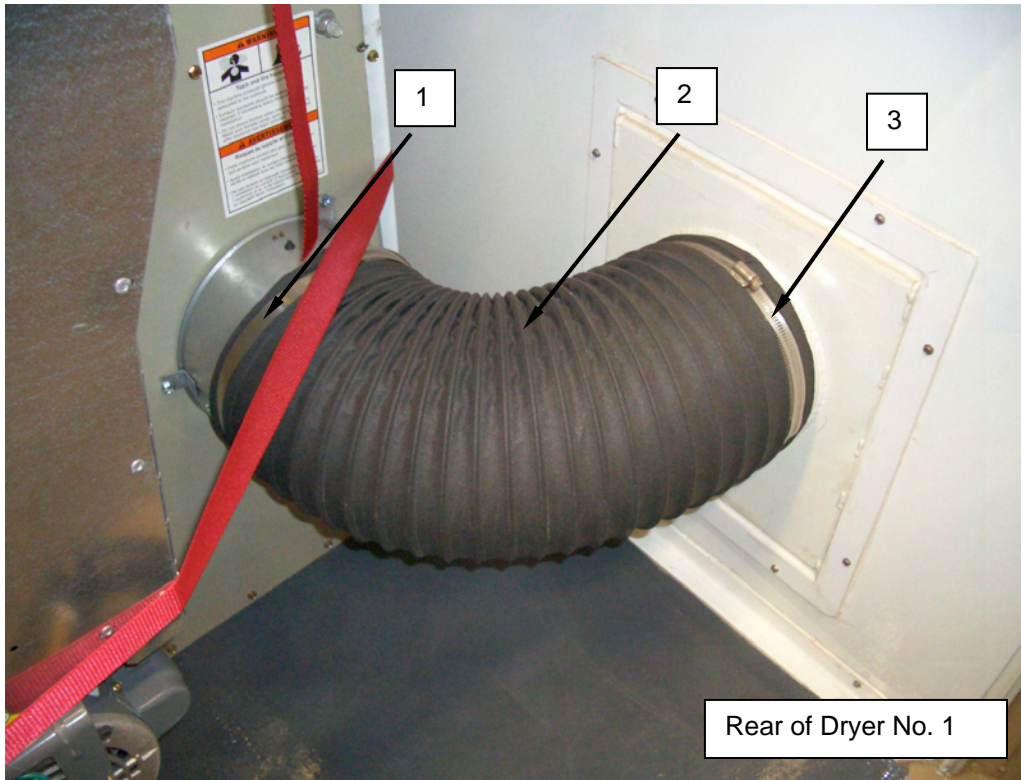


Figure 5. Replacing Dryer Duct.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**LOADING DOOR CATCH ASSEMBLY
ADJUST, REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No.1 (WP 0099, Item 2)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)

Materials/Parts

Rivets (WP 0101, Item 45)

Equipment Condition

FP-CBL set up

ADJUST

1. Open door.
2. Loosen acorn nut.
3. Adjust door strike screw (Figure 1, Item 1) in or out as required.
4. Tighten acorn nut.
5. Monitor for normal operation.

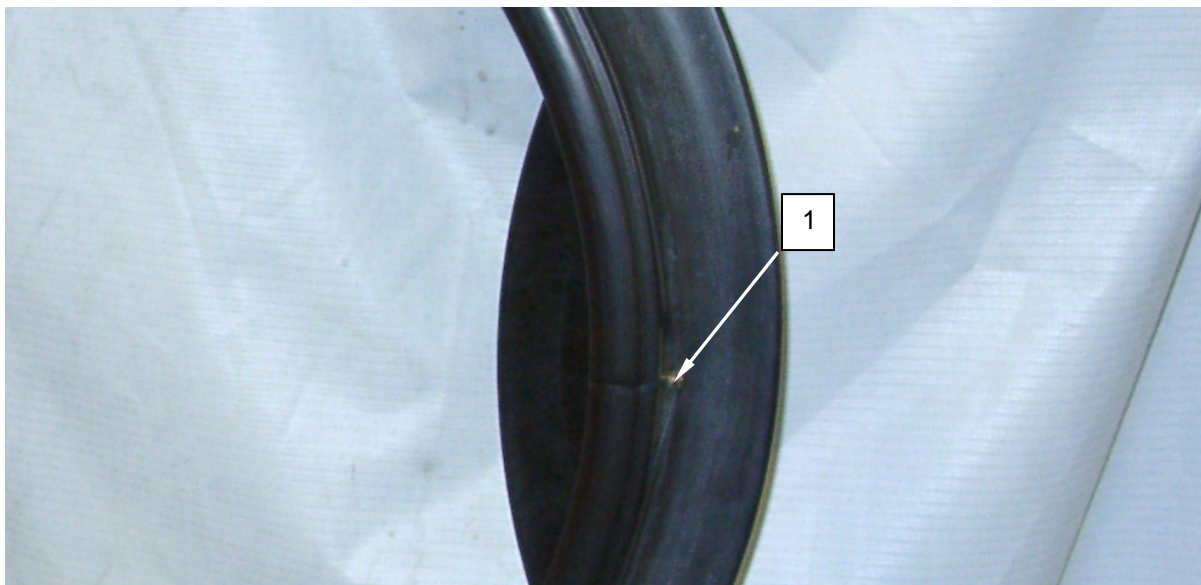


Figure 1. Adjust the Dryer Loading Door Catch Assembly.

END OF TASK

REPLACE**NOTE**

If tools or repair components are not available, the dryer door may be installed to open on the opposite side. The dryer front must be dropped and the door switch and harness must be relocated to accomplish this.

1. Open door.

WARNING

Leather gloves and eye protection must be worn when performing maintenance. Failure to do so could result in serious injury to eyes or hands.

2. Drill out rivets (Figure 2, Item 1) and remove strike (Figure 2, Item 2).
3. Install replacement strike (Figure 2, Item 2), and retain with rivets (Figure 2, Item 1).

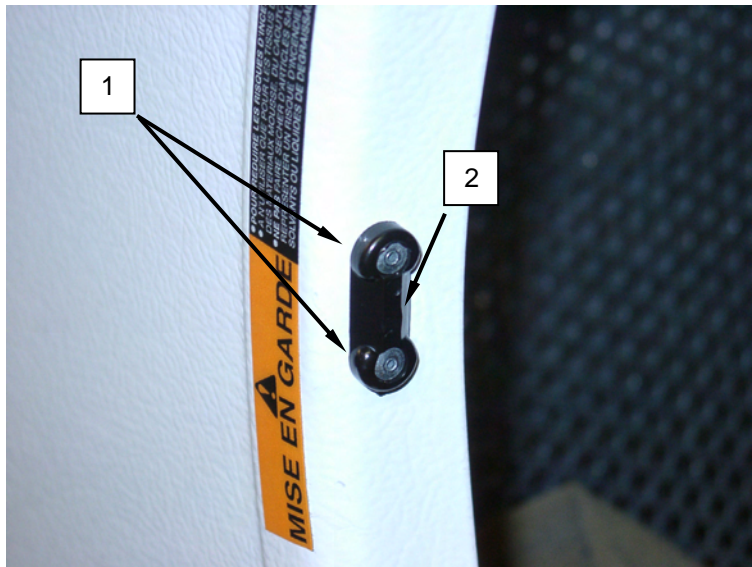


Figure 2. Replace the Dryer Loading Door Catch Assembly.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRYER CONTACTORS
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

ReferencesWP 0007
WP 0011**TEST****Test the Fan Contactor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Locate contactor box (Figure 1, Item 5) at the top left corner of the rear of dryer just to the left of the motor.
3. Remove screws retaining contactor box cover (Figure 1, Item 5), and remove cover.
4. Locate the fan contactor (Figure 1, Item 1).

WARNING

Use extreme caution when testing live electrical components. Serious injury or death can result from electrocution if proper safety precautions are not observed.

5. Connect power and operate dryer.
6. Check for 210 VAC across primary terminals L1 and L2, L1 and L3, and L2 and L3 (Figure 1, Item 2). If no voltage is present, refer to WP 0011 for dryer troubleshooting procedures.
7. Use a multimeter to check for 210 VAC across secondary terminals T1 and T2, T1 and T3, and T2 and T3 (Figure 1, Item 4).
8. Disconnect power to dryer at the circuit breaker located on wall of container (dryer side).

TEST - CONTINUED**Test the Reversing Contactor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

The reversing contactor is made up of two separate contactors that must be tested separately.

1. Disconnect power.
2. Remove screws retaining contactor box cover (Figure 2, Item 7), and remove cover.
3. Locate the forward (Figure 2, Item 6) and reverse contactor (Figure 2, Item 3) on the reversing contactor (Figure 2, Item 4).

WARNING

Use extreme caution when testing live electrical components. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

Ensure the dryer is operating in reversing mode. Refer to WP 0007 for operating instructions.

4. Connect power and operate dryer.

NOTE

The contactors will switch on and off during operation. If no load voltage is found on one contactor, check the other.

5. Check for 210 VAC across primary terminals L1 and L3, and L2 and L3 (Figure 2, Item 5) on either the forward or reverse contactor. If no voltage is present, refer to WP 0011 for dryer troubleshooting procedures.
6. Use a multimeter to check for 210 VAC across secondary terminals T1 and T2, T1 and T3, and T2 and T3 (Figure 2, Item 1) on either the forward or reverse contactor.
7. Perform steps 5 and 6 on the remaining contactor.
8. Disconnect power at the dryer circuit breaker.
9. Disconnect the white and red wires (Figure 2, Item 2) from the contactor control circuit, and use a multimeter to test for 3 to 5 ohms across the two terminals. Replace an open contactor.
10. Reconnect the white and red wires (Figure 2, Item 2) to the contactor control circuit terminals.
11. Perform steps 9 and 10 on the remaining contactor.

TEST - CONTINUED

12. Install contactor box cover (Figure 2, Item 7), and retain with screws.
13. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

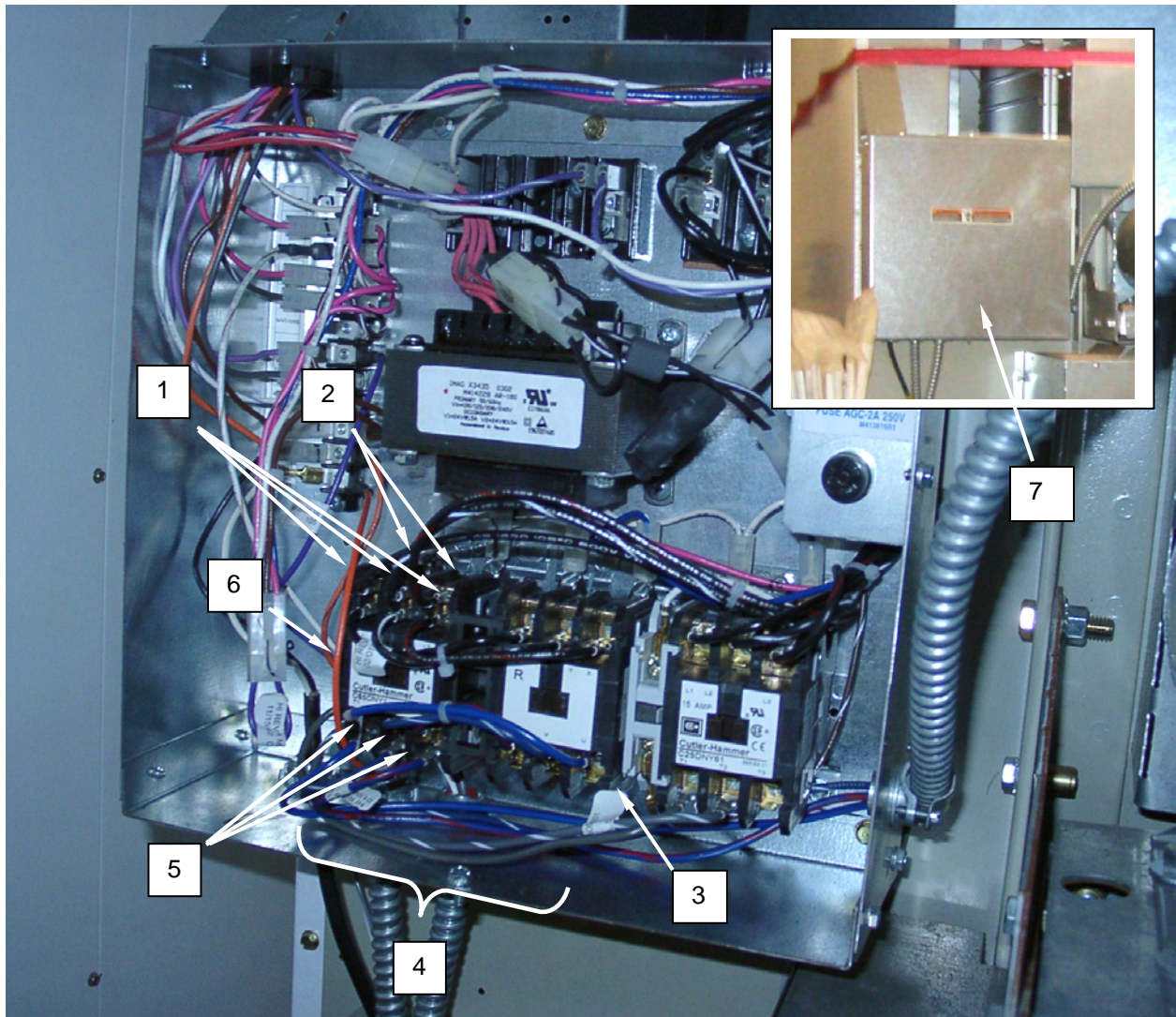


Figure 2. Test the Reversing Contactor.

END OF TASK

TEST - CONTINUED**Test the Heat Contactors****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Remove screws retaining the accessory box cover (Figure 3, Item 5), and remove cover.
3. Locate the two heat contactors (Figure 3, Item 3).

WARNING

Use extreme caution when testing live electrical components. Serious injury or death can result from electrocution if proper safety precautions are not observed.

4. Connect power and operate dryer.
5. Check for 210 VAC across primary terminals L1 and L2, L1 and L3, and L2 and L3 (Figure 1, Item 2). If no voltage is present, refer to WP 0011 for dryer troubleshooting procedures.

NOTE

Allow the dryer to operate at high heat for at least 1 minute before testing.

6. Use a multimeter to check for 210 VAC across secondary terminals T1 and T2, T1 and T3, and T2 and T3 (Figure 1, Item 4).
7. Repeat steps 5 and 6 for the remaining contactor.
8. Disconnect power.
9. Disconnect the white and purple-and-white striped wires (Figure 2, Item 1) from the contactor control circuit, and use a multimeter to test for 0 to 2 ohms across the two terminals. Replace an open contactor.
10. Reconnect the white and purple-and-white striped wires (Figure 2, Item 1) to the contactor control circuit terminals.
11. Repeat steps 8 and 9 for the remaining contactor.
12. Install accessory box cover, and retain with screws.
13. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

TEST - CONTINUED

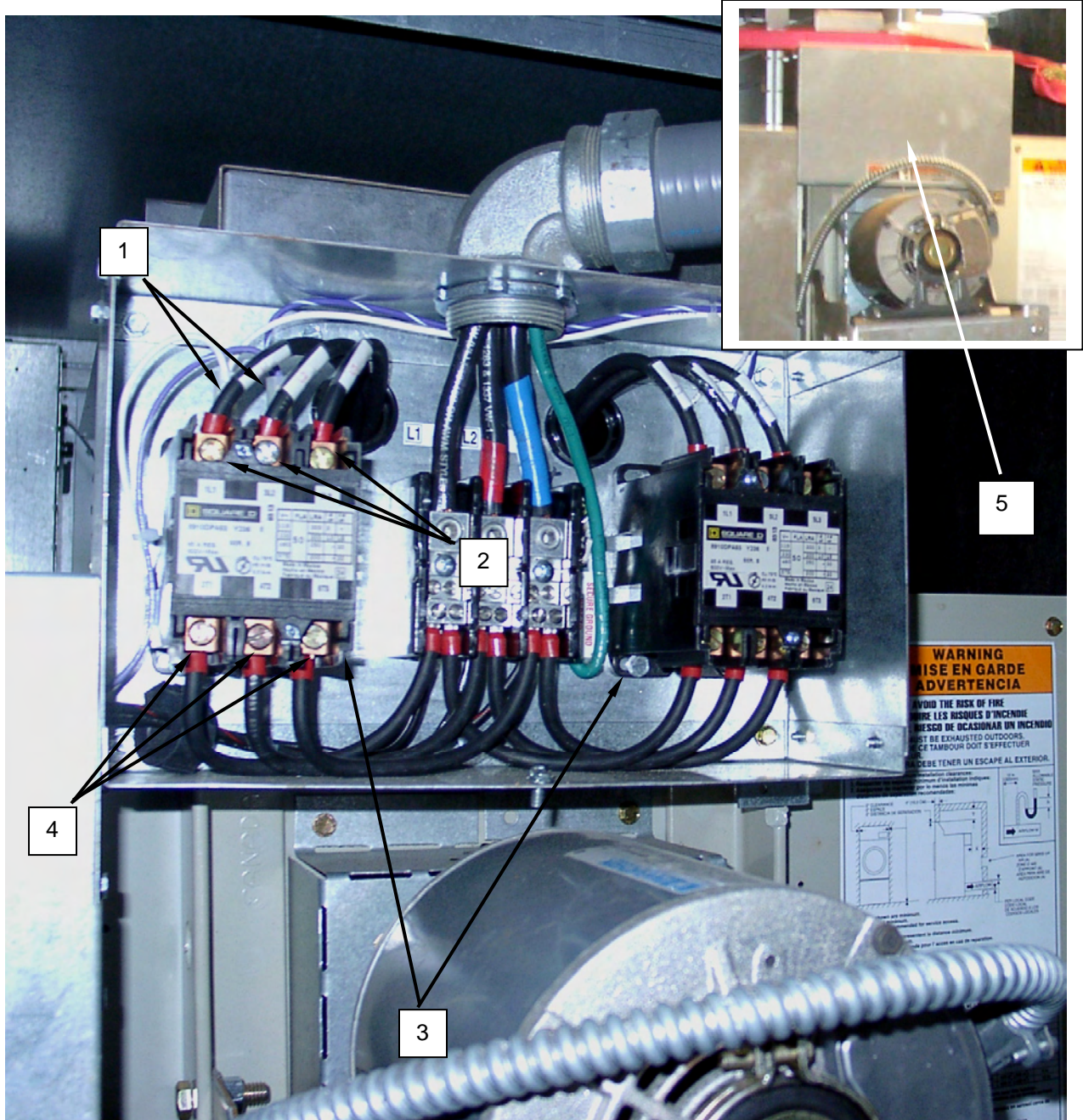


Figure 3. Test the Heat Contactors.

END OF TASK

REPLACE**Replace the Fan Contactor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Remove screws retaining contactor box cover (Figure 4, Item 2), and remove cover.
3. Tag and disconnect wiring from contactor (Figure 4, Item 1).
4. Remove screws retaining contactor (Figure 4, Item 1), and remove contactor.
5. Install replacement contactor (Figure 4, Item 1), and retain with screws.
6. Connect wiring to replacement contactor (Figure 4, Item 1) as tagged.
7. Install contactor box cover, and retain with screws.
8. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE - CONTINUED

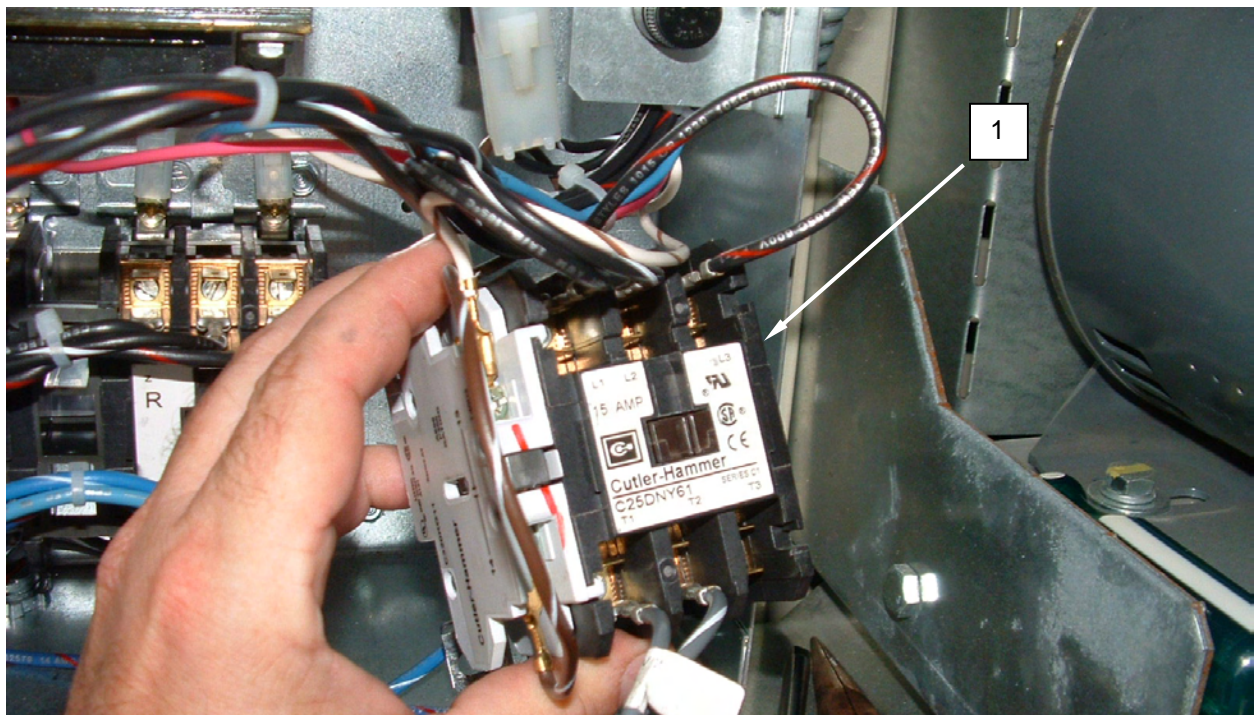
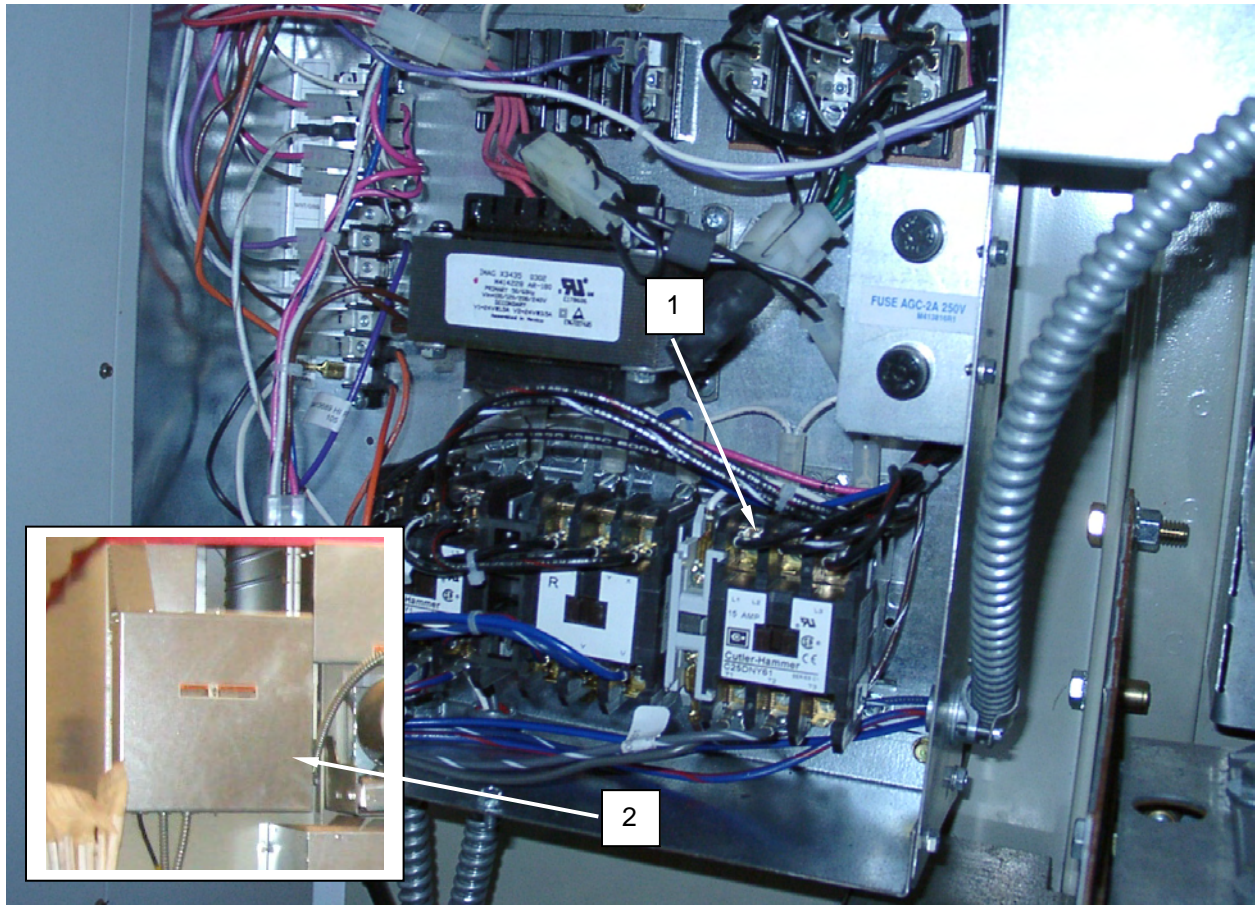


Figure 4. Replace the Fan Contactor.

END OF TASK

REPLACE – CONTINUED**Replace the Reversing Contactor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Remove screws retaining contactor box cover (Figure 5, Item 2) and remove cover.

NOTE

Wiring may also be replaced one for one from the contactors to the replacement contactors.

3. Tag and disconnect wiring from contactors (Figure 5, Item 1).

NOTE

The reversing contactor, though comprised of two separate contactors, is replaced as an assembly.

4. Remove screws retaining contactors (Figure 5, Item 1) and remove contactors as an assembly.
5. Install replacement contactors (Figure 5, Item 1) and retain with screws.
6. Connect wiring to replacement contactors (Figure 5, Item 1) as tagged.
7. Install contactor box cover, and retain with screws.
8. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

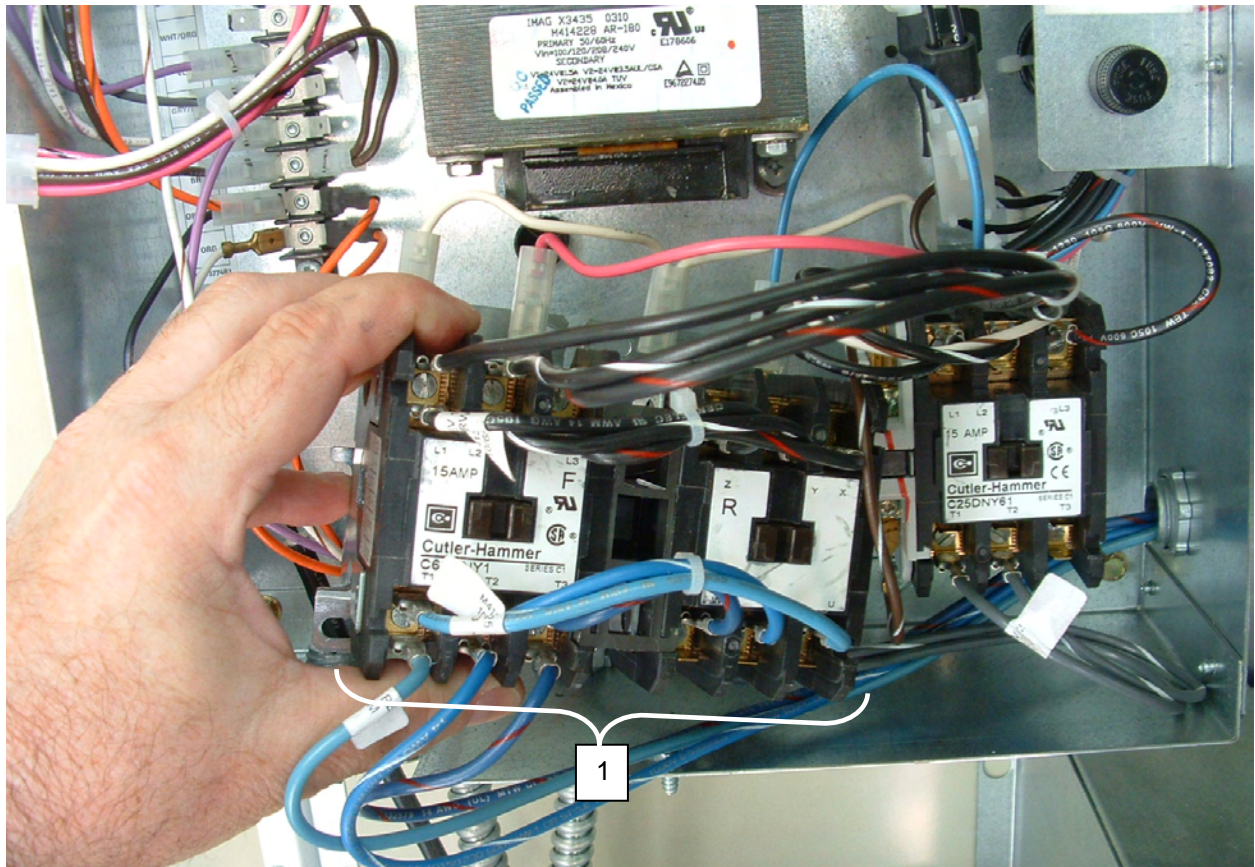
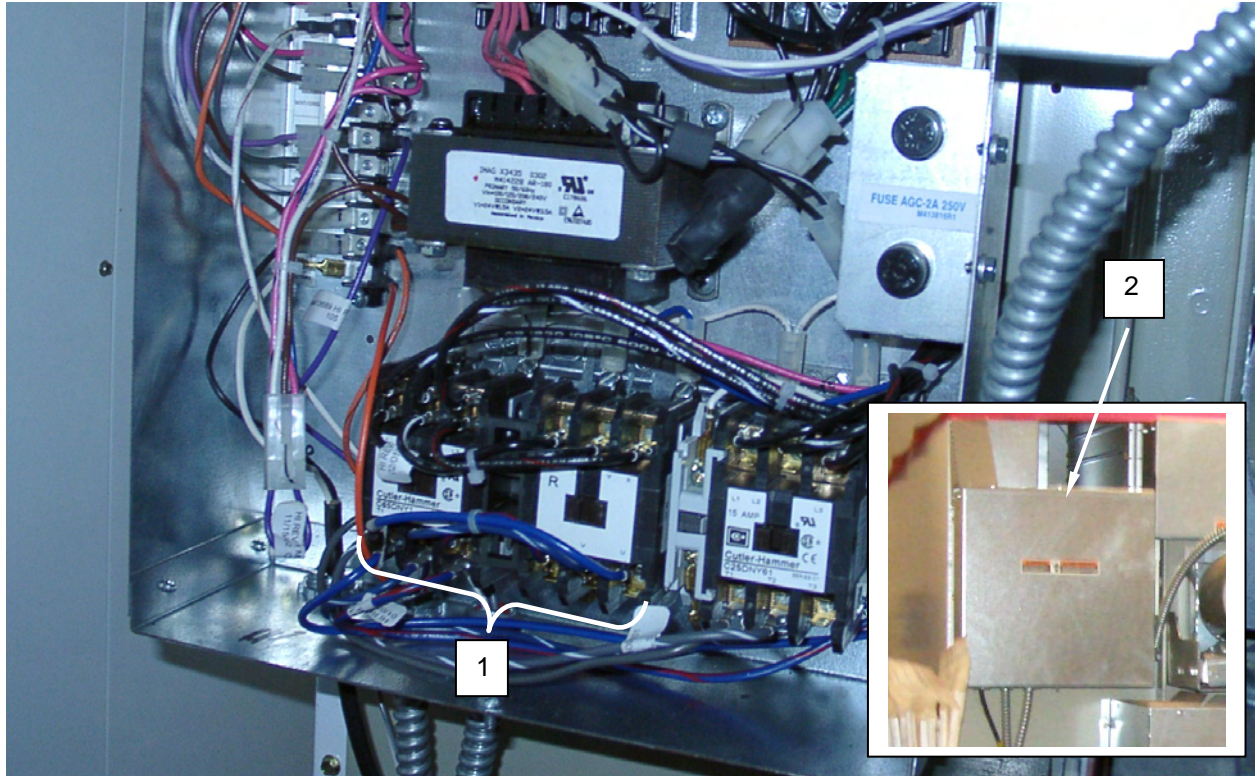


Figure 5. Replace the Reversing Contactor.

END OF TASK

REPLACE – CONTINUED**Replace a Heat Contactor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power.
2. Remove screws retaining accessory box cover (Figure 6, Item 2), and remove cover.

NOTE

Wiring may also be replaced one for one from the contactor to the replacement contactor.

3. Tag and disconnect wiring from contactor (Figure 6, Item 1).
4. Remove screws retaining contactor (Figure 6, Item 1) and remove contactor.
5. Install replacement contactor (Figure 6, Item 1) and retain with screws.
6. Connect wiring to replacement contactor (Figure 6, Item 1) as tagged.
7. Install accessory box cover, and retain with screws.
8. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

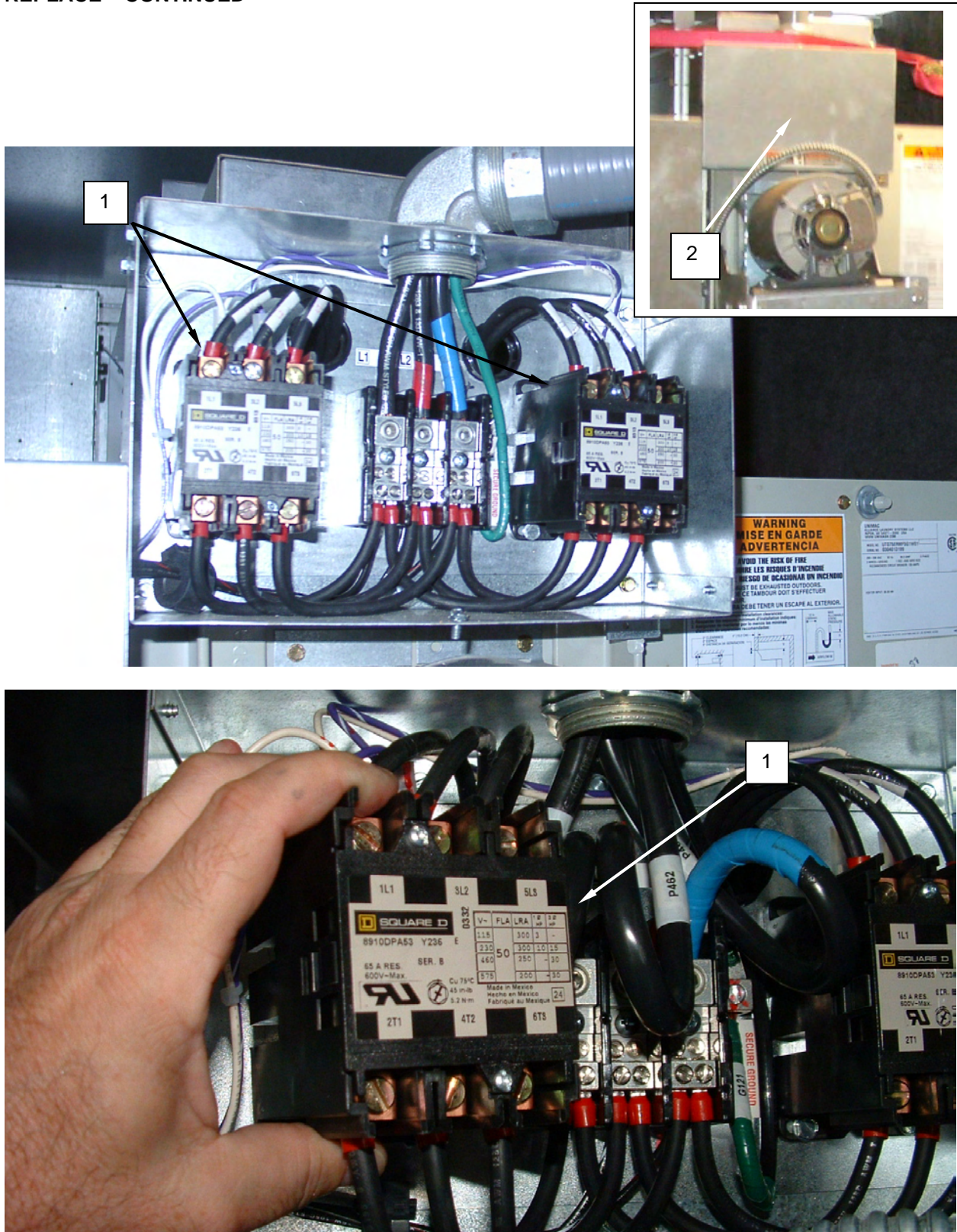


Figure 6. Replace the Heat Contactors.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRYER TRANSFORMER
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

References

WP 0007

TEST**Test the Dryer Transformer Fuses****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

Always test both transformer fuses at the same time. A fuse may not have visible signs of having opened.

1. Disconnect power by switching the circuit breakers located on wall of container (dryer side) to OFF.
2. Locate contactor box (Figure 1, Item 3) on the top left rear of dryer, just to left of motor.
3. Remove screws retaining contactor box cover and remove cover.
4. Locate primary fuse (Figure 1, Item 2).
5. Unscrew fuse holder cap (Figure 1, Item 2).
6. Remove fuse from cap (Figure 1, Item 2).
7. Use a multimeter to test the fuse (Figure 1, Item 2) for continuity (should read zero ohms).
8. Replace an open fuse (Figure 1, Item 2).
9. Install fuse into cap (Figure 1, Item 2).
10. Install cap (Figure 1, Item 2) with fuse into fuse holder.
11. Repeat Steps 5 through 9 for the secondary fuse (Figure 1, Item 1).

TEST – CONTINUED

12. Install cover and retain with screws.
13. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

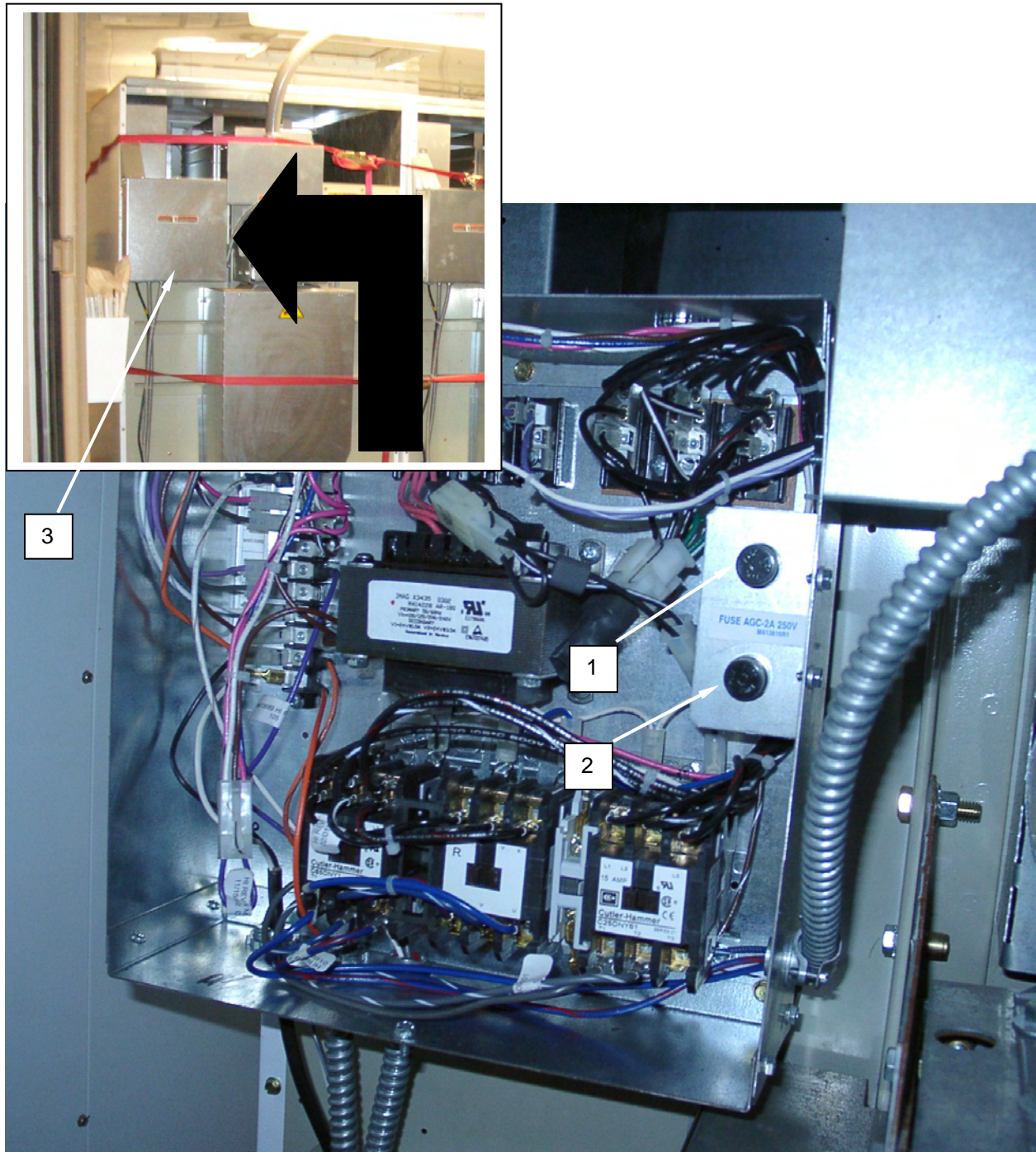


Figure 1. Test the Dryer Transformer Fuses.

END OF TASK

TEST – CONTINUED**Test the Transformer****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the circuit breakers (Figure 2, Item 1) located on wall of container (dryer side) to OFF.
2. Locate contactor box (Figure 2, Item 2) on rear of dryer.
3. Remove screws retaining contactor box cover and remove cover.
4. Disconnect the electrical quick disconnects (Figure 2, Items 3 and 4) from transformer (Figure 2, Item 4).
5. Use a multimeter set to the 1.0 ohm range to test for 0.2 ohms resistance (± 0.1 ohms) across the terminals 1 and 4 on the four-pin electrical quick disconnect (Figure 2, Item 3). If the resistance is not within this range, replace the transformer IAW the REPLACE procedure later in this work package.
6. Use a multimeter set to the 1.0 ohm range to test for 0.2 ohms resistance (± 0.1 ohms) across the terminals 2 and 3 on the four-pin electrical quick disconnect (Figure 2, Item 3). If the resistance is not within this range, replace the transformer IAW the REPLACE procedure later in this work package.
7. Use a multimeter set to the 10.0 ohm range to test for 6.5 ohms resistance (± 1.0 ohm) across the terminals on the two-pin electrical quick disconnect (Figure 2, Item 4). If the resistance is not within this range, replace the transformer IAW the REPLACE procedure later in this work package.
8. Replace an open or shorted transformer (Figure 2, Item 5).
9. Connect wiring to replacement transformer (Figure 2, Item 5).
10. Install contactor box cover and retain with screws.
11. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

TEST – CONTINUED

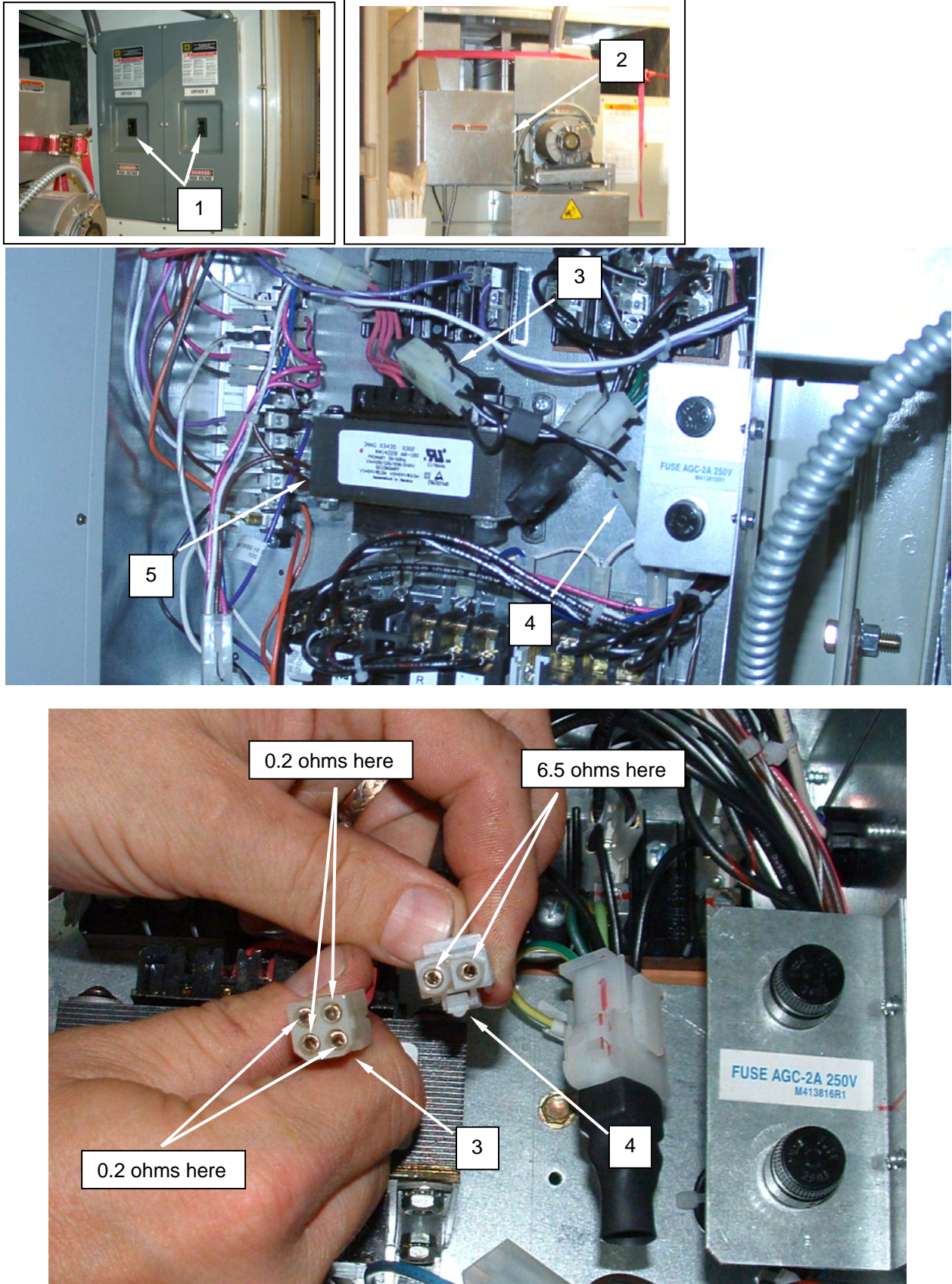


Figure 2. Test the Dryer Transformer.

END OF TASK

REPLACE**Replace the Dryer Transformer Fuses****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the circuit breakers (Figure 3, Item 1) located on wall of container (dryer side) to OFF.
2. Locate contactor box (Figure 3, Item 2) on rear of dryer.
3. Unscrew fuse holder cap (Figure 3, Item 3).
4. Remove fuse from cap (Figure 3, Item 3).
5. Install replacement fuse into cap (Figure 3, Item 3).
6. Install cap (Figure 3, Item 3) with replacement fuse into fuse holder.
7. Install cover, and retain with screws.
8. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

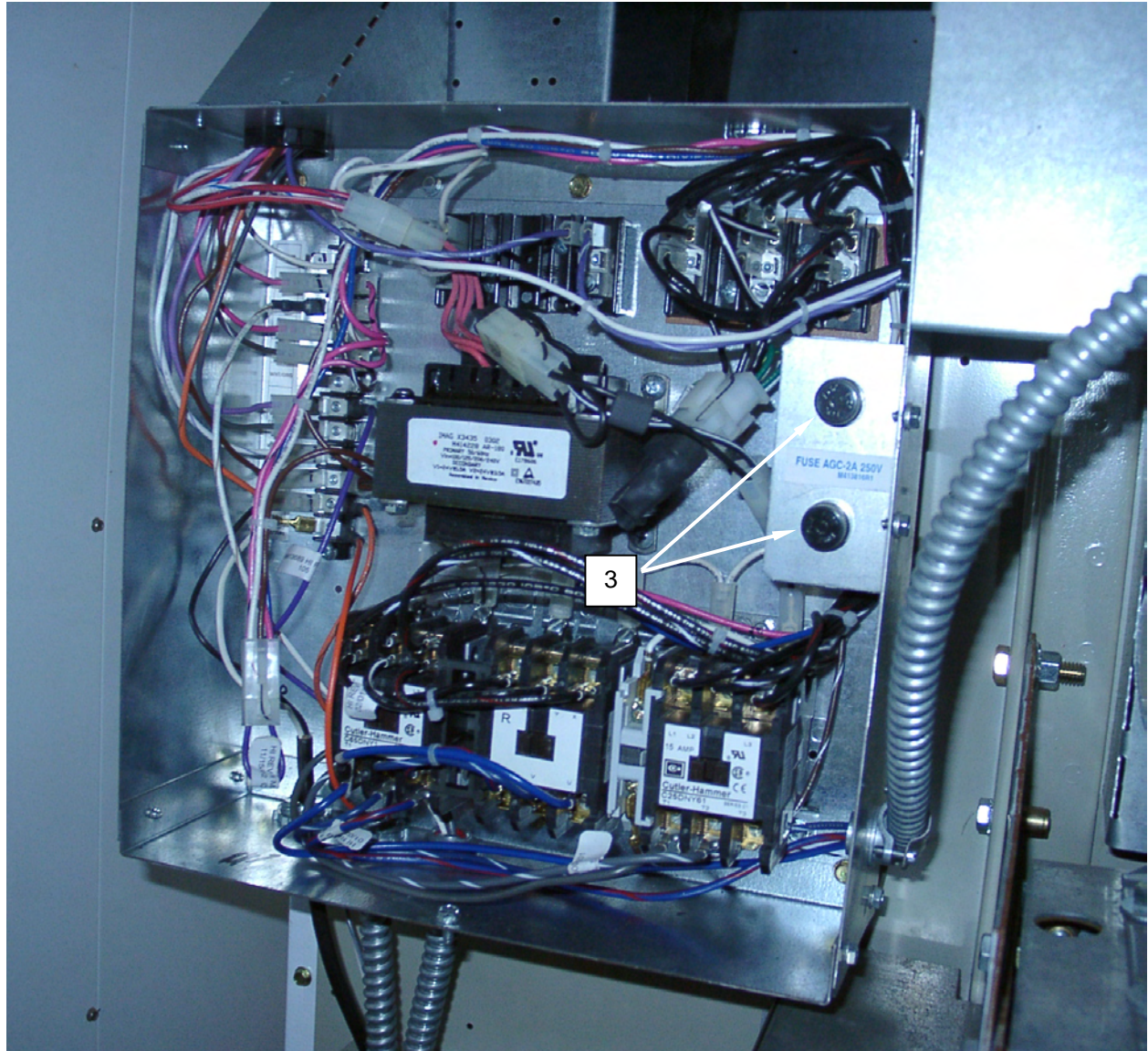
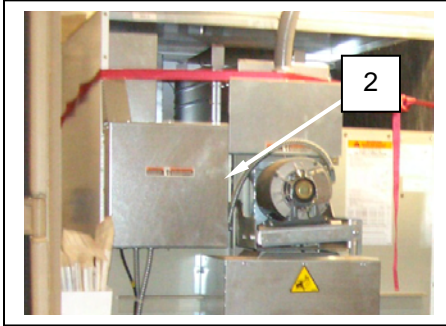
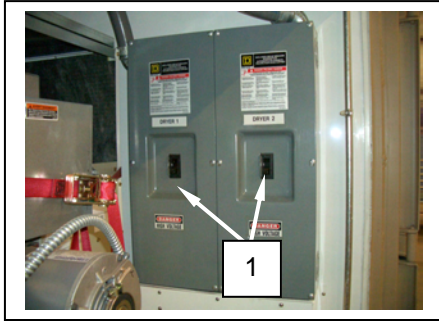


Figure 3. Replace the Dryer Transformer Fuses.

END OF TASK

REPLACE – CONTINUED**Replace the Dryer Transformer****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the circuit breakers (Figure 4, Item 1) located on wall of container (dryer side) to OFF.
2. Locate contactor box (Figure 4, Item 2) on rear of dryer.
3. Remove screws retaining contactor box cover and remove cover.
4. Tag and disconnect wiring from transformer (Figure 4, Item 3).
5. Remove screws retaining transformer (Figure 4, Item 3), and remove transformer.
6. Install replacement transformer (Figure 4, Item 3), and retain with screws.
7. Connect wiring to replacement transformer (Figure 4, Item 3) as tagged.
8. Install contactor box cover and retain with screws.
9. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

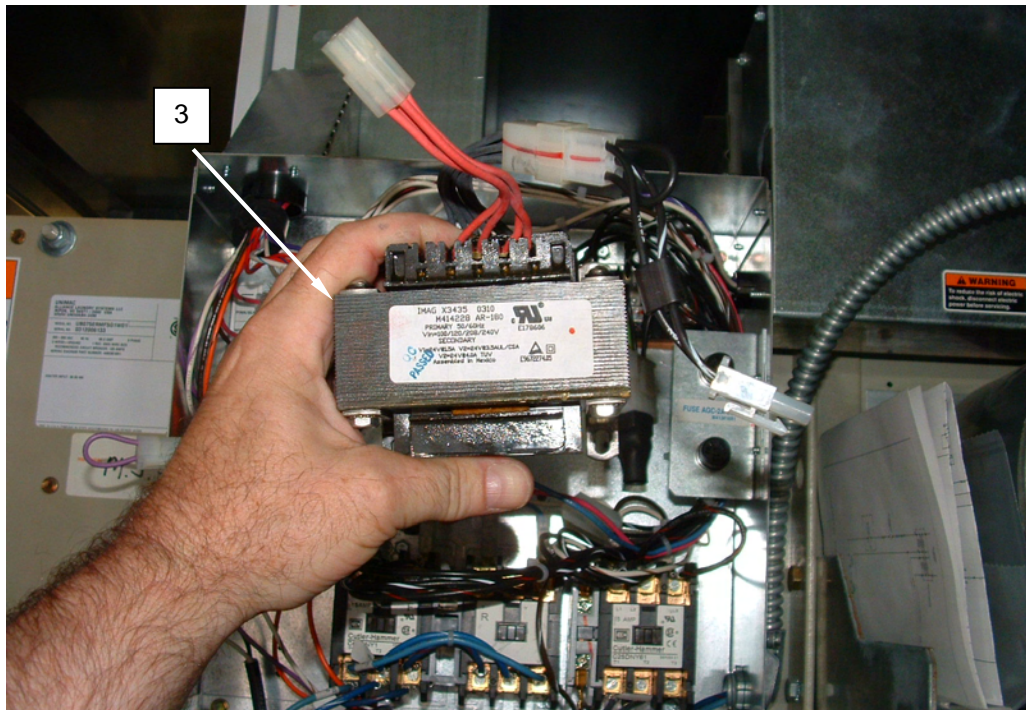
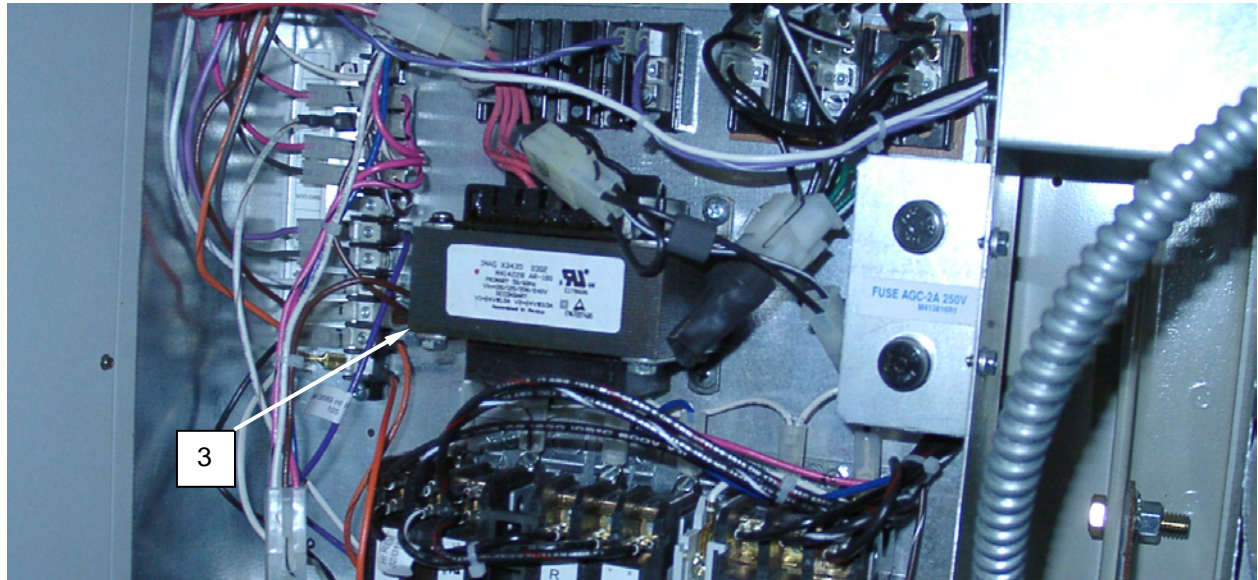
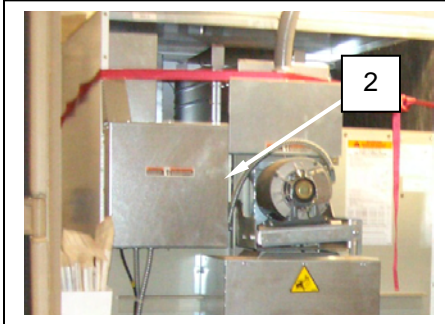
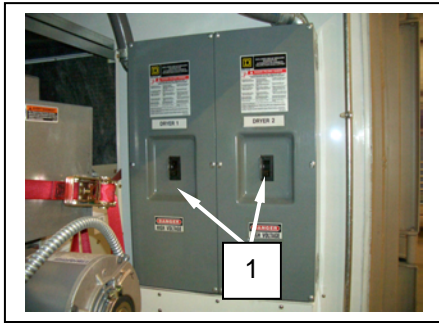


Figure 4. Replace the Dryer Transformer.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRYER CONTROLS
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer
63J (1)

Materials/Parts

Wire Markers (WP 0101, Item 64)
Tape, Electrical Insulation, 3/4-inch
(WP 0101, Item 62)

Equipment Condition

FP-CBL set up

References

WP 0033

TEST**Test the Dryer Lint Panel Switch****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access door IAW WP 0033.
3. Squeeze lint panel switch bracket and remove assembly (Figure 1, Item 1).
4. Tag and disconnect wiring from switch (Figure 1, Item 2).
5. Use a multimeter to check for zero ohms resistance over switch contacts when switch (Figure 1, Item 2) is closed.
6. Use a multimeter to check for infinite ohms resistance when switch (Figure 1, Item 2) is open.
7. Replace a malfunctioning switch (Figure 1, Item 2).
8. Reconnect wiring to switch (Figure 1, Item 2) as tagged.
9. Squeeze lint panel switch bracket and install assembly (Figure 1, Item 1).
10. Install lint compartment access door IAW WP 0033.
11. Switch the circuit breaker to ON and monitor for normal operation.

TEST – CONTINUED

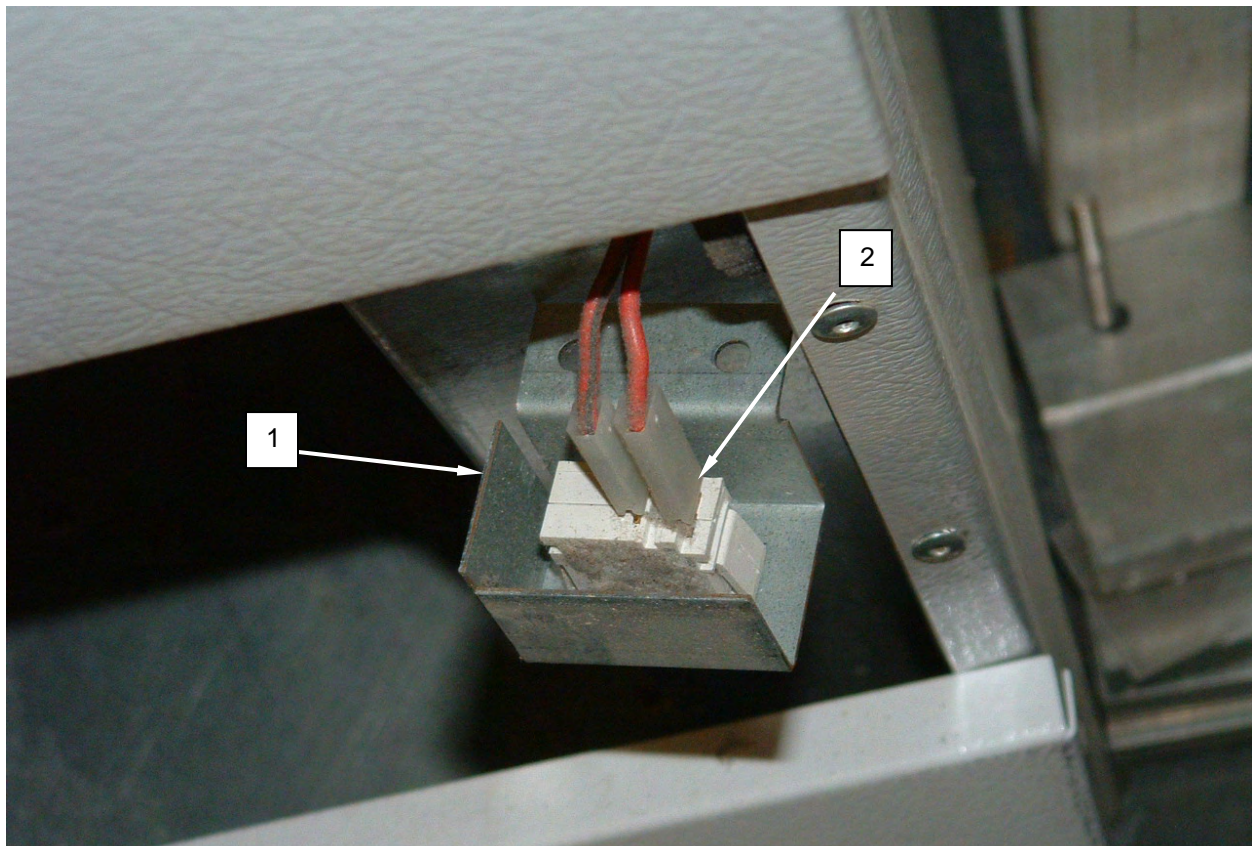
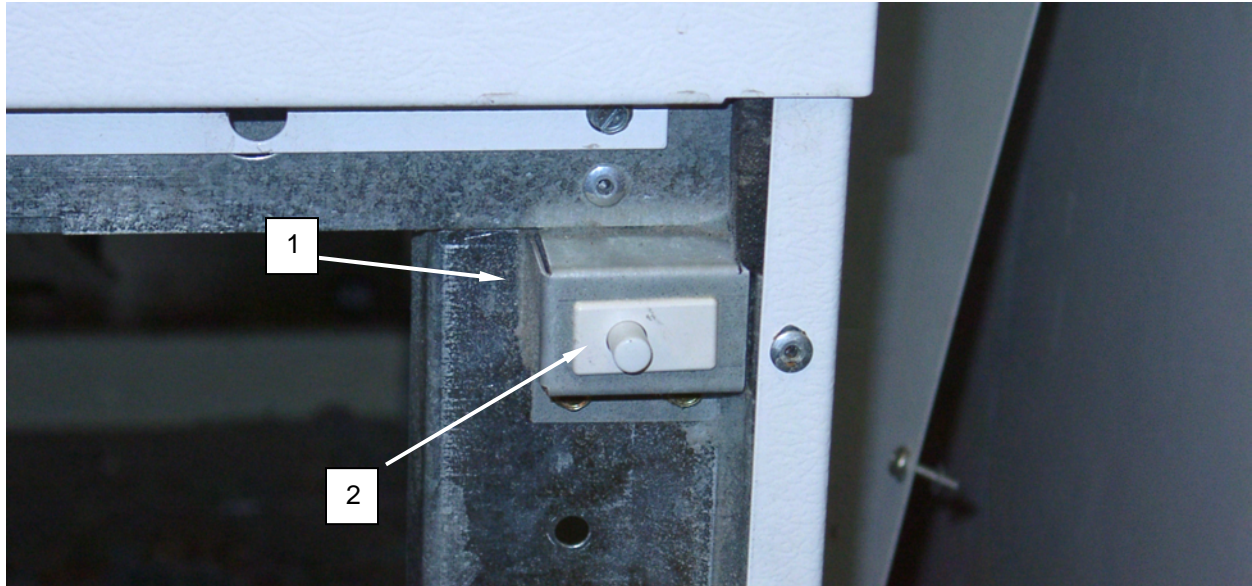


Figure 1. Test the Dryer Lint Panel Switch.

END OF TASK

TEST – CONTINUED**Test the Lint Compartment Thermistor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

If the thermistor shorts or if the dryer internal temperature exceeds 200°F, an alarm will sound on the dryer and “SH” will be shown on the dryer display. If this occurs, press STOP/RESET twice within three seconds, and then press ON/SELECT. If SH still shows on the display, replace the thermistor.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access door IAW WP 0033.
3. Remove screws retaining thermistor bracket (Figure 2, Item 1) and remove thermistor and bracket as an assembly.
4. Remove screws retaining thermistor guard (Figure 2, Item 2) and remove guard.
5. Tag and disconnect wiring from thermistor (Figure 2, Item 3).
6. Use a multimeter to check for 41,000.0 ohms ($\pm 1,000.0$ ohms) resistance at room temperature.
7. Replace a thermistor (Figure 2, Item 3) that is outside the resistance range specified in the previous step.
8. Reconnect wiring to thermistor (Figure 2, Item 3) as tagged.
9. Install thermistor guard (Figure 2, Item 2) and retain with screws.
10. Install thermistor (Figure 2, Item 3) and bracket (Figure 2, Item 1) as an assembly and retain with screws.
11. Install lint compartment access door.
12. Switch the circuit breaker to ON and monitor for normal operation.

TEST – CONTINUED

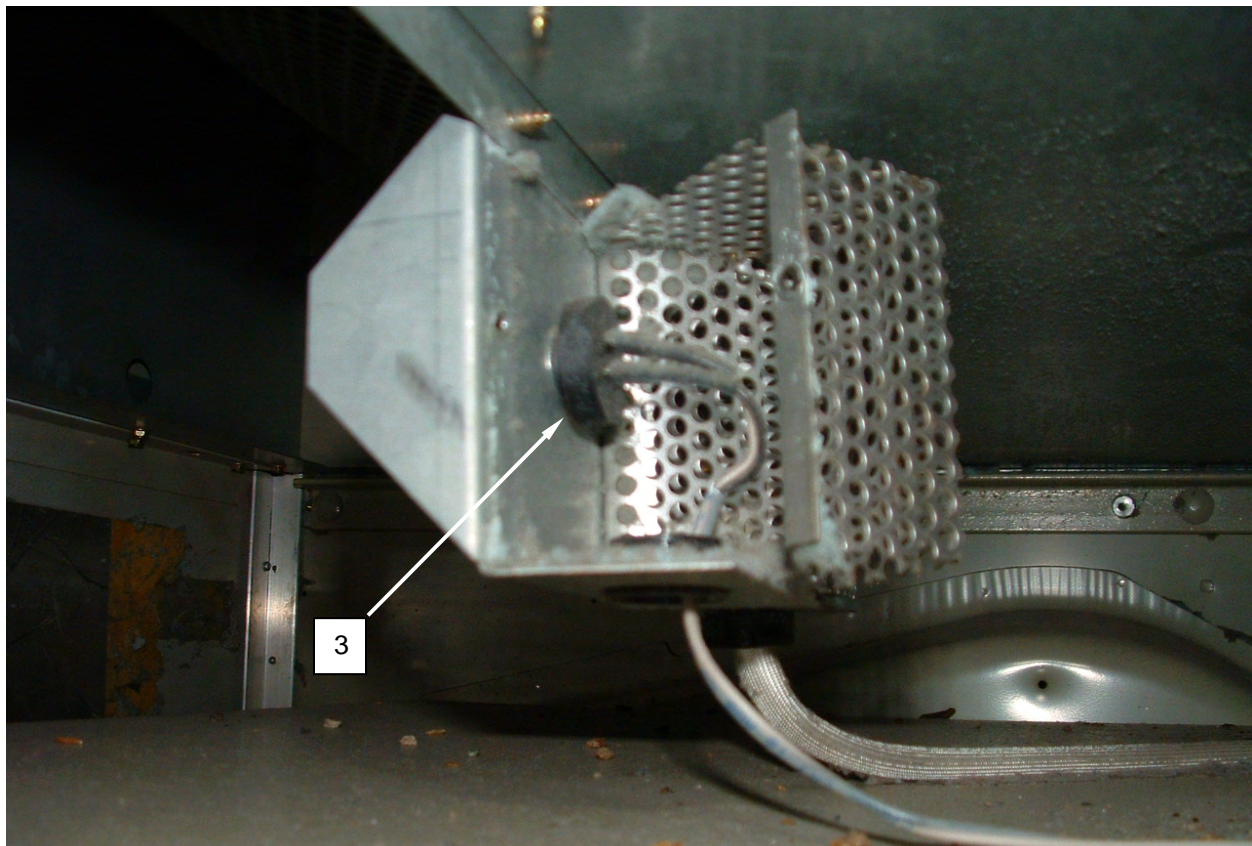
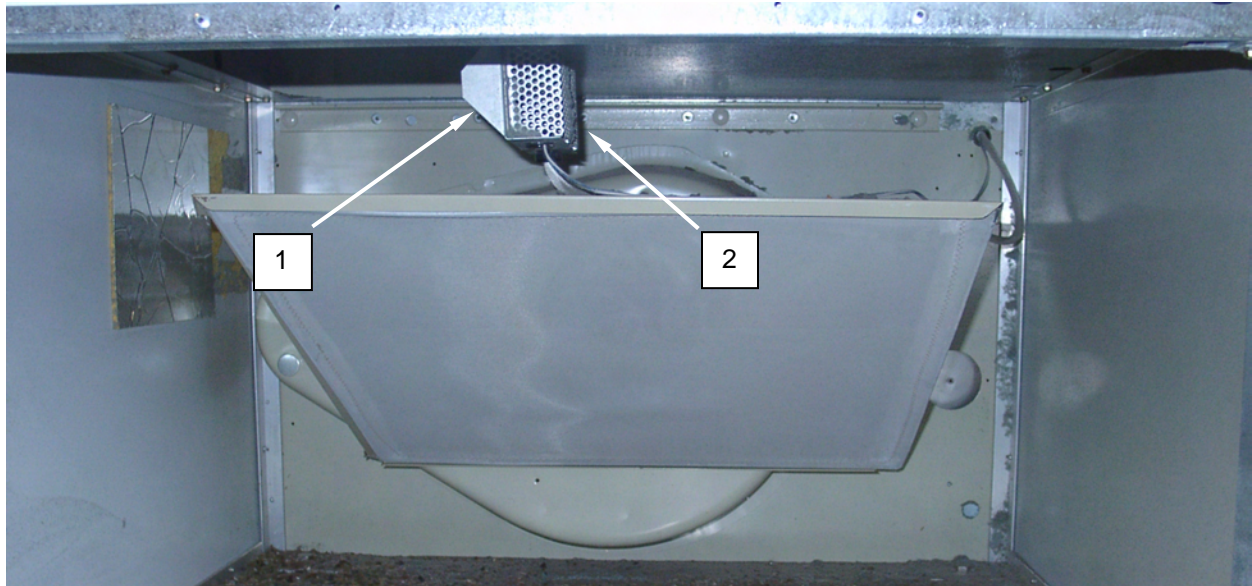


Figure 2. Test the Lint Compartment Thermistor.

END OF TASK

TEST – CONTINUED**Test the High Limit Thermostat****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

Ensure dryer has completely cooled before testing.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Tag and disconnect wiring from thermostat (Figure 3, Item 1).
4. Use a multimeter to ensure that the resistance across the thermostat terminals is exactly zero ohms.
5. Replace the thermostat (Figure 3, Item 1) if it does not measure exactly zero ohms.
6. Reconnect wiring to thermostat (Figure 3, Item 1) as tagged.
7. Install top front panel.
8. Switch the circuit breaker to ON and monitor for normal operation.

TEST – CONTINUED

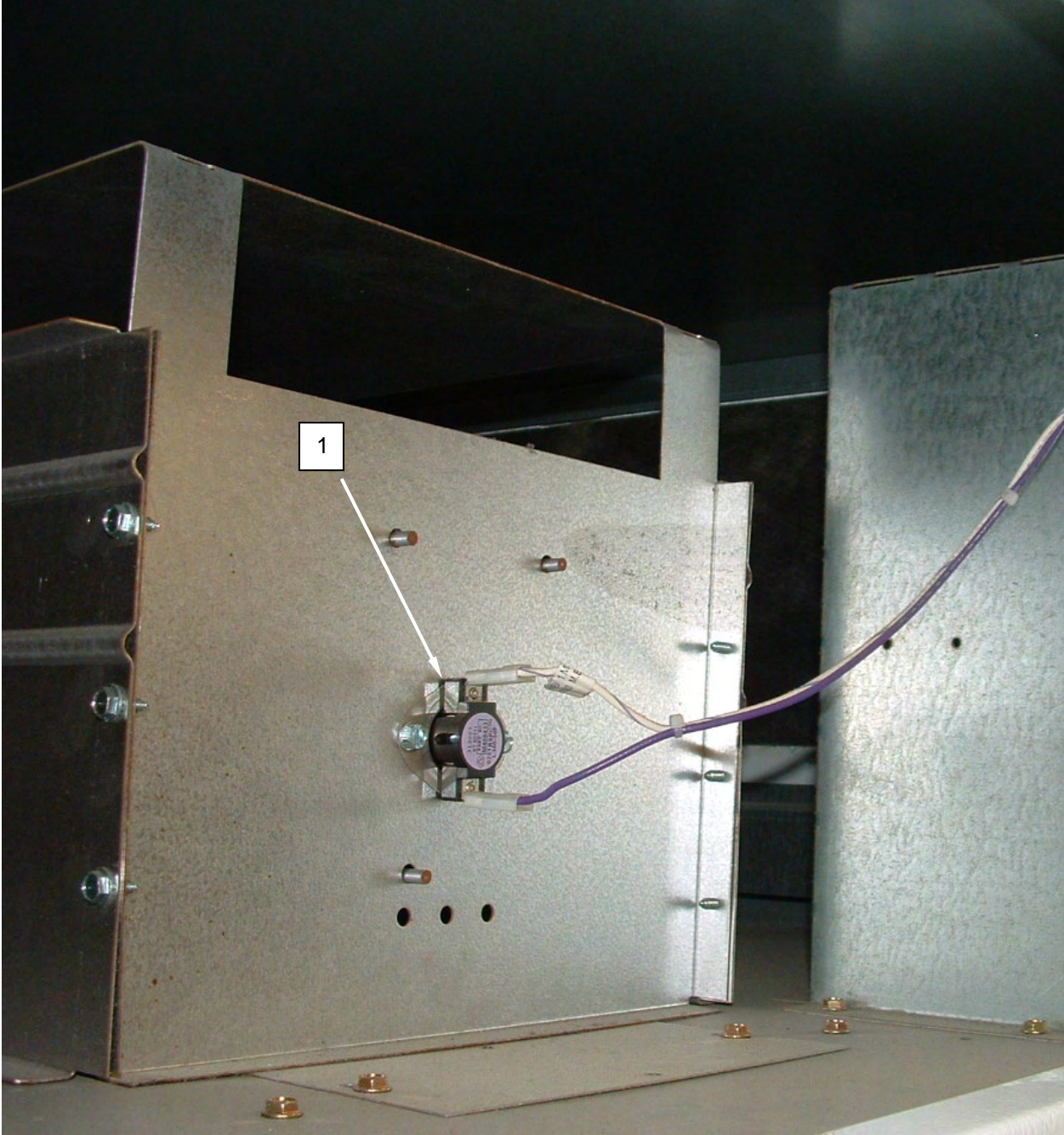


Figure 3. Test the High Limit Thermostat.

END OF TASK

TEST – CONTINUED**Test the Thermostat****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

Ensure dryer has completely cooled before testing.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access door IAW WP 0033.
3. Remove screws retaining thermostat bracket assembly (Figure 4, Item 1) and remove thermostat and bracket as an assembly.
4. Remove screws retaining thermostat guard (Figure 4, Item 2) and remove guard.
5. Tag and disconnect wiring from thermostat (Figure 4, Item 3).
6. Use a multimeter to ensure that the resistance across the thermostat terminals is exactly zero ohms.
7. Replace the thermostat (Figure 4, Item 3) if not exactly zero ohms.
8. Connect wiring to thermostat (Figure 4, Item 3) as tagged.
9. Install thermostat guard (Figure 4, Item 2) and retain with screws.
10. Install thermostat (Figure 4, Item 3) and bracket (Figure 4, Item 1) as an assembly and retain with screws.
11. Install lint compartment access door.
12. Switch the circuit breaker to ON and monitor for normal operation.

TEST – CONTINUED

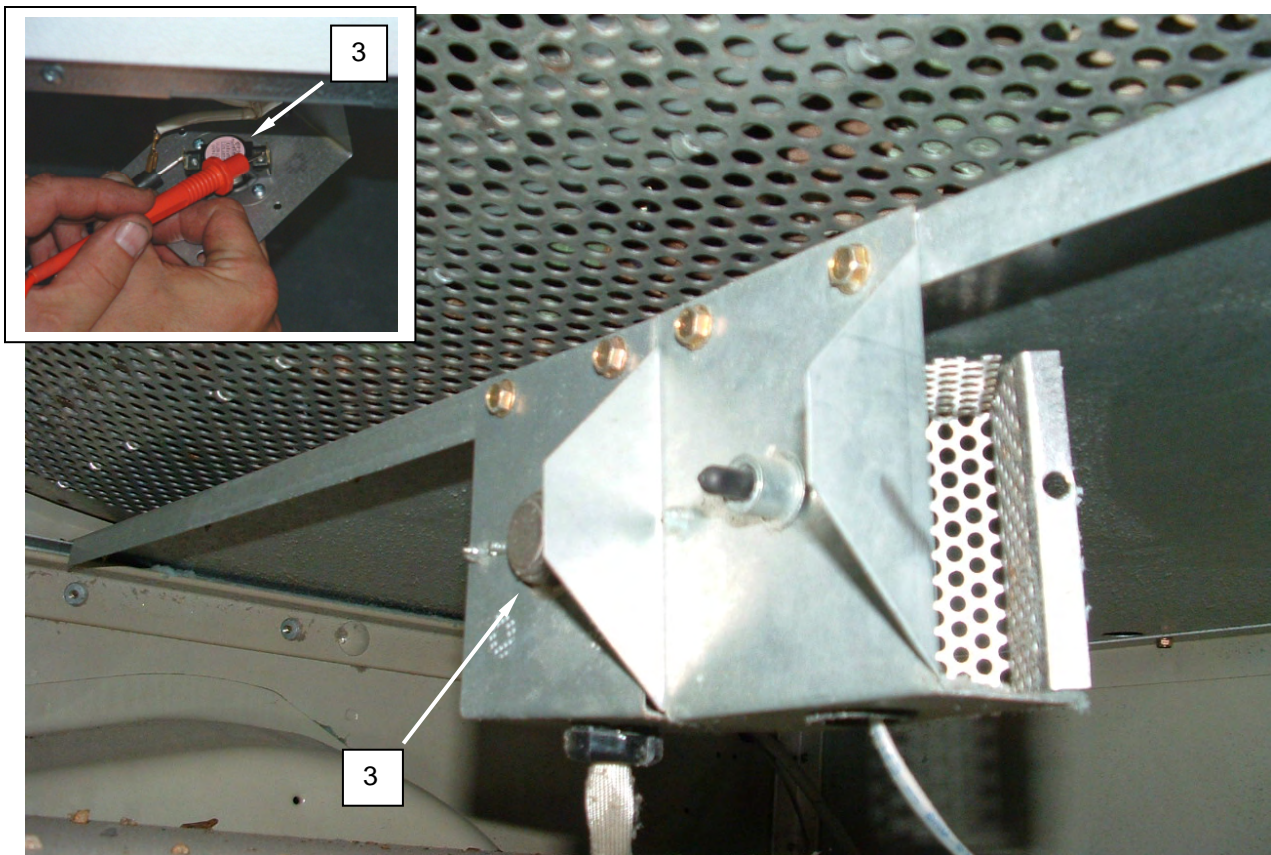
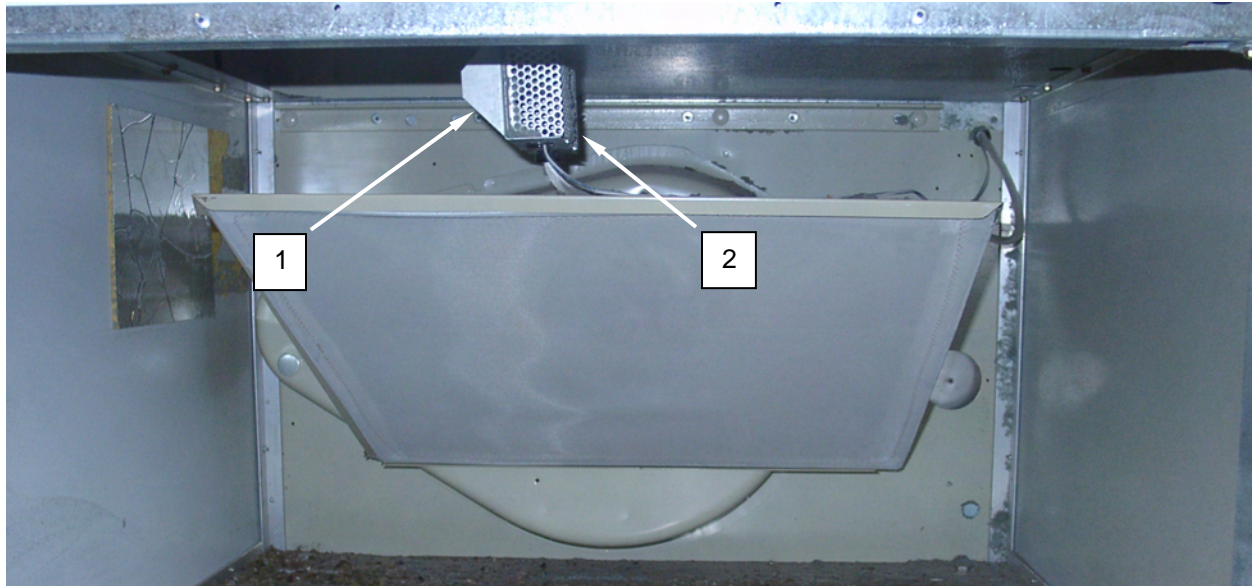


Figure 4. Test the Thermostat.

END OF TASK

TEST – CONTINUED**Test the Dryer Door Switch****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Open dryer door.
3. Remove switch (Figure 5, Item 1) by prying it gently with a small screwdriver.

NOTE

Do not allow wiring to fall back through switch opening. Wrap tape or a wire tie around the switch wiring if necessary to keep the wiring from falling back into the dryer.

4. Tag and disconnect wiring from switch (Figure 5, Item 1).
5. Use a multimeter to ensure that it measures zero ohms resistance (i.e. shorted) in the closed position.
6. Use a multimeter to ensure that it measures infinite resistance (i.e. open circuit) in the open position.
7. Replace a switch (Figure 5, Item 1) that fails either test.
8. Connect wiring to switch (Figure 5, Item 1) as tagged.
9. Install switch (Figure 5, Item 1).
10. Close dryer door.
11. Switch the circuit breaker to ON and monitor for normal operation.

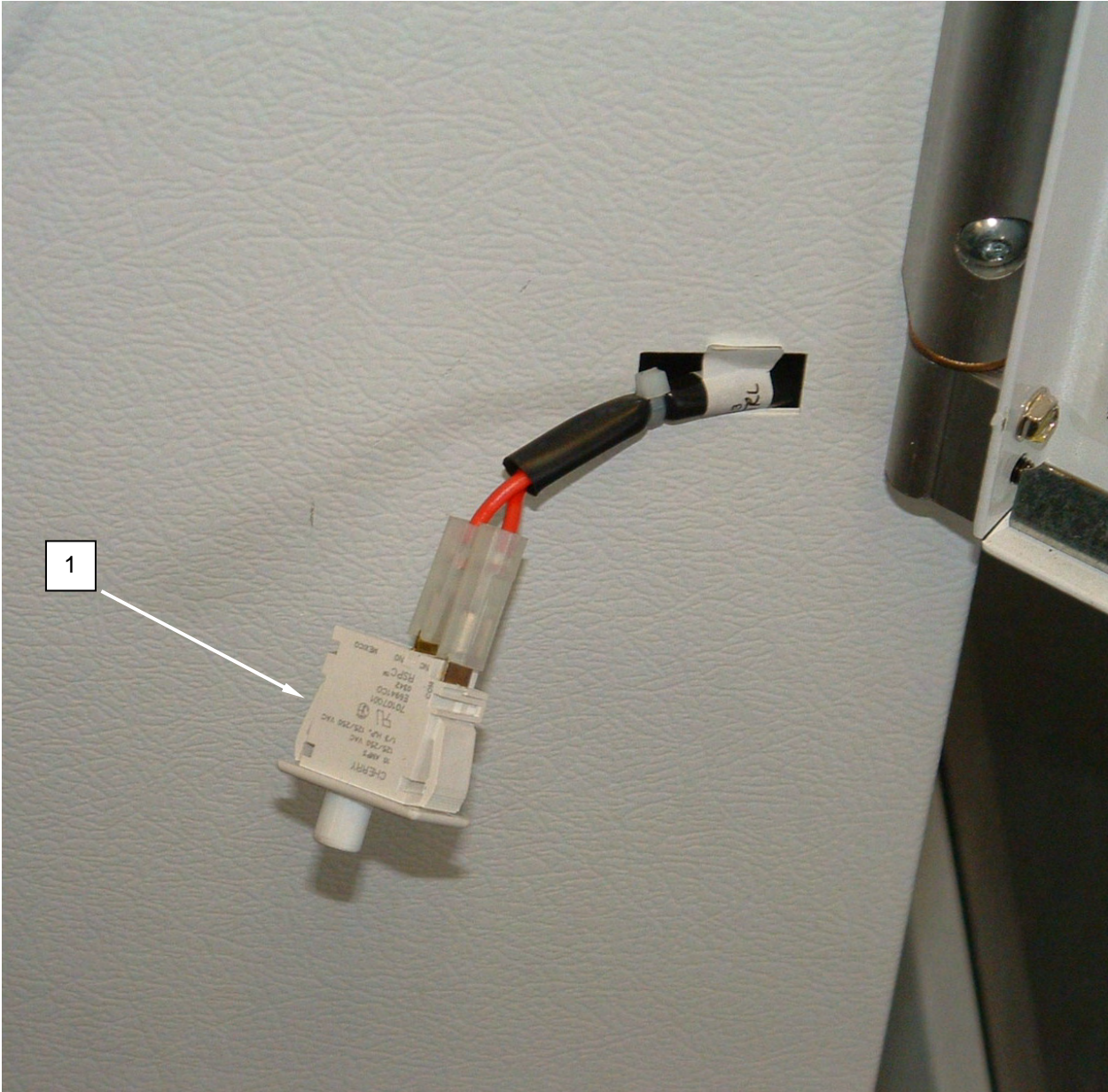


Figure 5. Test the Dryer Door Switch.

END OF TASK

TEST – CONTINUED**Test the Control Panel**

1. Run system diagnostic test on control panel by holding START (Figure 6, Item 1) and pressing SAVE CUSTOM (Figure 6, Item 2). All LED's will then light as shown in Figure 6. Replace a control panel with inoperative LED's.
2. Hold START (Figure 6, Item 1) and pressing SAVE CUSTOM (Figure 6, Item 2) to exit the diagnostic test.

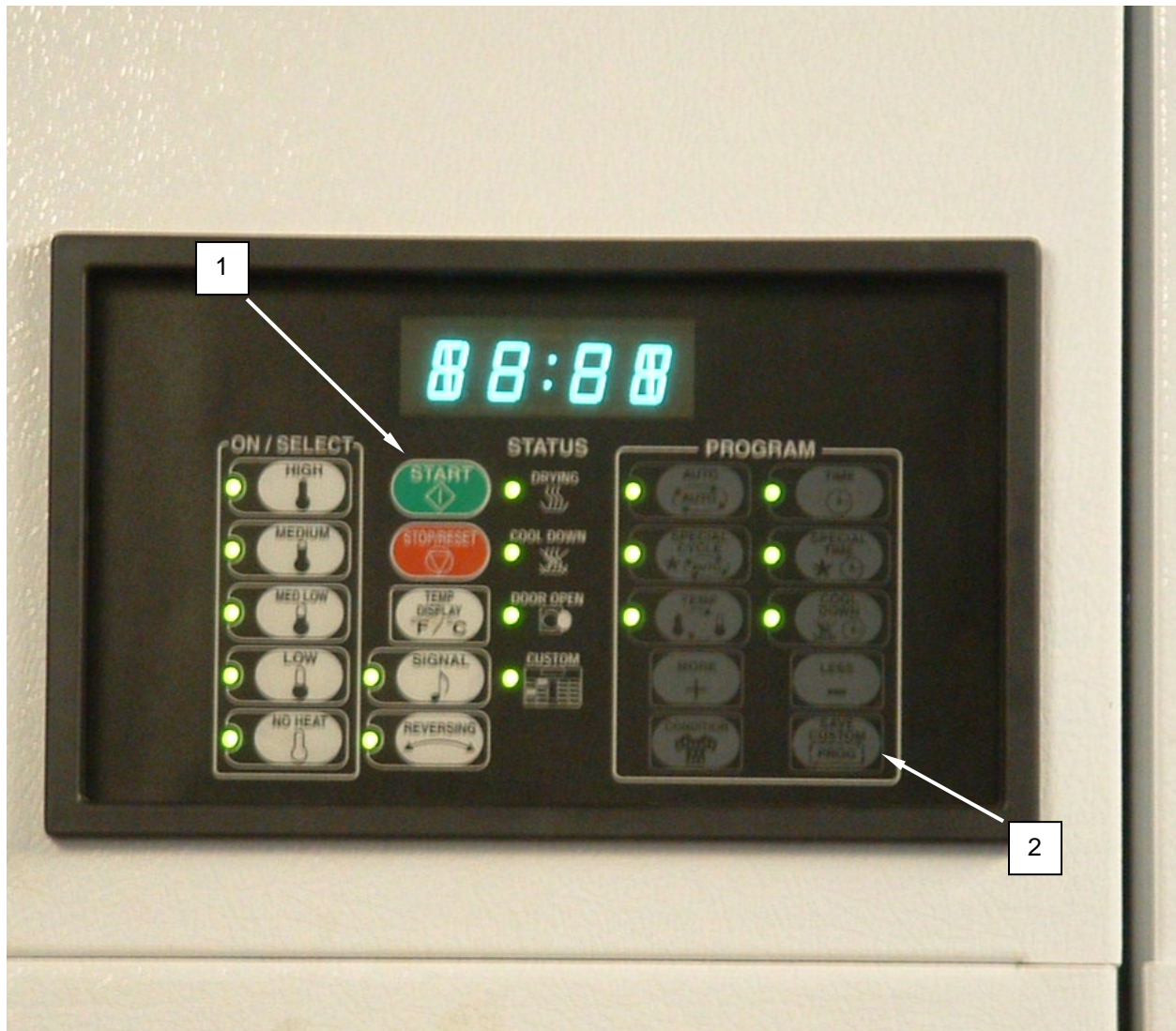


Figure 6. Test the Control Panel.

END OF TASK

TEST – CONTINUED**Test the Control Panel Fuses****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Remove the secondary fuse from fuse holder (Figure 7, Item 1).
4. Use a multimeter to test the fuse (Figure 7, Item 1) for continuity. Replace an open fuse.
5. Remove the primary fuse (Figure 7, Item 2) from the printed circuit board.
6. Use a multimeter to test the fuse (Figure 7, Item 2) for continuity. Replace an open fuse.
7. Install fuses (Figure 7, Items 1 and 2).
8. Install top front panel.

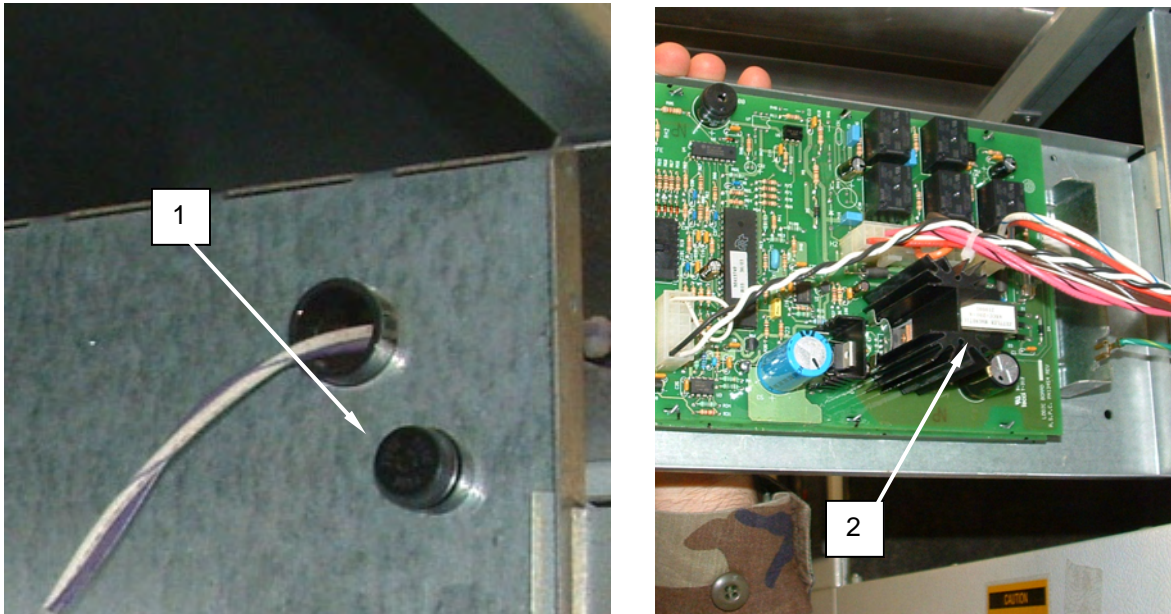


Figure 7. Test the Control Panel Fuses.

END OF TASK

REPLACE**Replace the Dryer Lint Panel Switch****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access panel IAW WP 0033.
3. Remove screws retaining switch bracket (Figure 8, Item 1), and remove bracket from dryer.
4. Tag and disconnect wiring from switch (Figure 8, Item 2).
5. Remove switch (Figure 8, Item 2) from bracket (Figure 8, Item 1) by gently prying switch from retaining clips.
6. Install replacement switch (Figure 8, Item 2) into bracket retaining clips.
7. Connect wiring to replacement switch (Figure 8, Item 2) as tagged.
8. Install bracket (Figure 8, Item 1) onto dryer and retain with screws.
9. Install lint compartment access panel IAW WP 0033.
10. Switch the circuit breaker to ON and monitor for normal operation.

REPLACE – CONTINUED

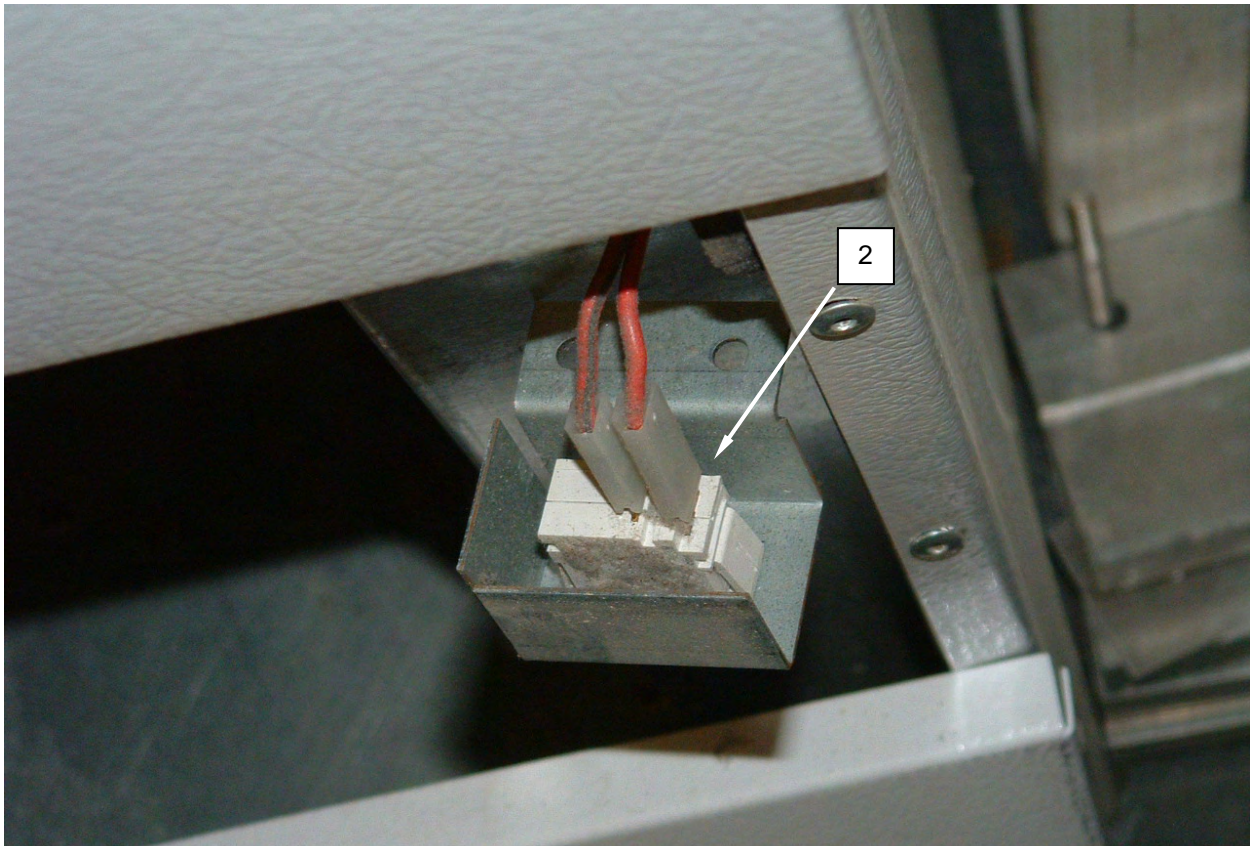
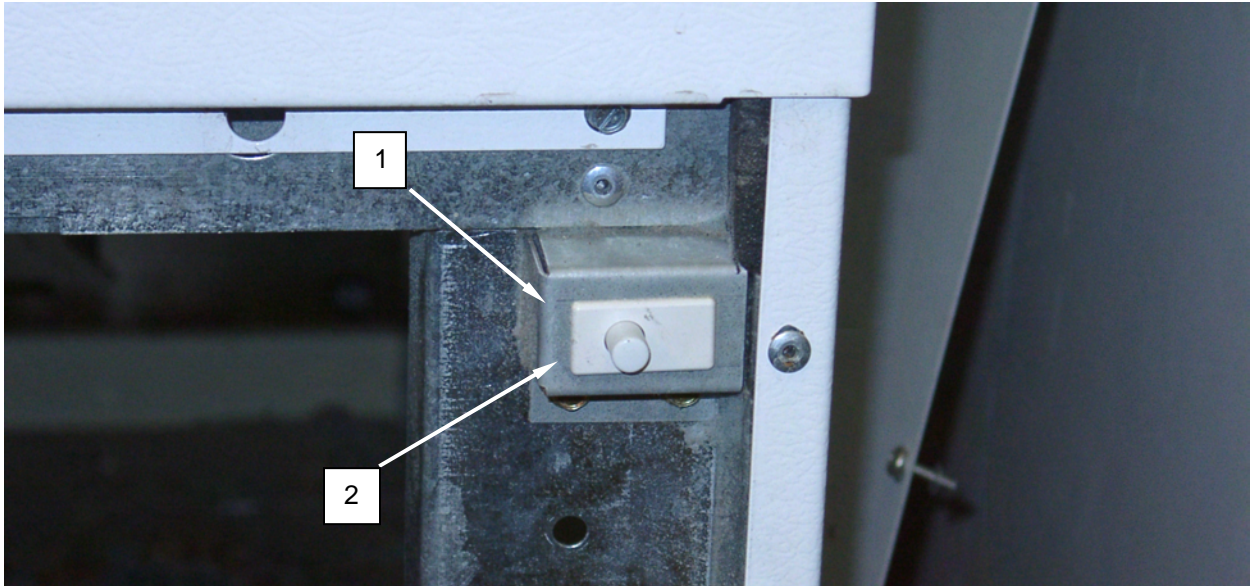


Figure 8. Replace the Dryer Lint Panel Switch.

END OF TASK

REPLACE – CONTINUED**Replace the Lint Compartment Thermistor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access door IAW WP 0033.
3. Remove screws retaining thermistor bracket (Figure 9, Item 1) and remove thermistor and bracket as an assembly.
4. Remove screws retaining thermistor guard (Figure 9, Item 2), and remove guard.
5. Tag and disconnect wiring from thermistor (Figure 9, Item 3).
6. Remove thermistor (Figure 9, Item 3) by unscrewing the thermistor from the bracket.
7. Install replacement thermistor (Figure 9, Item 3).
8. Reconnect wiring to thermistor (Figure 9, Item 3) as tagged.
9. Install thermistor guard (Figure 9, Item 2) and retain with screws.
10. Install thermistor (Figure 9, Item 3) and bracket (Figure 9, Item 1) as an assembly and retain with screws.
11. Install lint compartment access door IAW WP 0033.
12. Switch the circuit breaker to ON and monitor for normal operation.

REPLACE – CONTINUED

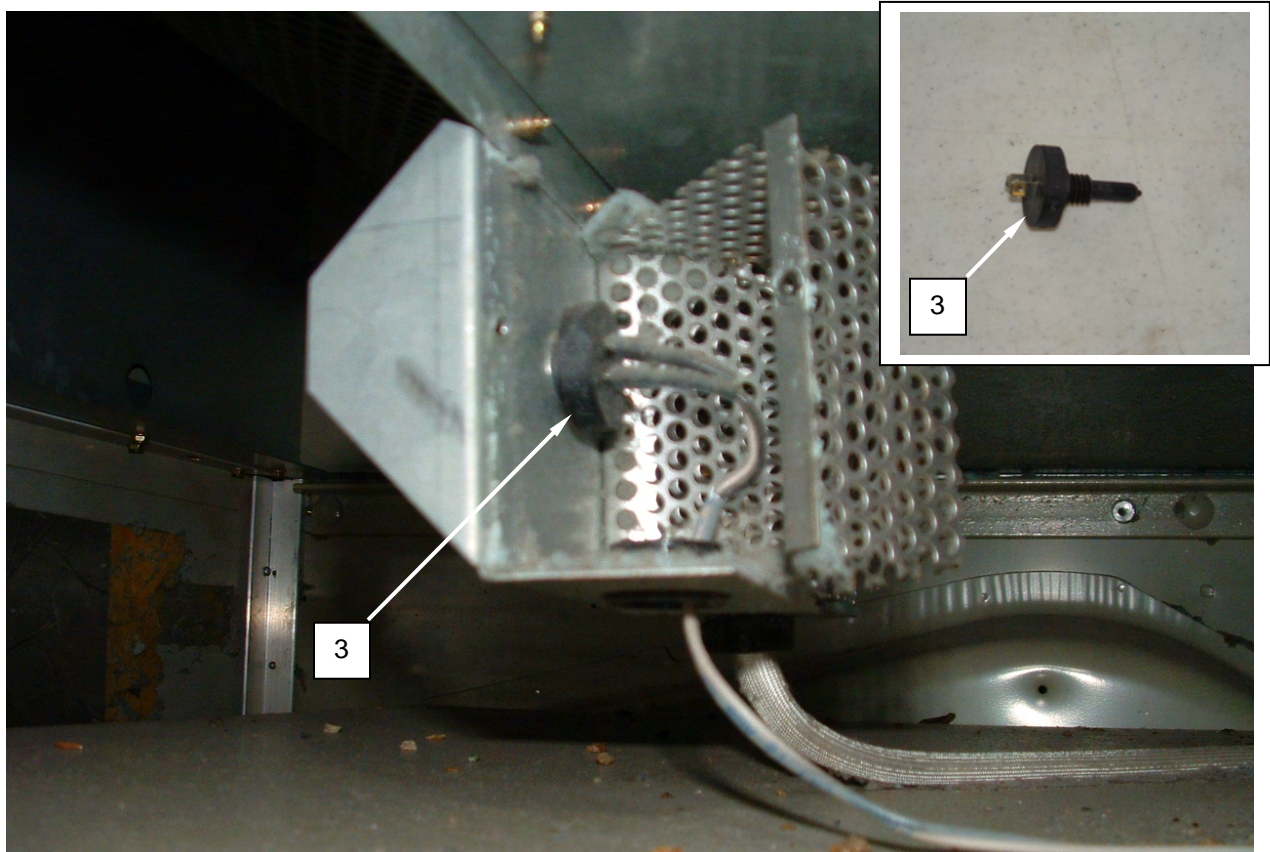
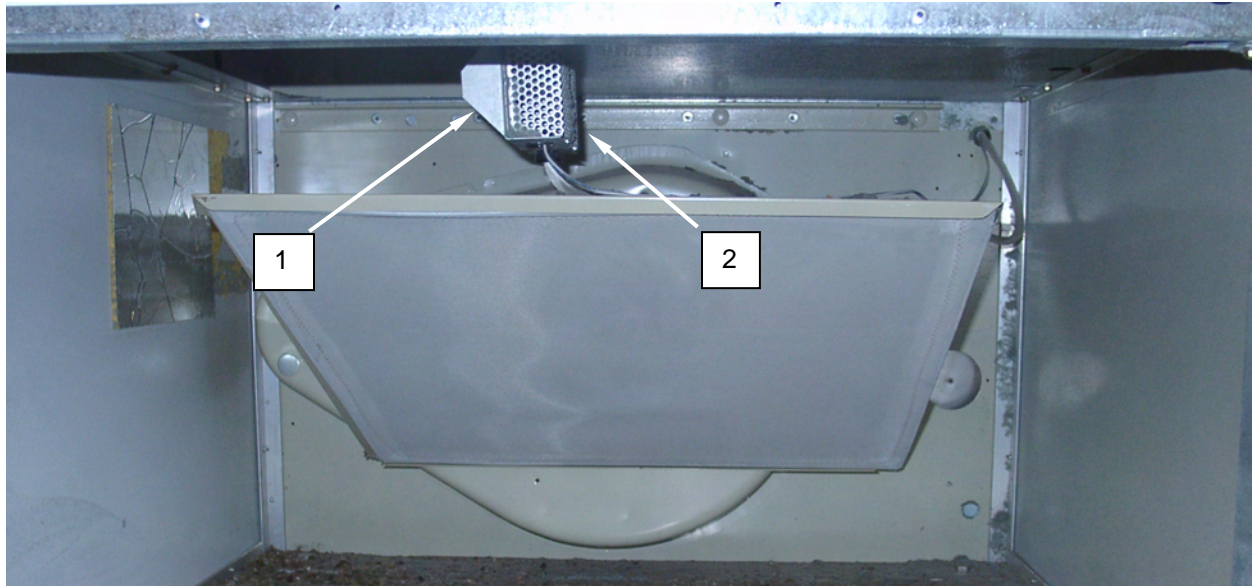


Figure 9. Replace the Lint Compartment Thermistor.

END OF TASK

REPLACE – CONTINUED**Replace the High Limit Thermostat****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Tag and disconnect wiring from thermostat (Figure 10, Item 1).
4. Remove the screws retaining the thermostat (Figure 10, Item 1) and remove the thermostat.
5. Install the replacement thermostat (Figure 10, Item 1) and retain with screws.
6. Connect wiring to thermostat (Figure 10, Item 1) as tagged.
7. Install top front panel.
8. Switch the circuit breaker to ON and monitor for normal operation.

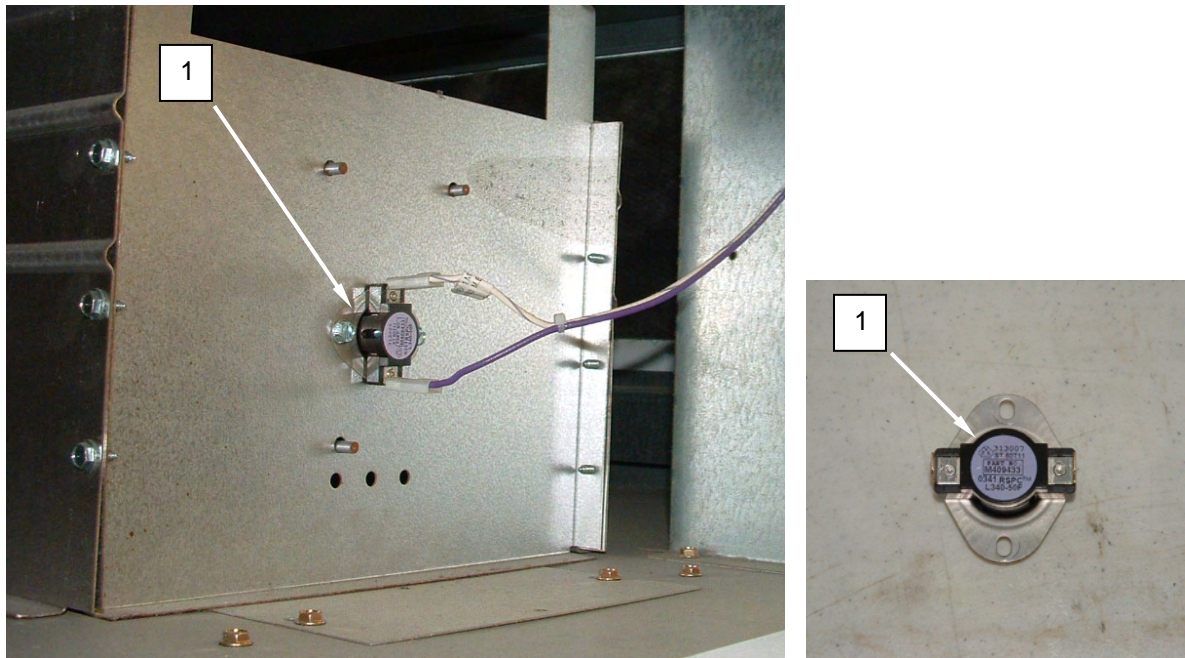


Figure 10. Replace the High Limit Thermostat.

END OF TASK

REPLACE – CONTINUED**Replace the Thermostat****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove lint compartment access door IAW WP 0033.
3. Remove screws retaining thermostat bracket (Figure 11, Item 1) assembly and remove thermostat and bracket as an assembly.
4. Remove screws retaining thermostat guard (Figure 11, Item 2) and remove guard.
5. Tag and disconnect wiring from thermostat (Figure 11, Item 3).
6. Remove screws retaining thermostat (Figure 11, Item 3) to bracket (Figure 11, Item 1) and remove thermostat.
7. Install replacement thermostat (Figure 11, Item 3) onto bracket (Figure 11, Item 1) and retain with screws.
8. Connect wiring to thermostat (Figure 11, Item 3) as tagged.
9. Install thermostat guard (Figure 11, Item 2) and retain with screws.
10. Install thermostat (Figure 11, Item 3) and bracket (Figure 11, Item 1) as an assembly and retain with screws.
11. Install lint compartment access door IAW WP 0033.
12. Switch the circuit breaker to ON and monitor for normal operation.

REPLACE – CONTINUED

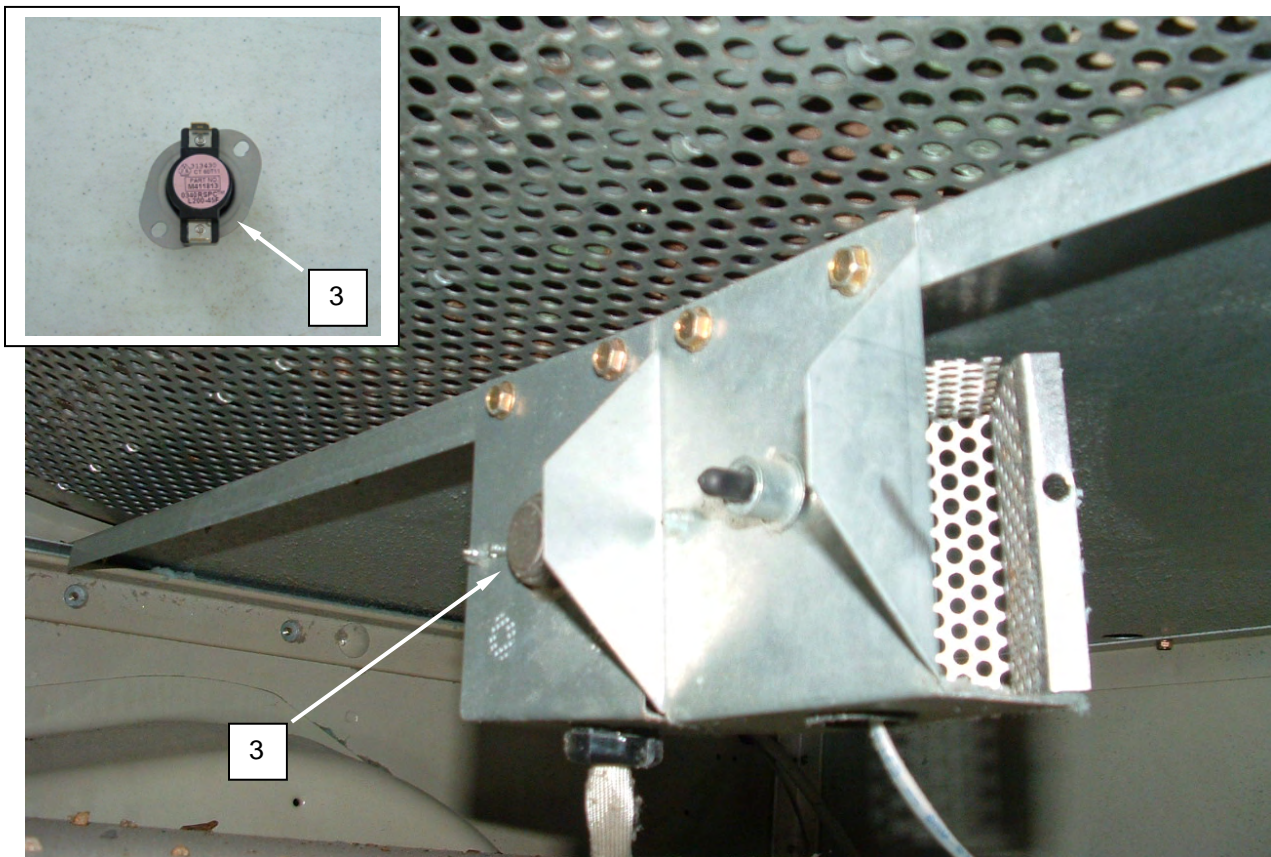
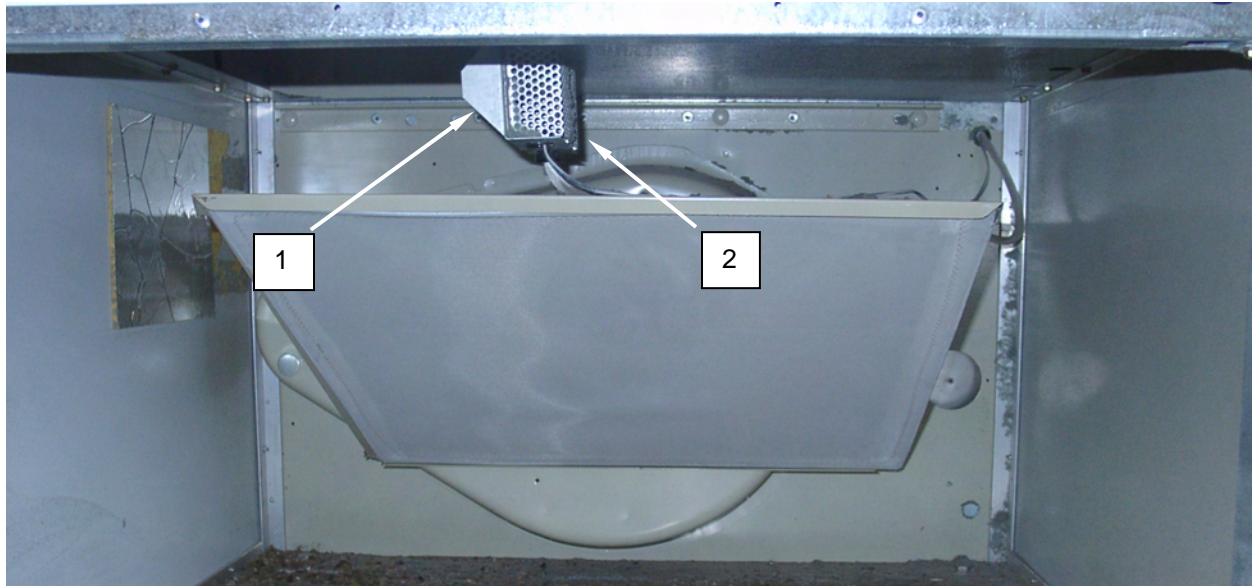


Figure 11. Replace the Thermostat.

END OF TASK

REPLACE – CONTINUED**Replace the Dryer Door Switch****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Open dryer door.
3. Remove the switch (Figure 12, Item 1) by prying gently with a small screwdriver.

NOTE

Do not allow wiring to fall back through switch opening. Wrap tape or a wire tie around the switch wiring if necessary to keep the wiring from falling back into the dryer.

4. Tag and disconnect wiring from switch (Figure 12, Item 1).
5. Connect wiring to replacement switch (Figure 12, Item 1) as tagged.
6. Install switch (Figure 12, Item 1).
7. Close dryer door.
8. Switch the circuit breaker to ON and monitor for normal operation.

REPLACE – CONTINUED

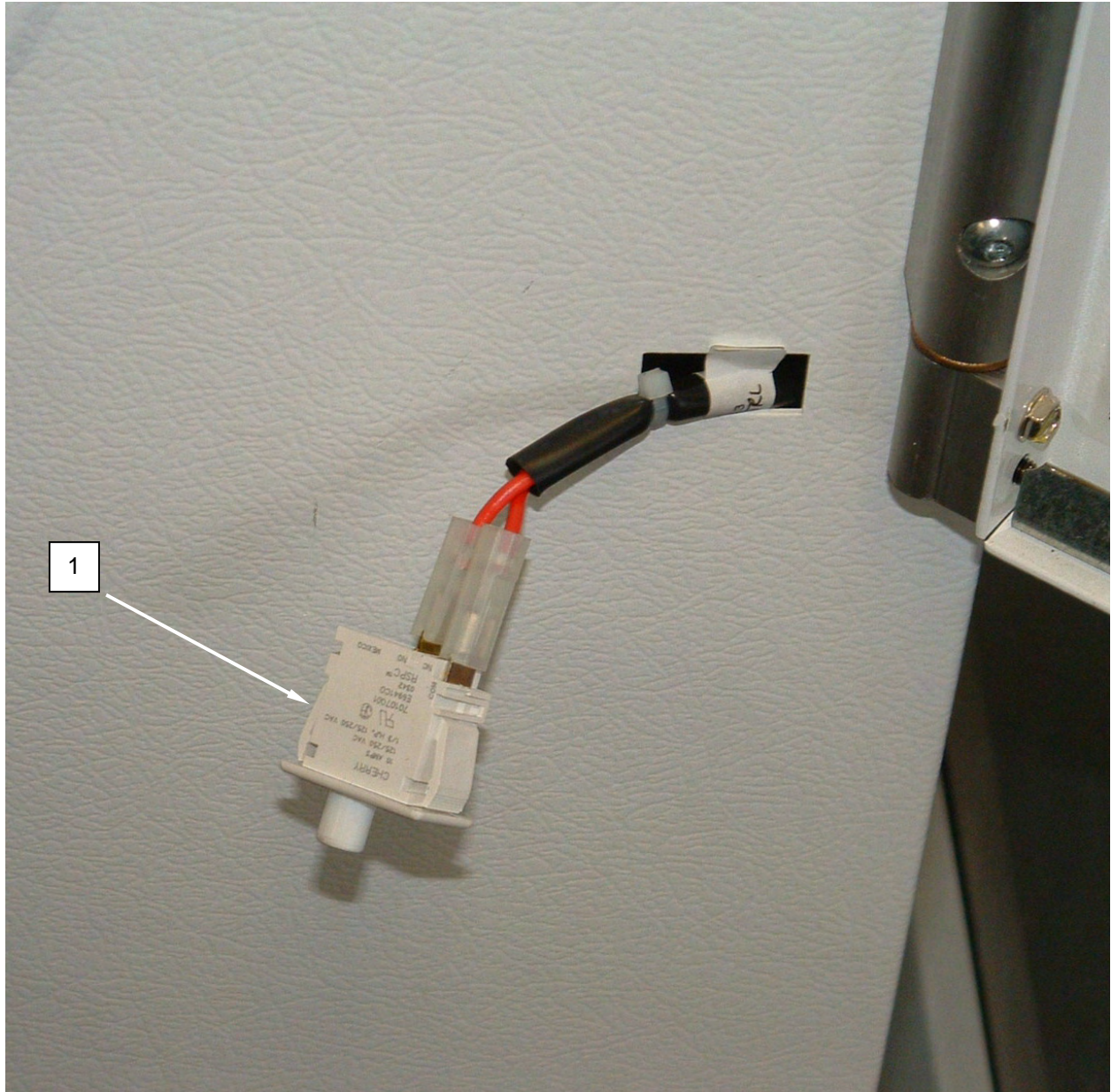


Figure 12. Replace the Dryer Door Switch.

END OF TASK

REPLACE – CONTINUED**Replace the Control Panel****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Remove screws retaining control panel door, and open door.
4. Tag and disconnect wiring from control panel printed circuit board (Figure 13, Item 1).
5. Remove nuts (Figure 13, Item 2) retaining control panel (Figure 13, Item 1) and remove control panel.
6. Install replacement control panel and retain with nuts (Figure 13, Item 2).
7. Connect wiring to replacement control panel printed circuit board (Figure 13, Item 1) as tagged.
8. Close control panel door, and secure in place with screws.
9. Install top front panel.
10. Connect power and monitor for normal operation.

REPLACE – CONTINUED

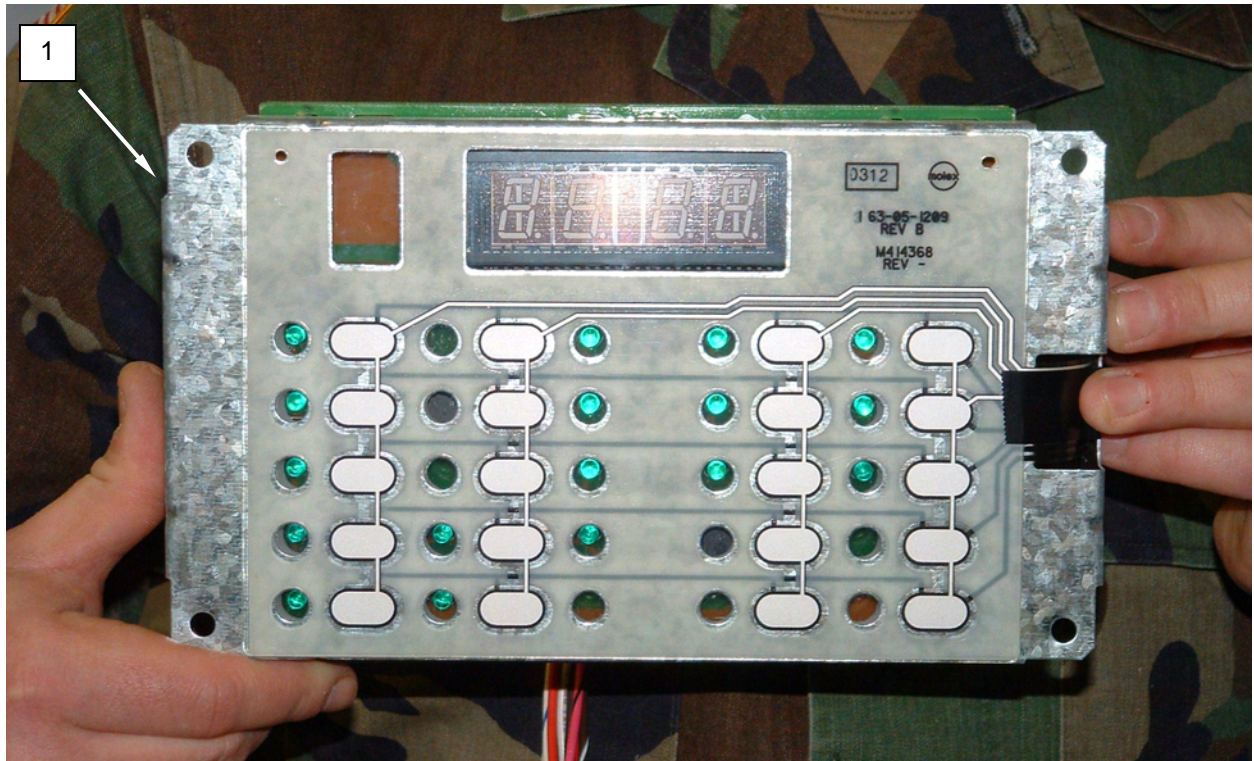
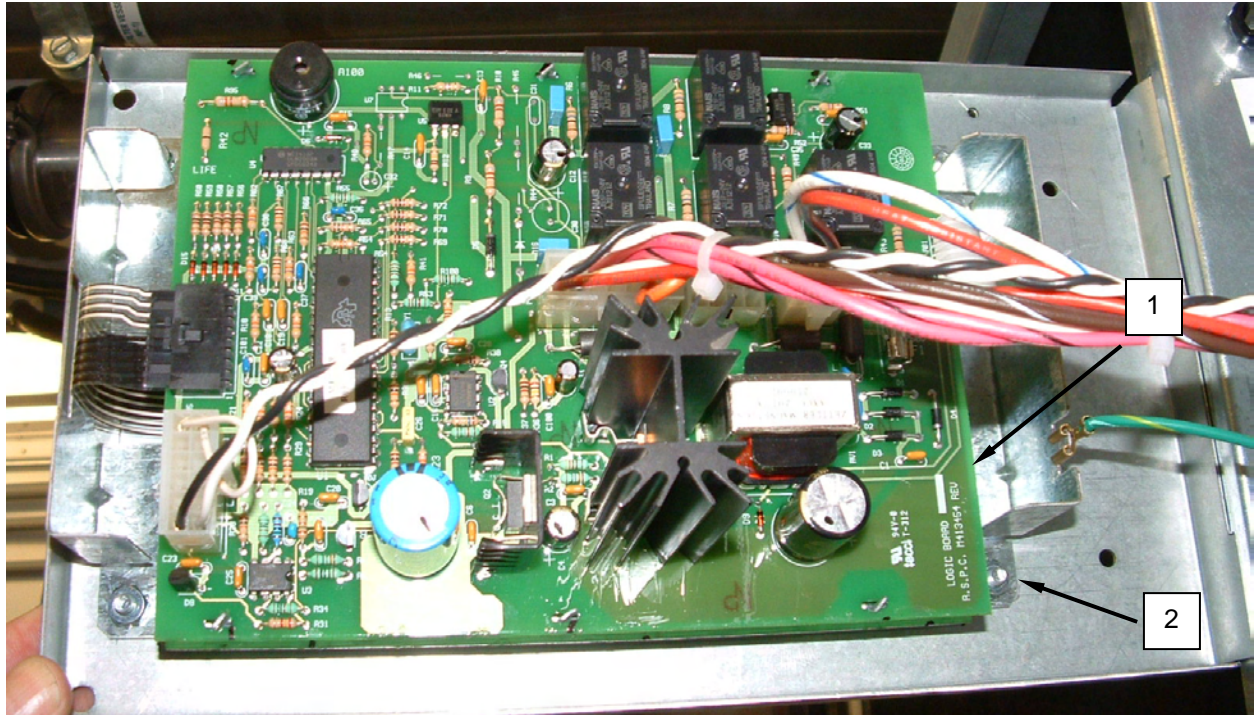


Figure 13. Replace the Control Panel Display.

END OF TASK

REPLACE – CONTINUED**Replace the Control Panel Display Overlay**

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Remove overlay (Figure 14, Item 1) from display. Ensure all traces of the old overlay and adhesive are removed.
4. Install replacement overlay (Figure 14, Item 1).
5. Connect power and monitor for normal operation.

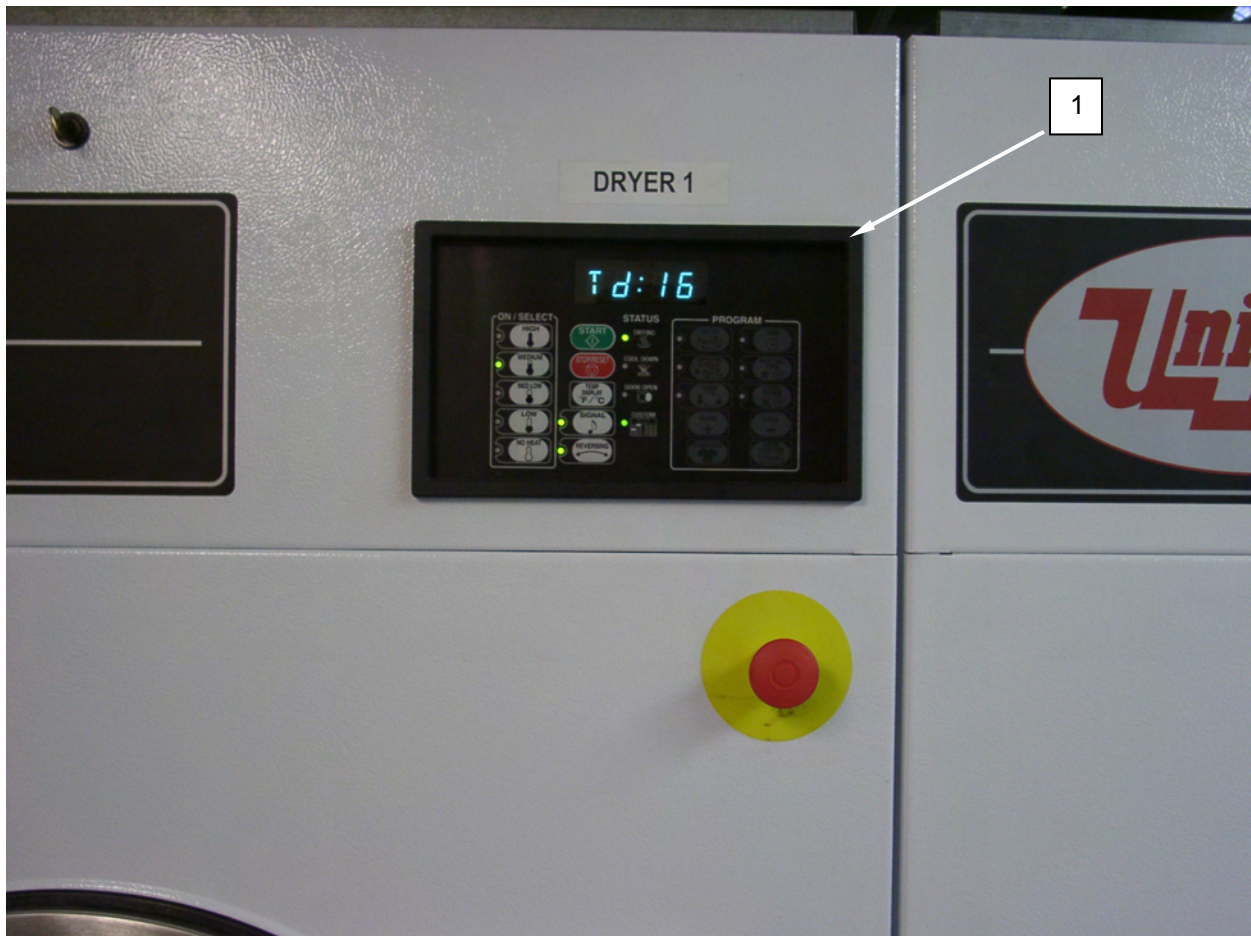


Figure 14. Replace the Control Panel Display Overlay.

END OF TASK

REPLACE – CONTINUED**Replace the Control Panel Fuses****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Remove screws retaining control panel door, and open door.
4. Remove the secondary fuse from fuse holder (Figure 15, Item 1).
5. Install the replacement secondary fuse into fuse holder (Figure 15, Item 1)
6. Remove the primary fuse (Figure 15, Item 2) from the printed circuit board.
7. Install the replacement primary fuse (Figure 15, Item 2) into the printed circuit board.
8. Close control panel door, and secure in place with screws.
9. Install top front panel.

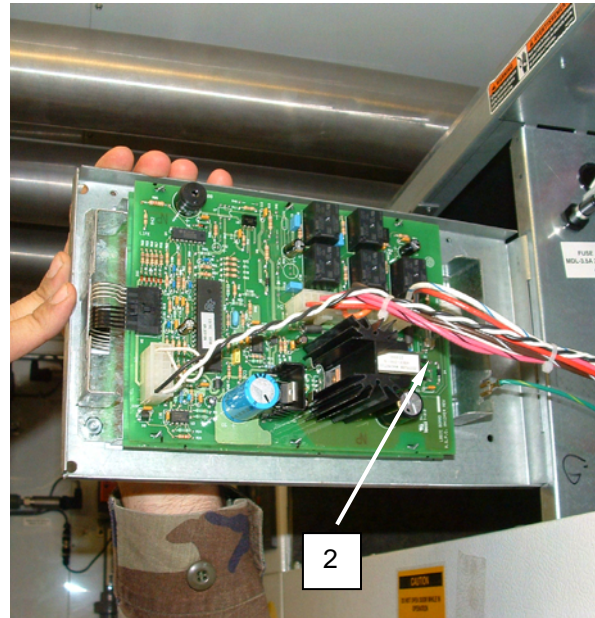
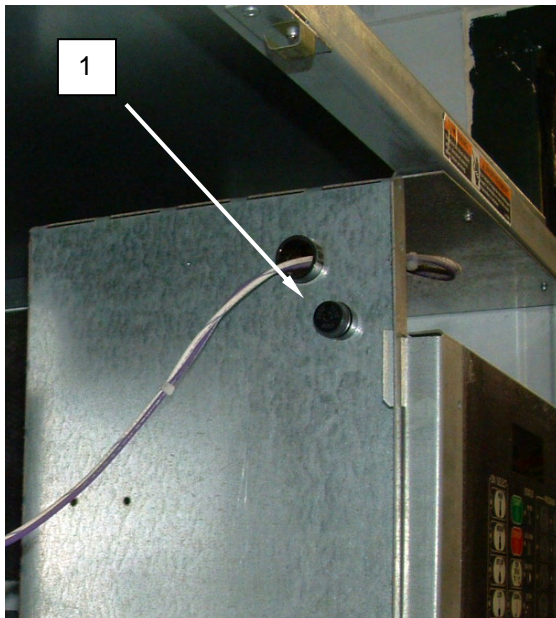


Figure 15. Replace the Control Panel Fuses.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRYER EMERGENCY STOP SWITCH
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

ReferencesWP 0007
WP 0033**TEST****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch the dryer circuit breaker to OFF.
2. Remove top front panel (Figure 1, Item 2) and the lint compartment access door (Figure 1, Item 3).
3. Open control panel (Figure 1, Item 4).
4. Remove the screws retaining the door (Figure 1, Item 1) and remove the door.

NOTE

Remove the bottom screws retaining the dryer front first, then the side screws, and then the top screws.

NOTE

The emergency stop switch and door switch will still be connected to the dryer front.

5. Remove screws retaining dryer front (Figure 1, Item 5) and remove dryer front.

TEST – CONTINUED



Figure 1. Test the Dryer Emergency Stop Switch.

TEST – CONTINUED

6. Disconnect wiring from switch (Figure 2, Item 1).
7. Depress switch (Figure 2, Item 1) to open circuit, and use an ohmmeter to test for infinite resistance.
8. Reset switch (Figure 2, Item 1), and use an ohmmeter to test for zero ohms resistance.
9. Replace a switch (Figure 2, Item 1) that fails either test.
10. Reconnect wiring as tagged.
11. Install dryer front (Figure 1, Item 5), and retain with screws
12. Close control panel (Figure 1, Item 4).
13. Install door (Figure 1, Item 1) and retain with screws.
14. Install top front panel (Figure 1, Item 2) and lint compartment panel (Figure 1, Item 3).
15. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

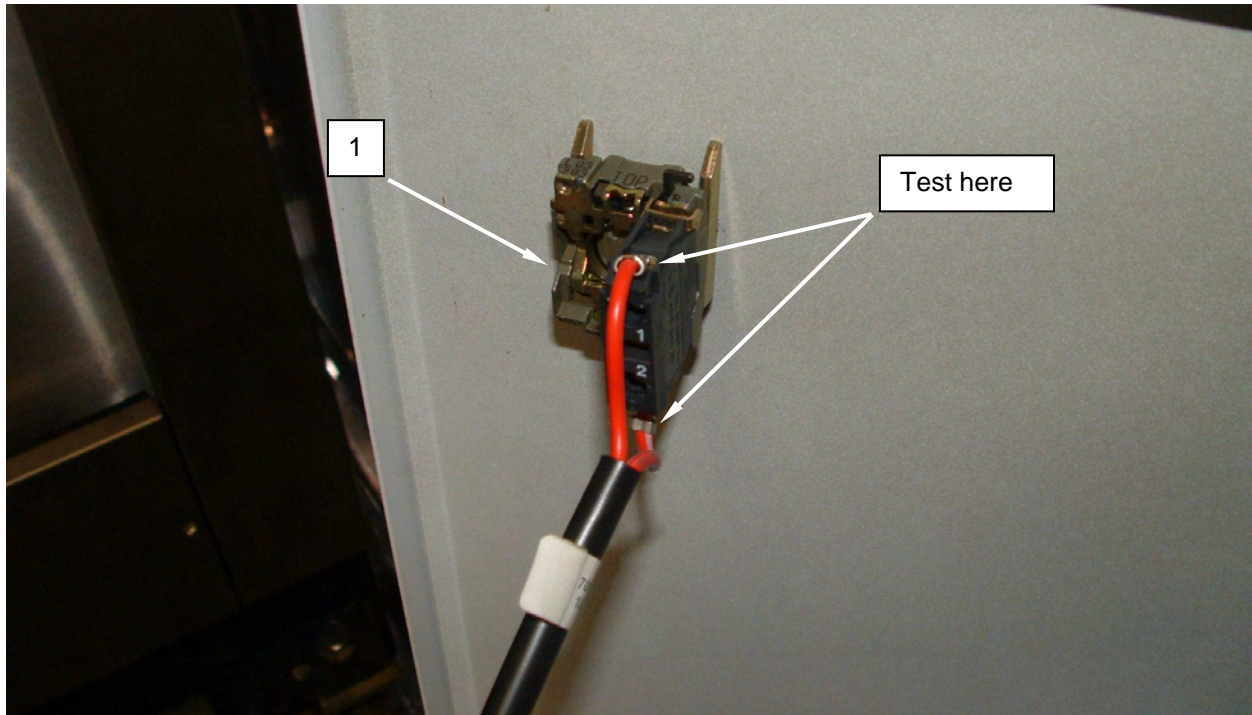


Figure 2. Test the Dryer Emergency Stop Switch.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Switch the dryer circuit breaker to OFF.
2. Remove top front panel (Figure 3, Item 2) and the lint compartment access door (Figure 3, Item 3).
3. Open control panel (Figure 3, Item 4).
4. Remove the screws retaining the door (Figure 3, Item 1) and remove the door.

NOTE

Remove the bottom screws retaining the dryer front first, then the side screws, and then the top screws.

NOTE

The emergency stop switch and door switch will still be connected to the dryer front.

5. Remove screws retaining dryer front (Figure 3, Item 5) and remove dryer front.

REPLACE – CONTINUED



Figure 3. Replace the Dryer Emergency Stop Switch.

REPLACE – CONTINUED

6. Tag and disconnect wiring from switch (Figure 4, Item 1).
7. Remove switch (Figure 4, Item 1) by lifting switch release lever (Figure 4, Item 2) and separating the two switch halves.
8. Install replacement switch (Figure 4, Item 1).
9. Reconnect wiring as tagged.
10. Install dryer front (Figure 3, Item 5) and retain with screws
11. Close control panel (Figure 3, Item 4)
12. Install door (Figure 3, Item 1) and retain with screws.
13. Install top front panel (Figure 3, Item 2) and lint compartment panel (Figure 3, Item 3).
14. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

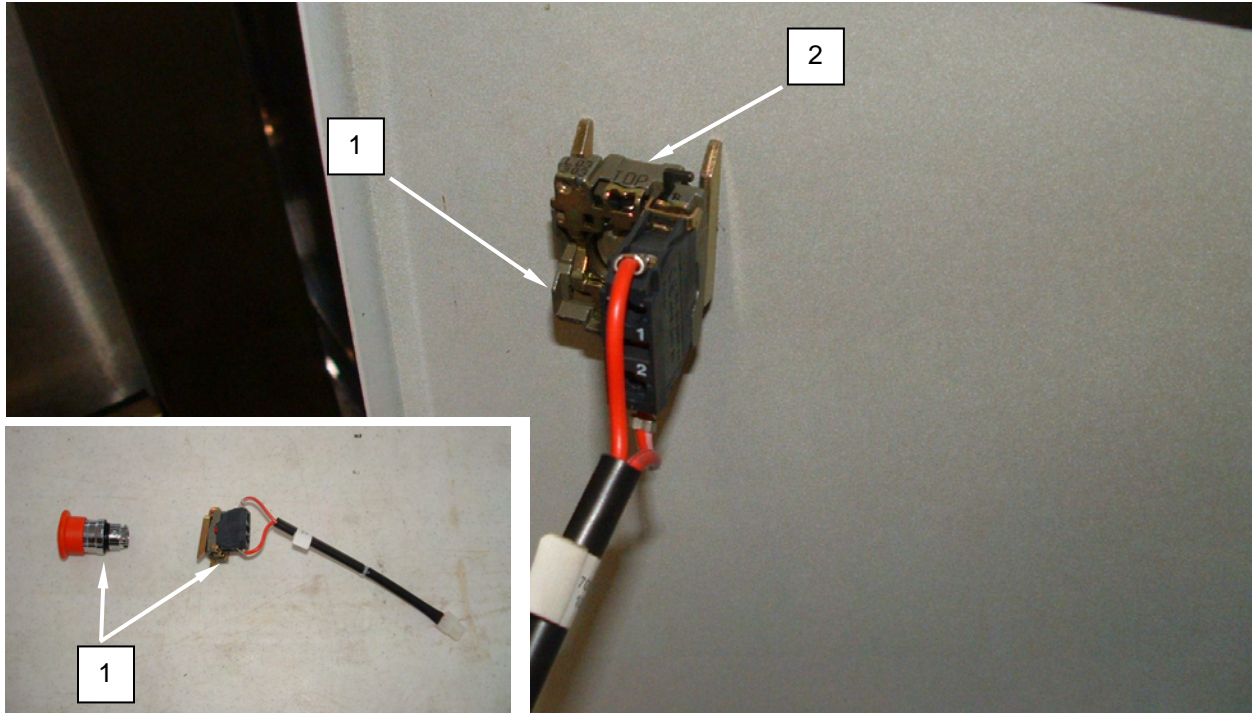


Figure 4. Replace the Dryer Emergency Stop Switch.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**HEATING ELEMENTS
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

References

WP 0007

TEST**WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the screws retaining the perforated element guard (Figure 1, Item 3), and remove the guard.
3. Tag and disconnect the wiring from the element terminals (Figure 1, Item 1). Reinstall the terminal nuts (Figure 1, Item 2) for testing.
4. Use a multimeter to check for 4.0 ohms resistance (± 1.0 ohm) between element terminals (Figure 1, Item 1) as indicated in Figure 1.
5. Use a multimeter to test for infinite resistance between each element terminal (Figure 1, Item 1) and ground.
6. Replace elements that are open or shorted.
7. Remove terminal nuts (Figure 1, Item 2) and reconnect wiring as tagged.
8. Install perforated element guard, and retain with screws.
9. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

TEST – CONTINUED

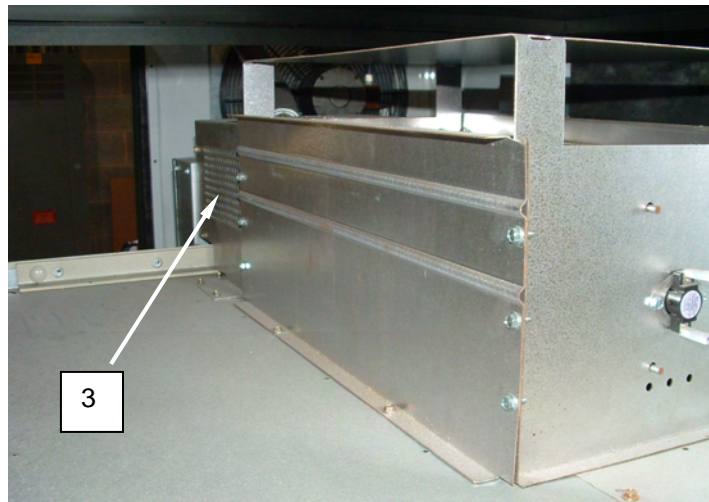
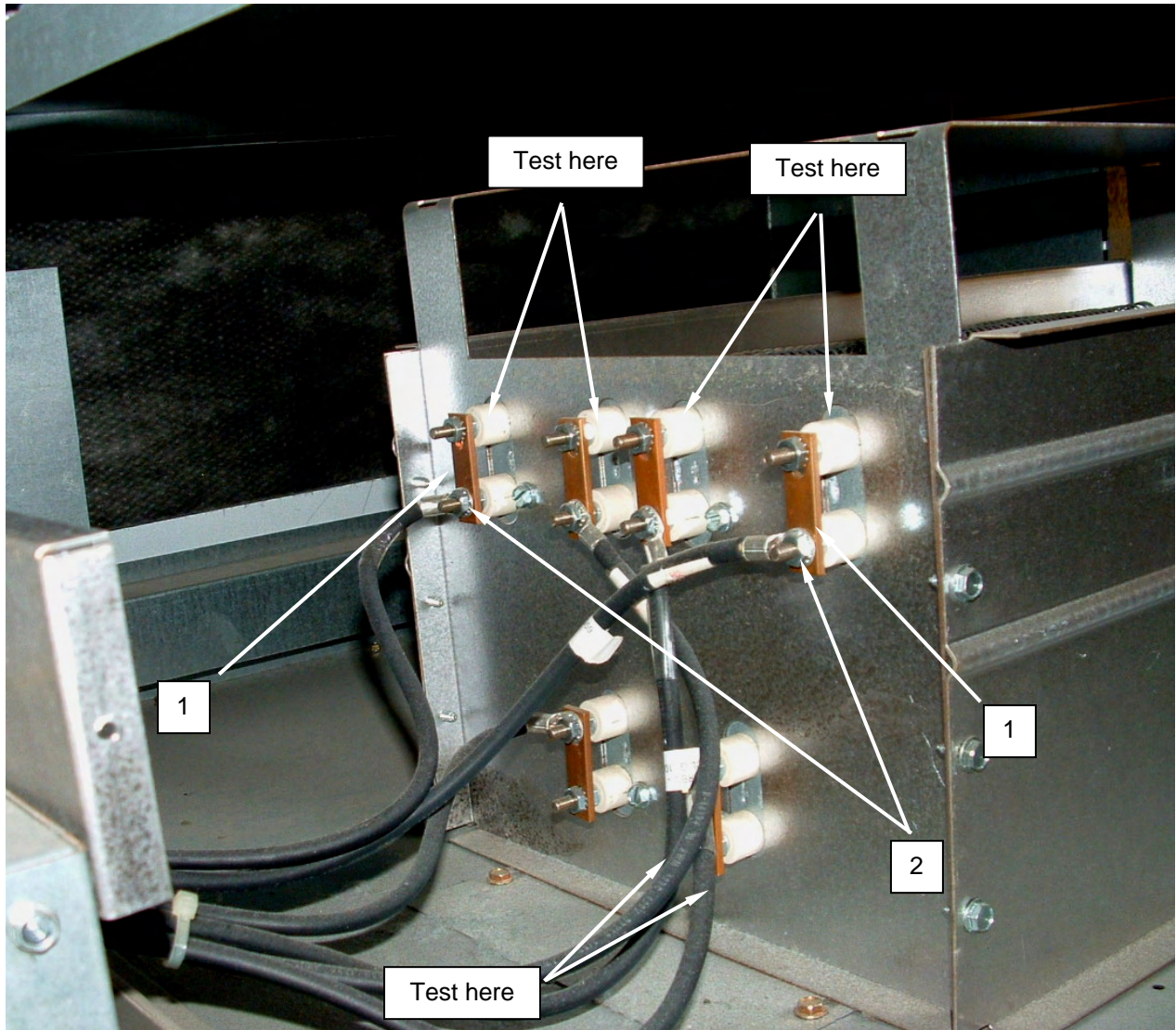


Figure 1. Test the Dryer Heating Elements.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove the top front panel of the dryer using the dryer key.
3. Disconnect the wiring from the high limit thermostat (Figure 2, Item 3).
4. Remove the screws retaining the perforated element guard, and remove the guard.
5. Tag and disconnect the wiring from the elements (Figure 2, Item 5).
6. Remove the screws retaining the element assembly (Figure 2, 3, Item 3), and remove the element assembly.
7. Remove the side covers (Figure 2, 3, Item 4) from the element assembly (Figure 2, 3, Item 3).
8. Remove the screws retaining the element (Figure 2, 3, Item 2) to be replaced, and remove the element. Retain the copper bus bars (Figure 2, Item 4) for installation on the replacement element
9. Install the retained copper bus bars (Figure 2, Item 4) on the replacement element, and install the replacement element (Figure 2, 3, Item 1) into the element assembly (Figure 2, 3, Item 2), and retain with screws.
10. Install the side covers (Figure 2, 3, Item 4) onto the element assembly (Figure 2, 3, Item 2).
11. Install the replacement element assembly (Figure 2, Item 5), and retain with screws.
12. Connect wiring to elements (Figure 2, Item 3) as tagged.
13. Reconnect wiring to high limit thermostat, and install the top front panel of the dryer.
14. Install perforated element guard, and retain with screws.
15. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

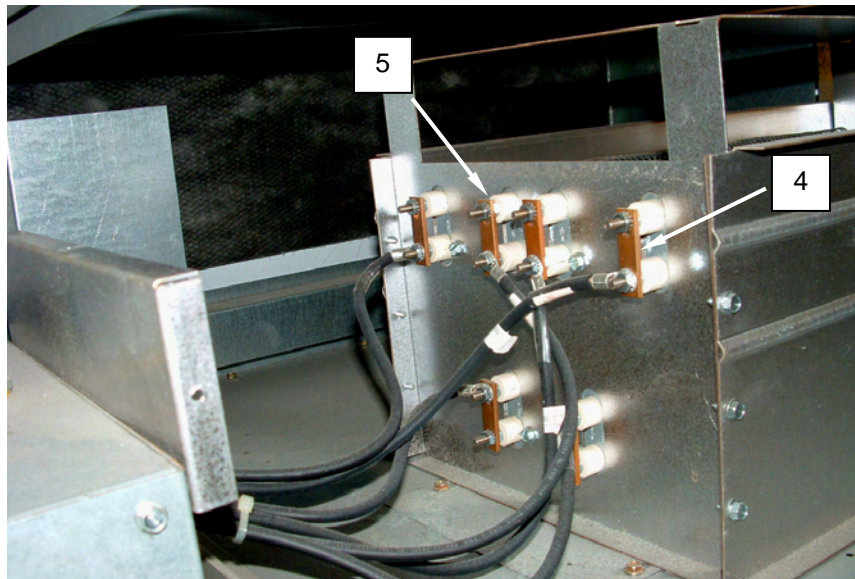
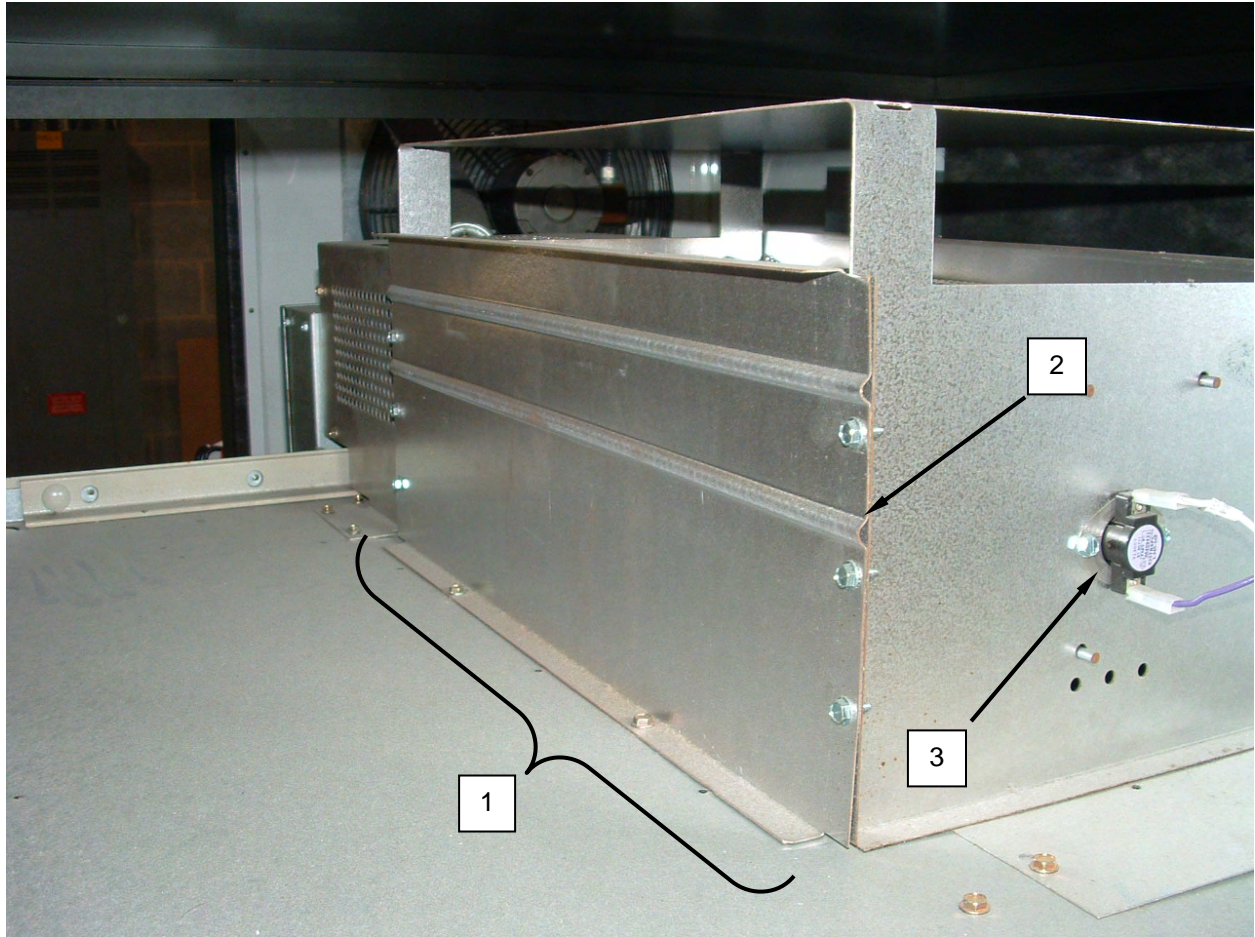


Figure 2. Replace the Dryer Heating Elements.

REPLACE – CONTINUED

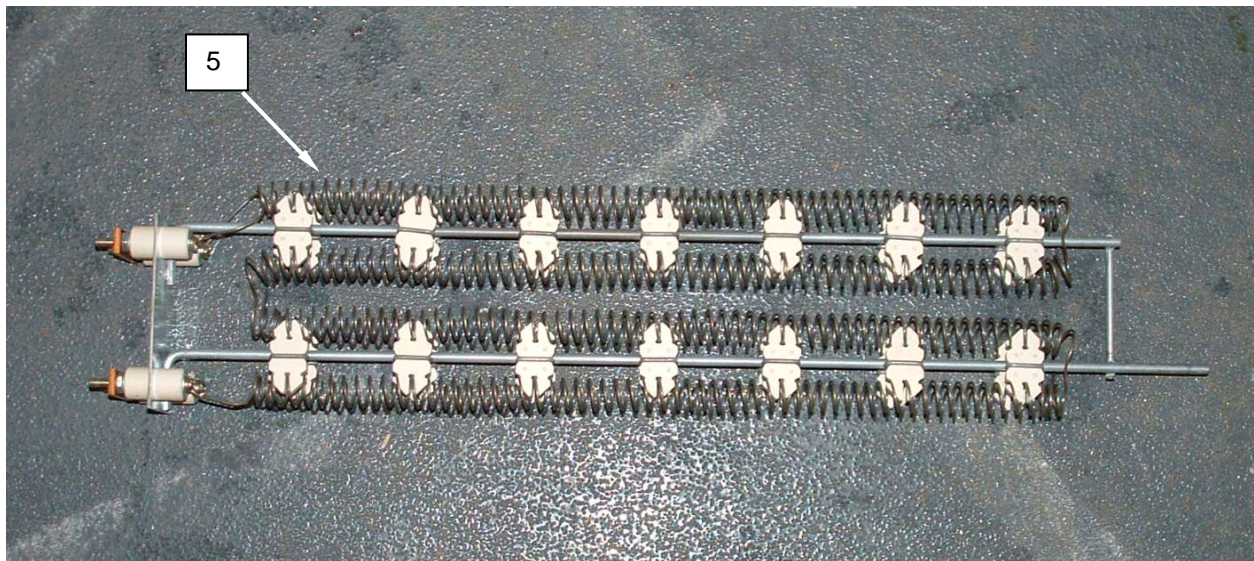
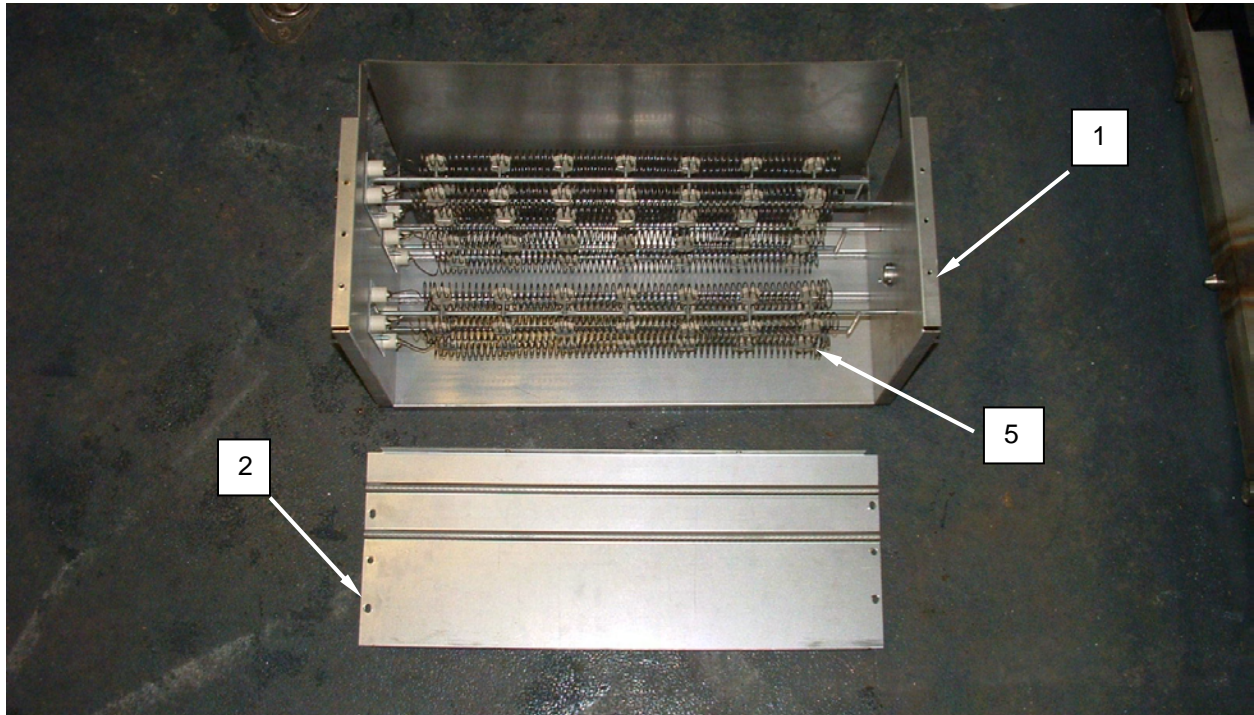


Figure 3. Replace the Dryer Heating Elements.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**DRIVE BELTS, DRYER
INSPECT, ADJUST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)

Materials/Parts

None required.

Equipment Condition

FP-CBL set up

References

WP 0007

INSPECT**WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove screws retaining belt guard and remove belt guard.
3. Inspect each belt (Figure 1, Item 1) for approximately ½-inch deflection.
4. Inspect each belt (Figure 1, Item 1) for glazing, cuts, and shredding.
5. Adjust belts (Figure 1, Item 1) with improper deflection.
6. Replace belts (Figure 1, Item 1) with physical damage or which cannot be adjusted.
7. Install belt guard, and retain with screws.
8. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

INSPECT – CONTINUED

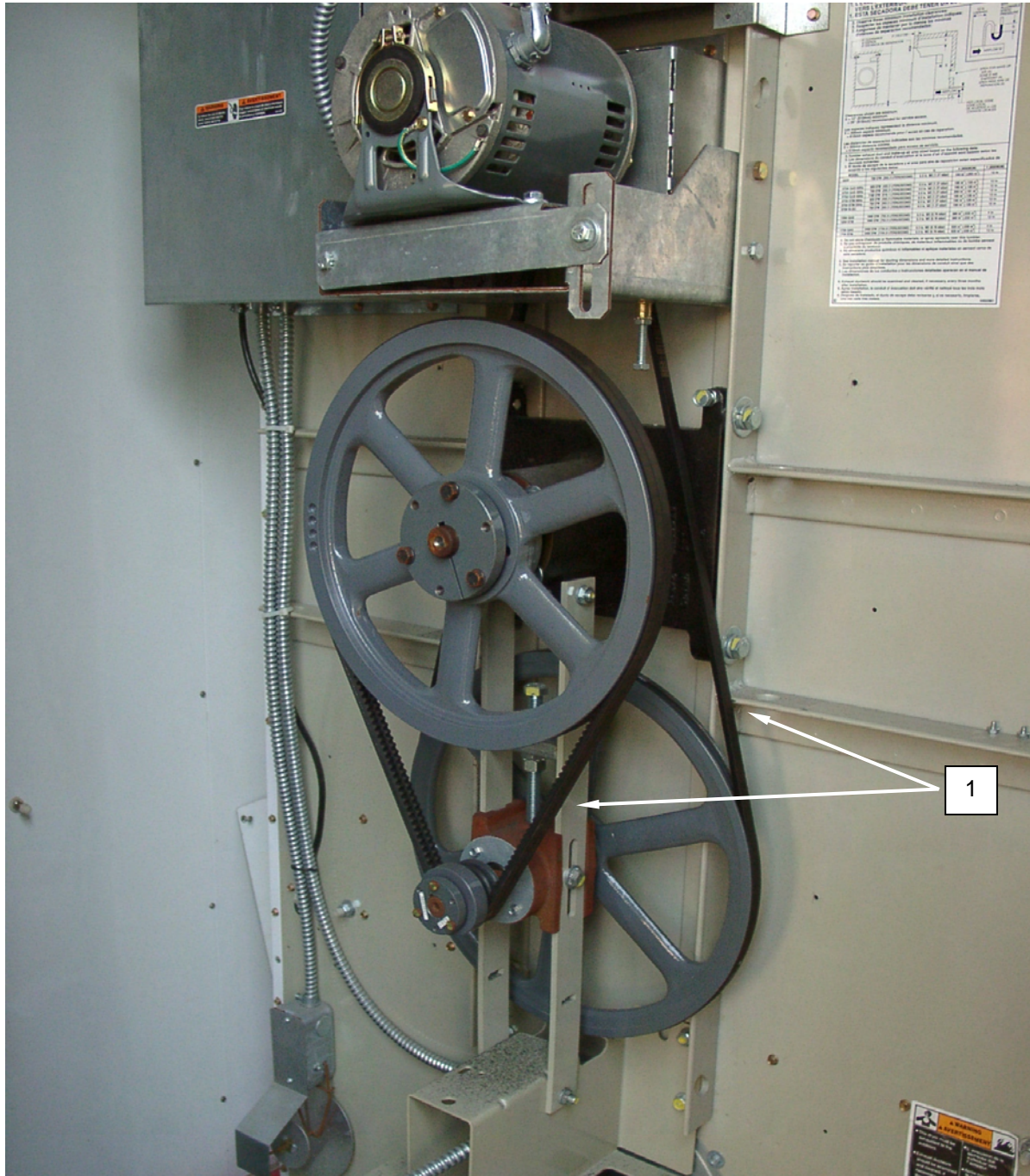


Figure 1. Inspect the Dryer Drive Belts.

END OF TASK

ADJUST

WARNING

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove screws retaining belt guard, and remove belt guard.
3. Adjust outer belt (Figure 2, Item 5) first by loosening pulley adjusting screws (Figure 2, Item 3), increasing or easing tension on belt by moving idler housing (Figure 2, Item 4) up or down, and locking idler housing in place. A correctly adjusted belt should have approximately ½-inch deflection.
4. Adjust inner belt (Figure 2, Item 2) by loosening motor adjustment (Figure 2, Item 1), increasing or easing tension as necessary by moving motor up or down, and locking motor in place. A correctly adjusted belt should have approximately ½-inch deflection.
5. Recheck all belt tensions after completing last adjustment.
6. Install belt guard and retain with screws.
7. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

ADJUST – CONTINUED

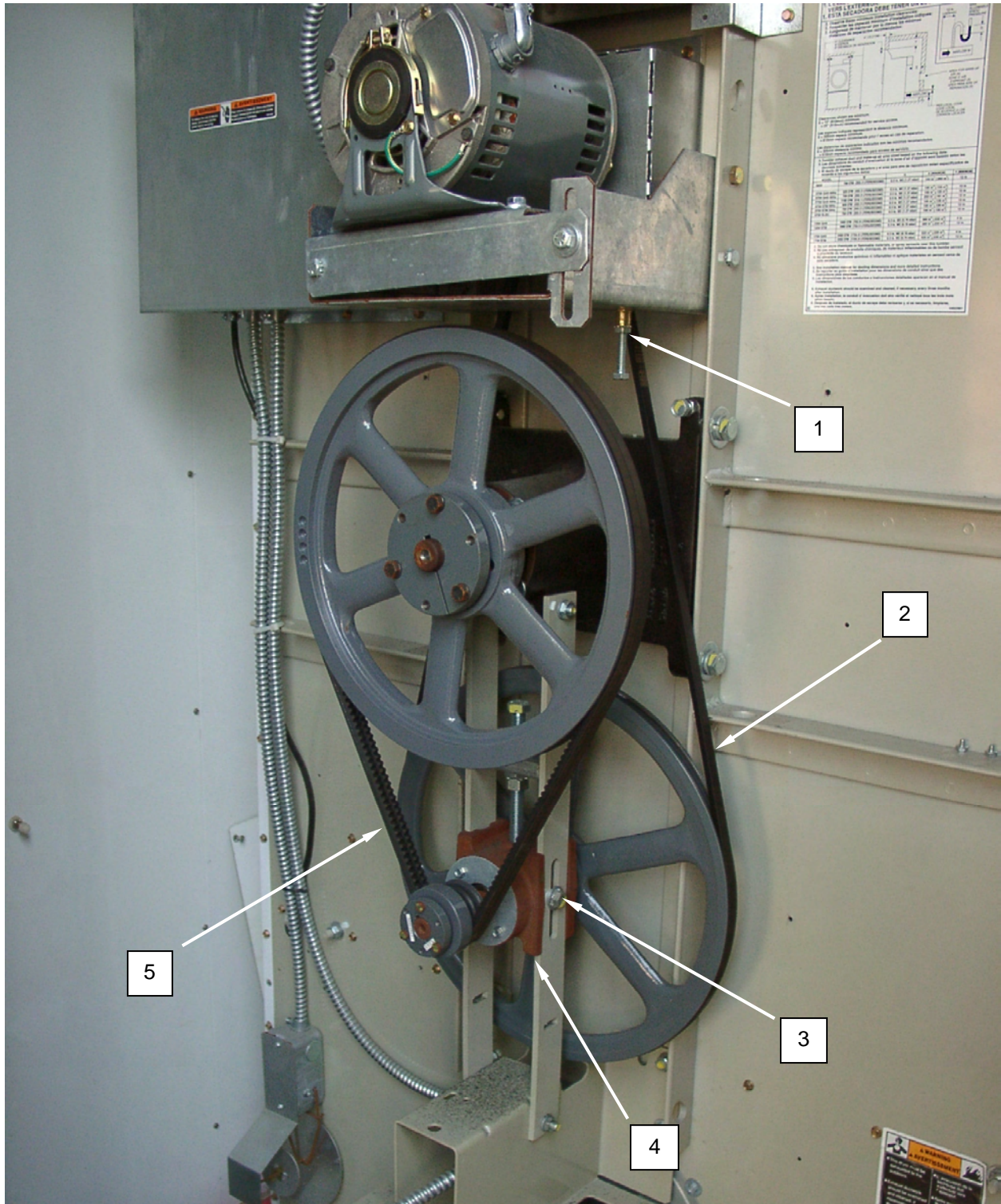


Figure 2. Adjust the Dryer Drive Belts.

END OF TASK

REPLACE**WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

NOTE

Replace the belts as a set.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove screws retaining the belt guard and remove belt guard.
3. Loosen screws retaining the idler housing (Figure 3, Item 3) and release tension from outer belt (Figure 3, Item 1).
4. Remove outer belts (Figure 3, Item 1).
5. Remove the lower bolt (Figure 3, Item 4) from the idler housing (Figure 3, Item 3) and allow the idler housing to swing out.
6. Remove inner belt (Figure 3, Item 2).
7. Install replacement inner belt (Figure 3, Item 2).
8. Position the idler housing (Figure 3, Item 3) back in place and retain with the lower bolt (Figure 3, Item 4).
9. Install replacement outer belts (Figure 3, Item 1).
10. Adjust belts.
11. Install belt guard and retain with screws.
12. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

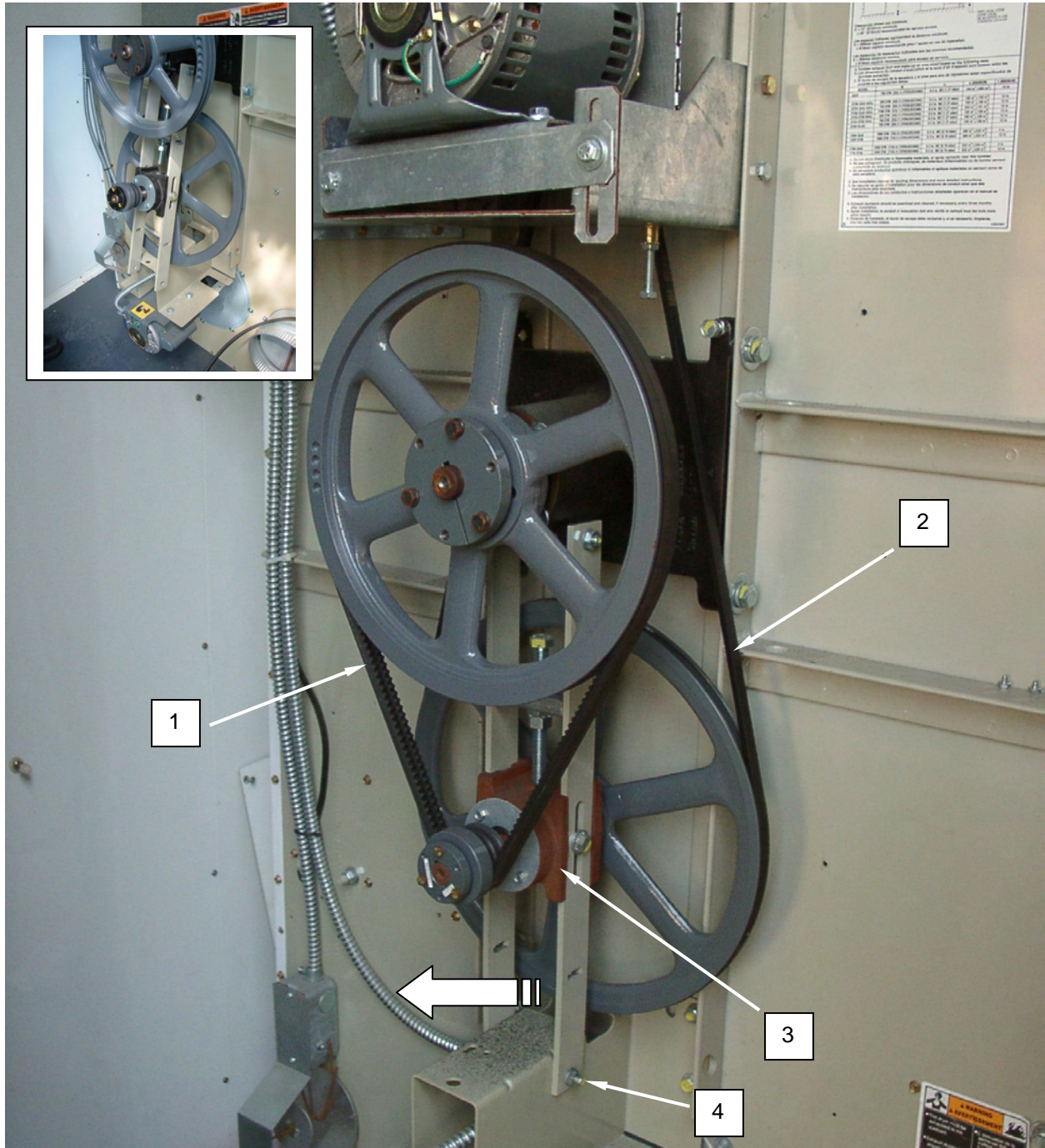


Figure 3. Replace the Dryer Drive Belts.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**AC CYLINDER DRIVE MOTOR
AC FAN MOTOR
TEST, REPLACE****INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (1)**Materials/Parts**

Wire Markers (WP 0101, Item 64)

Equipment Condition

FP-CBL set up

ReferencesWP 0007
WP 0078**TEST****Test the AC Cylinder Drive Motor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove screws retaining motor wiring access cover (Figure 1, Item 2) and remove motor wiring access cover.
3. Tag and disconnect wiring from motor (Figure 1, Item 1).
4. Use a multimeter to check for 10.0 to 12.0 ohms resistance between motor terminals.
5. Use a multimeter to check for infinite resistance between each motor terminal and ground.
6. Replace an open or shorted motor (Figure 1, Item 1).
7. Reconnect wiring as tagged.
8. Install motor wiring access cover (Figure 1, Item 2) and retain with screws.
9. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

TEST – CONTINUED

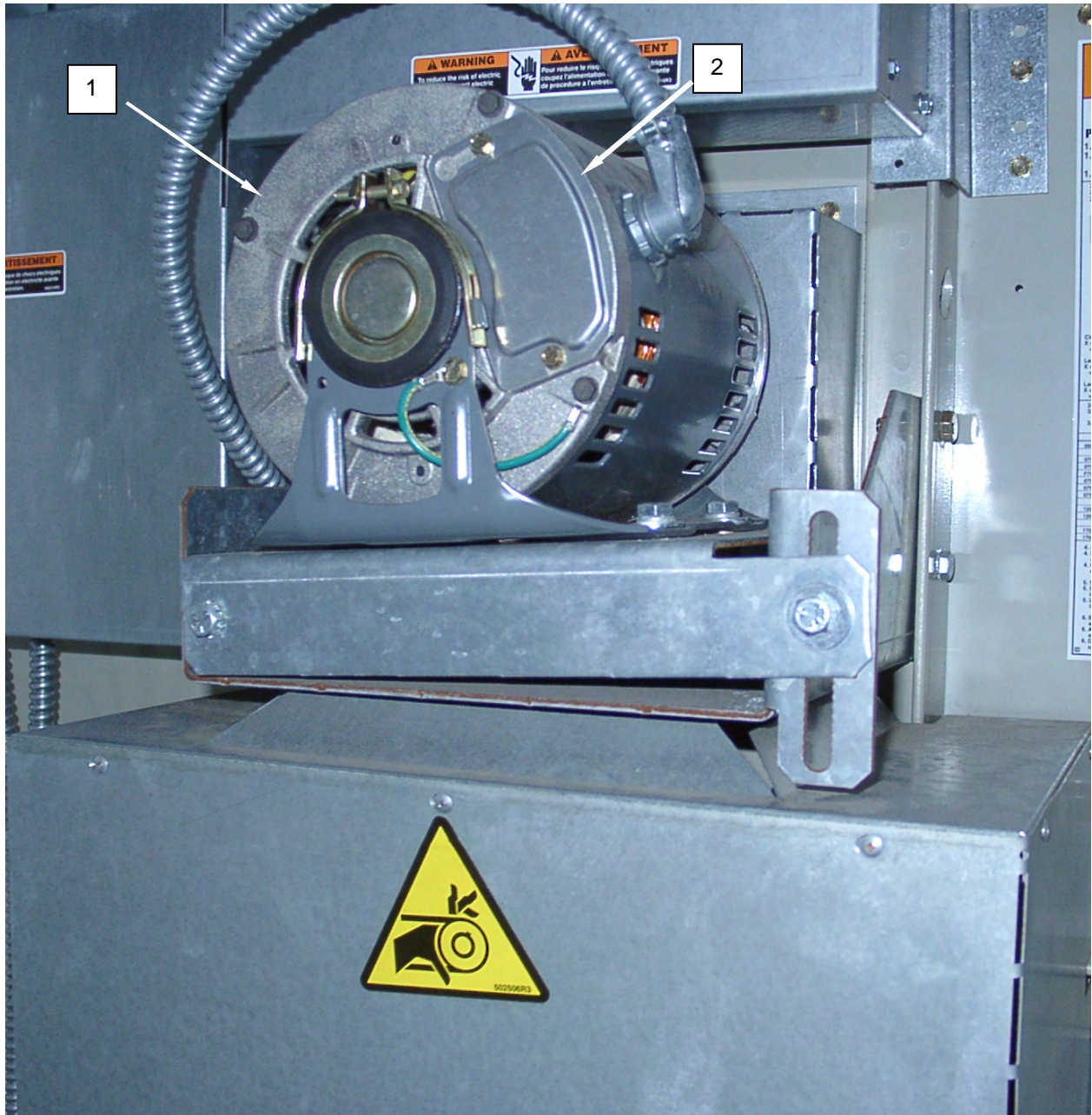


Figure 1. Test the AC Cylinder Drive Motor.

END OF TASK

TEST – CONTINUED**Test the AC Fan Motor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power.
2. Remove screws retaining contactor box cover on upper left rear corner of dryer and remove cover.
3. Locate the fan contactor (Figure 2, Item 1).
4. Tag and disconnect wires (Figure 2, Item 2) from T1 and T2.
5. Use a multimeter to test for 4.0 ohms resistance between disconnected wires (Figure 2, Item 2).
6. Use a multimeter to test for infinite resistance between each disconnected wire (Figure 2, Item 2) and ground.
7. Replace an open or shorted motor.
8. Connect wiring (Figure 2, Item 2) as tagged.
9. Install contactor box cover and retain with screws.
10. Connect power, operate IAW procedures given in WP 0007 and monitor for normal operation.

TEST – CONTINUED

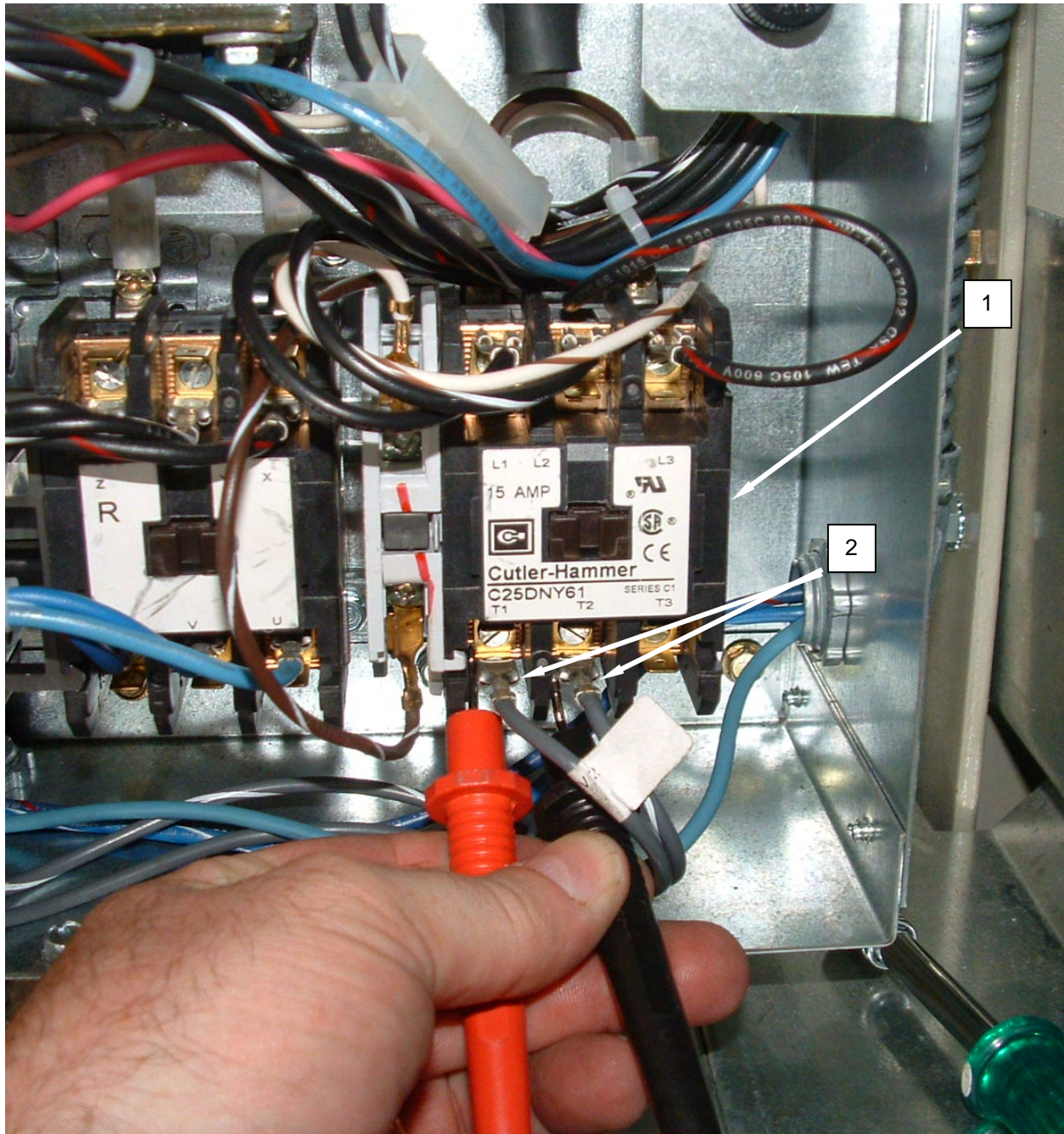


Figure 2. Test the AC Fan Motor.

END OF TASK

REPLACE**Replace the AC Cylinder Drive Motor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power by switching the dryer circuit breaker to OFF.
2. Remove screws retaining belt guard on rear of dryer and remove belt guard.
3. Remove screws retaining junction box cover (Figure 3, Item 1) and remove junction box cover.
4. Tag and disconnect wiring from motor (Figure 3, Item 4).
5. Remove conduit locknut, and remove conduit (Figure 3, Item 2) from junction box.
6. Adjust motor to relieve tension on belt (Figure 3, Item 3).
7. Remove screws, washers, and nuts retaining motor (Figure 3, Item 4) to motor mount and remove motor.
8. Install replacement motor (Figure 3, Item 4), and secure in place with screws, washers, and nuts.
9. Install inner belt (Figure 3, Item 3) onto replacement motor (Figure 3, Item 1) and adjust to ½-inch deflection.
10. Remove screws retaining junction box cover (Figure 3, Item 1) on replacement motor (Figure 3, Item 4), and remove cover.
11. Knock out conduit plug, if necessary.
12. Install conduit (Figure 3, Item 2) into junction box, and retain with locknut.
13. Connect wiring to replacement motor (Figure 3, Item 4) as tagged.
14. Install junction box cover (Figure 3, Item 1) onto replacement motor (Figure 3, Item 4), and retain with screws.
15. Install belt guard and retain with screws.
16. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

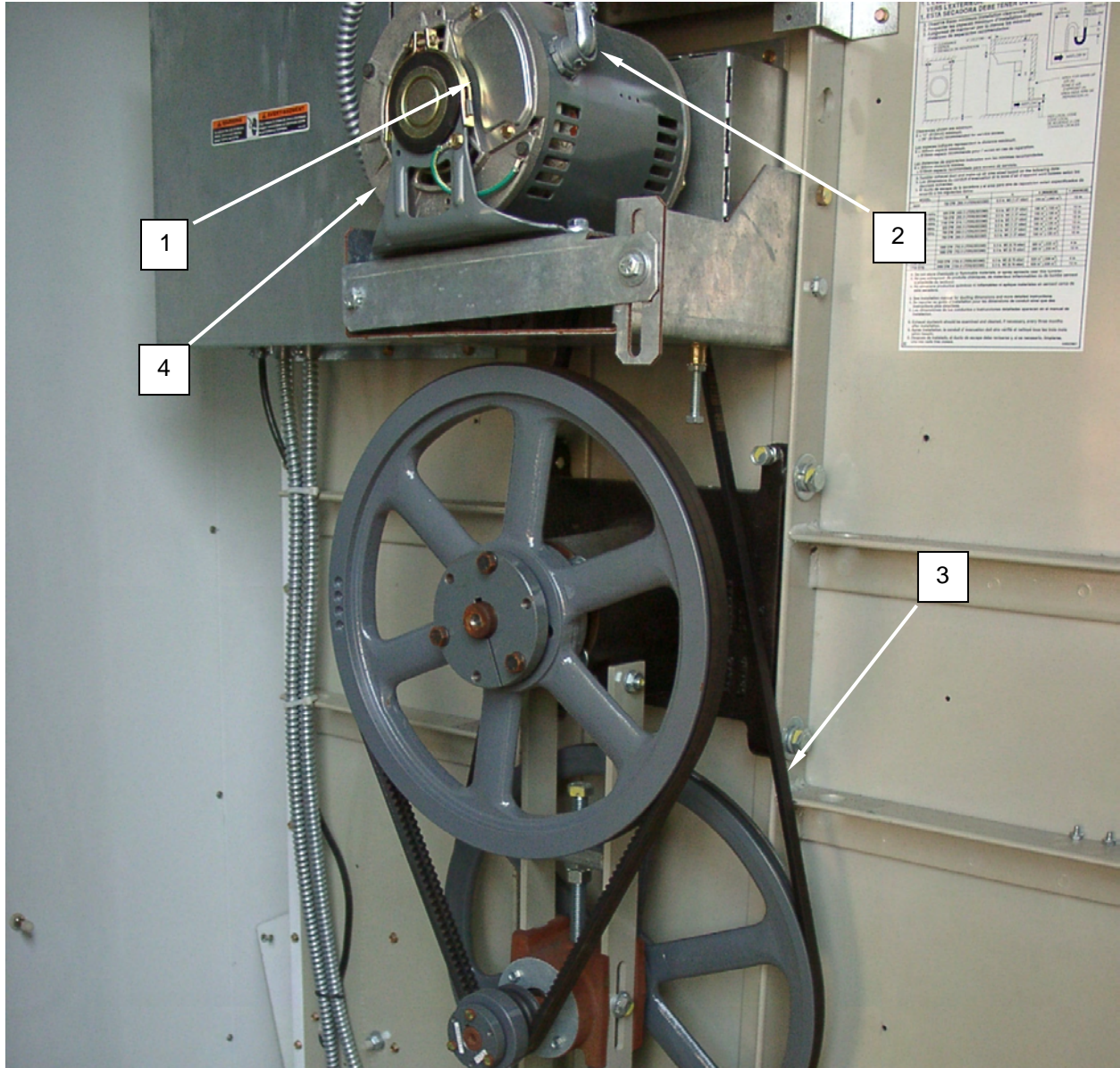


Figure 3. Replace the AC Cylinder Drive Motor.

END OF TASK

REPLACE – CONTINUED**Replace the AC Fan Motor****WARNING**

Ensure that all electrical power to the dryer is shut off and disconnected before proceeding. The circuit breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.



Ensure that the dryer power is shut off and disconnected before proceeding. Rotating machinery and belts may snag fingers, hair, or clothing. Failure to observe safety precautions may result in serious injury or death to personnel.

1. Disconnect power.
2. Remove the belts IAW procedures given in WP 0078.
3. Remove screws retaining motor wiring access cover (Figure 4, Item 3), and remove cover.
4. Tag and disconnect wiring from motor (Figure 4, Item 2).
5. Remove the conduit (Figure 4, Item 1) with wiring from the motor.

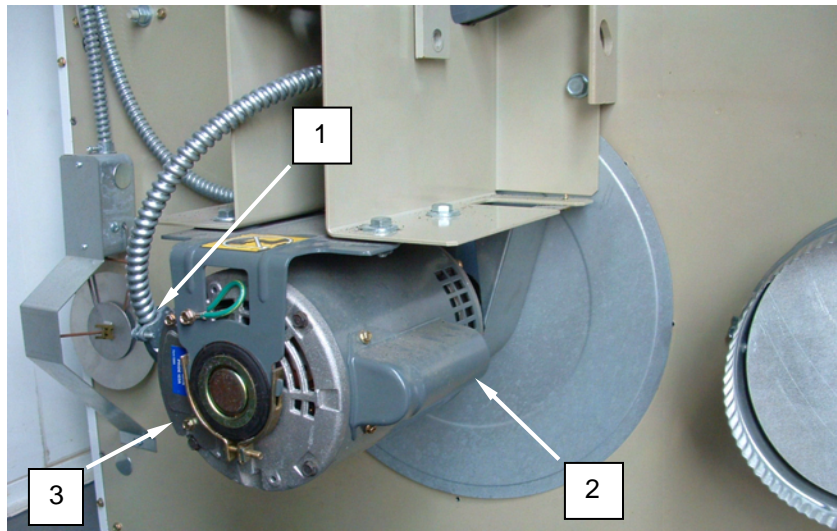


Figure 4. Replace the AC Fan Motor.

REPLACE – CONTINUED

6. Remove screws retaining fan housing cover (Figure 5, Item 2).
7. Remove bolts securing guard (Figure 5, Item 6), and remove guard.
8. Remove bolts securing motor (Figure 5, Item 5) to motor mount, and remove motor, fan (Figure 5, Item 1), and fan housing cover (Figure 5, Item 2) as an assembly.
9. Secure the motor shaft and remove the nut retaining the fan (Figure 5, Item 1) to the motor shaft (Figure 5, Item 4).
10. Remove the bolts retaining the fan housing cover (Figure 5, Item 2) to the motor (Figure 5, Item 5).
11. Remove the fan (Figure 5, Item 1) and the fan housing cover (Figure 5, Item 2) from the motor shaft (Figure 5, Item 4). Remove the key (Figure 5, Item 3) from the motor shaft.
12. Install the key (Figure 5, Item 3) on the replacement motor shaft (Figure 5, Item 4).
13. Install the fan housing cover (Figure 5, Item 2) onto the motor shaft (Figure 5, Item 4).
14. Install the fan (Figure 5, Item 1) onto the motor shaft (Figure 5, Item 4) and retain with nut.
15. Secure the fan housing cover (Figure 5, Item 2) to the motor (Figure 5, Item 5) with bolts.
16. Install the motor (Figure 5, Item 5), fan (Figure 5, Item 1), and fan housing cover (Figure 5, Item 2) as an assembly onto the motor mount and retain with bolts.
17. Install the guard (Figure 5, Item 6) and retain with bolts.
18. Retain the fan housing cover (Figure 5, Item 2) to the dryer with screws.
19. Remove screws retaining motor junction box cover (Figure 5, Item 9), and remove cover.
20. Install the conduit (Figure 5, Item 7) with wiring into the motor junction box (Figure 5, Item 9).
21. Connect the wiring to the motor (Figure 5, Item 9) as tagged.
22. Install the motor wiring access cover (Figure 5, Item 7) and retain with screws.
23. Install the belts IAW procedures given in WP 0078.
24. Connect power, operate IAW procedures given in WP 0007, and monitor for normal operation.

REPLACE – CONTINUED

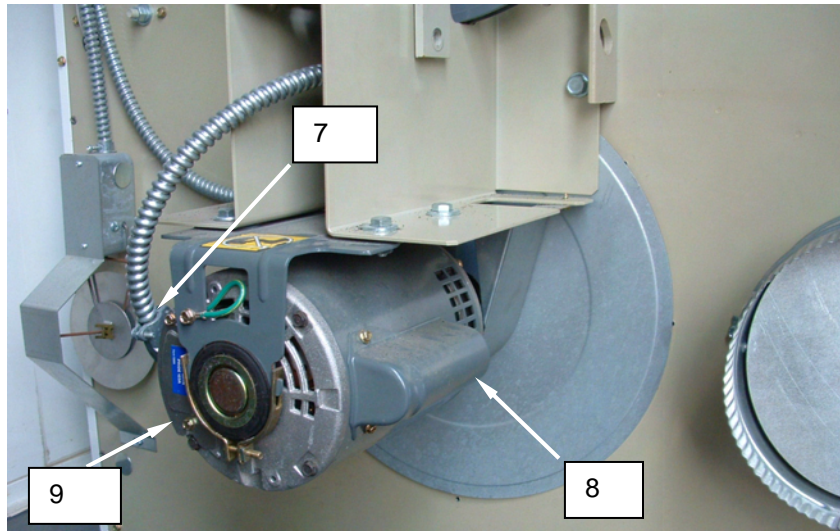
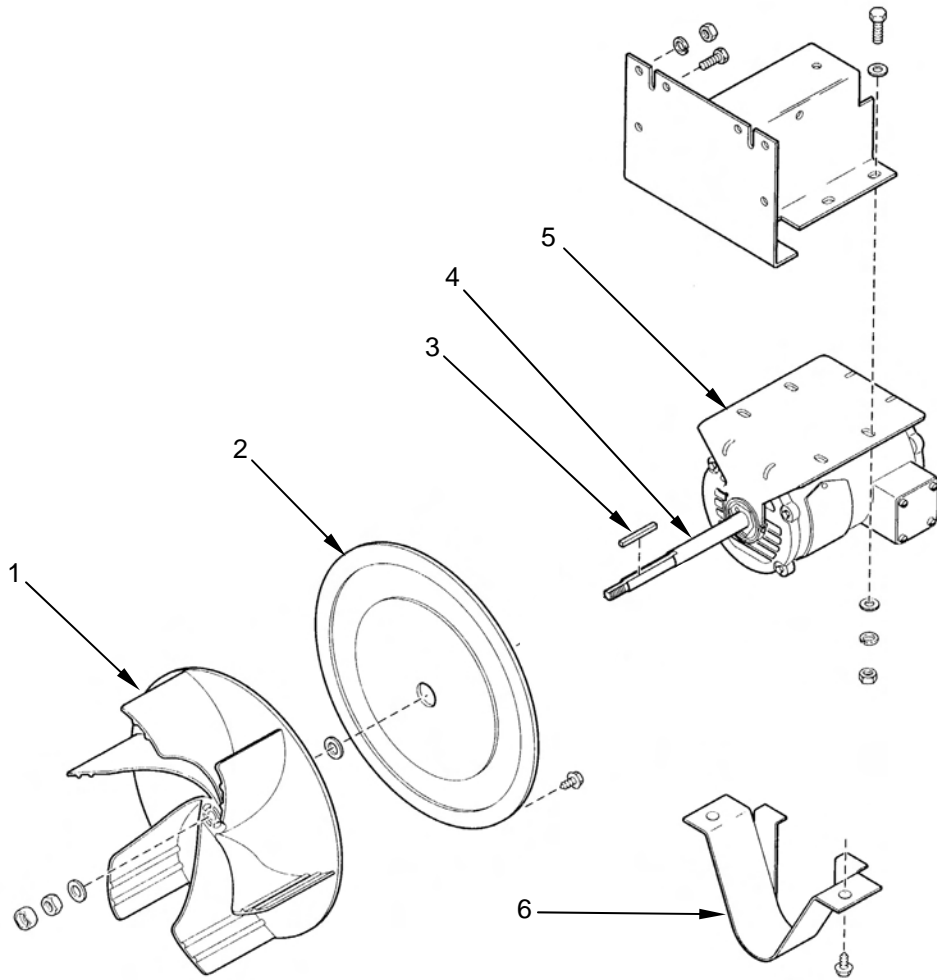


Figure 5. Replace the AC Fan Motor.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE
**AIR COMPRESSOR
REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Tool Kit, General Mechanics (WP 0099, Item 3)

Personnel RequiredQuartermaster and Chemical Equipment Repairer
63J (2)**Materials/Parts**

None required.

Equipment Condition

FP-CBL set up

REPLACE

1. Disconnect compressor hose (Figure 1, Item 2) if necessary.

**WARNING**

The air compressor is approximately 42 lbs and somewhat awkward to carry. To prevent injury, two persons are required when carrying the air compressor.

2. If necessary, remove bolts that secure air compressor from its stowage location on the floor of the FP-CBL and remove.
3. Remove bolts and nuts securing compressor (Figure 1, Item 1) to base plate (Figure 1, Item 3). Set base plate and hardware aside.
4. Remove unserviceable compressor.
5. Install new compressor (Figure 1, Item 1) to base plate (Figure 1, Item 3) with nuts and bolts set aside earlier.
6. Reconnect compressor hose (Figure 1, Item 2) if desired.

REPLACE – CONTINUED

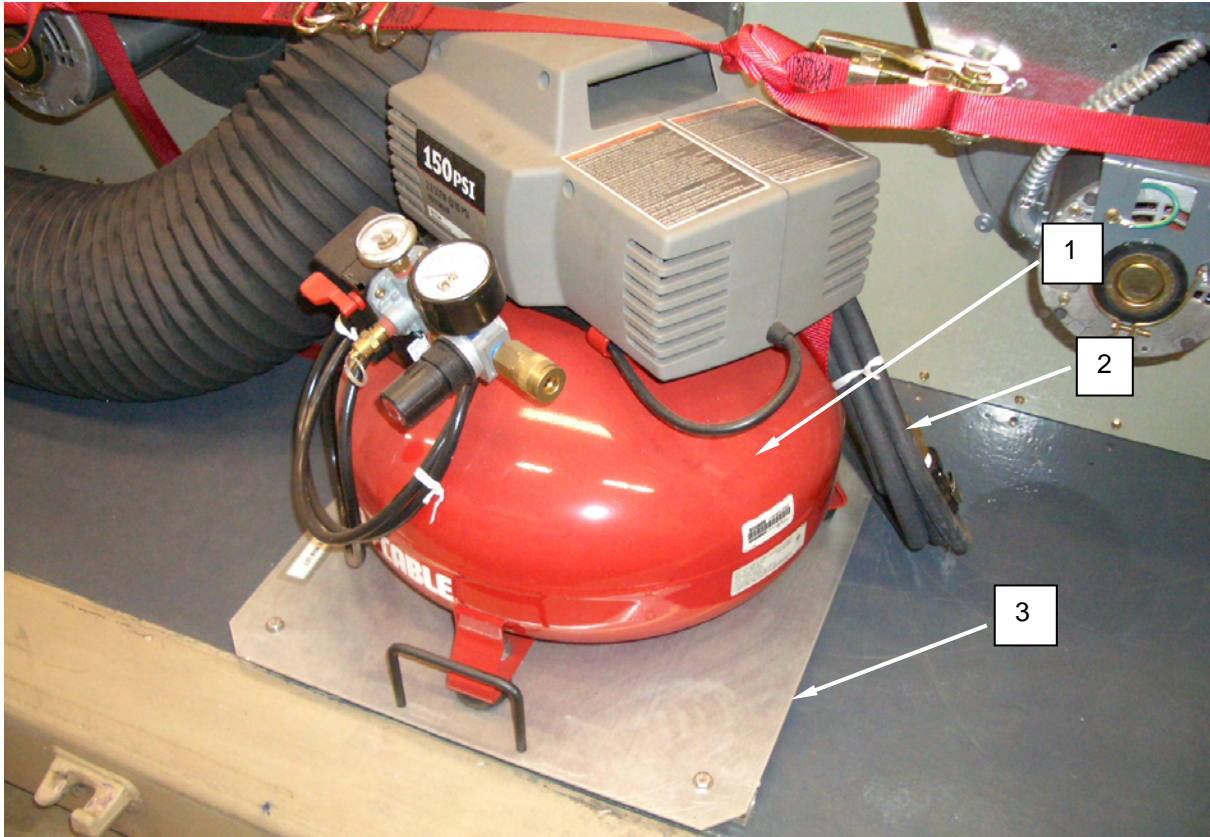


Figure 1. Replace Air Compressor.

END OF TASK

END OF WORK PACKAGE

SERVICE MAINTENANCE**PREPARATION FOR STORAGE AND SHIPMENT**

INITIAL SETUP:**Personnel Required**

Quartermaster and Chemical Equipment Repairer
63J (1)

PREPARATION FOR STORAGE OR SHIPMENT**General Storage Requirements**

To ensure that serviceability standards of the stored FP-CBL are maintained, every effort will be made to adhere to the following general storage requirements:

1. Force Provider Containerized Batch Laundry will be protected from pilferage, dampness, fire, dirt, and rodents.
2. Force Provider Containerized Batch Laundry should be level during storage.

In-Storage Inspection

1. Check that no damage or deterioration has been incurred.
2. Ensure that all modifications or similar requirements have been completed.
3. Check the adequacy of the storage facilities, efforts taken to control pests and rodents, and protection against unfavorable climatic conditions.

END OF TASK**PREPARATION FOR SHIPMENT****Shipment requirements**

The Force Provider Containerized Batch Laundry should be level during shipment.

END OF TASK**END OF WORK PACKAGE**

CHAPTER 8

FIELD MAINTENANCE
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

FIELD MAINTENANCE**INTRODUCTION**

SCOPE

This chapter contains information necessary to maintain the Force Provider Containerized Batch Laundry (FP-CBL) at the field maintenance level in accordance with the Maintenance Allocation Chart (MAC) for the equipment. All components of the Force Provider Containerized Batch Laundry (FP-CBL) can be repaired or replaced at the field level.

Common Tools and Equipment

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment or Table of Distribution and Allowances (MTOE/TDA) applicable to your unit.

Special Tools, TMDE, and Support Equipment

Tools and equipment that must be fabricated are listed in the applicable maintenance work package.

Repair Parts

Repair parts are listed and illustrated in WP 0086 through WP 0096 of this manual.

END OF WORK PACKAGE

FIELD MAINTENANCE**ENTRY RAMP
REPAIR**

INITIAL SETUP:**Tools and Special Tools**

Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No. 1 (WP 0099, Item 2)

Materials/Parts

Rod, Welding (WP 0101, Item 46)
Plate, 1/8" Aluminum Sheet/Diamond (WP 0101, Item 42)

Personnel Required

Metal Worker 44B (1) or
Machinist 44E (1)

Equipment Condition

FP-CBL set up

REPAIR**NOTE**

The ramp is made of aluminum alloy, and must be welded with gas shielded arc welders or with aluminum rods specifically made for conventional arc welders.

1. Remove ramp (Figure 1, Item 1) from service.
2. Repair damage to ramp (Figure 1, Item 1). Fabricate patches of 1/8-inch aluminum sheet as necessary. Use of diamond plate for patches is preferable.

WARNING

Ensure repaired ramp is not warped in any way. Ensure ramp alignment is correct. Failure to observe precautions may produce a tripping hazard, creating a potential for serious injury or death to personnel.

3. Ensure repaired ramp (Figure 1, Item 1) fits correctly.

REPAIR - CONTINUED

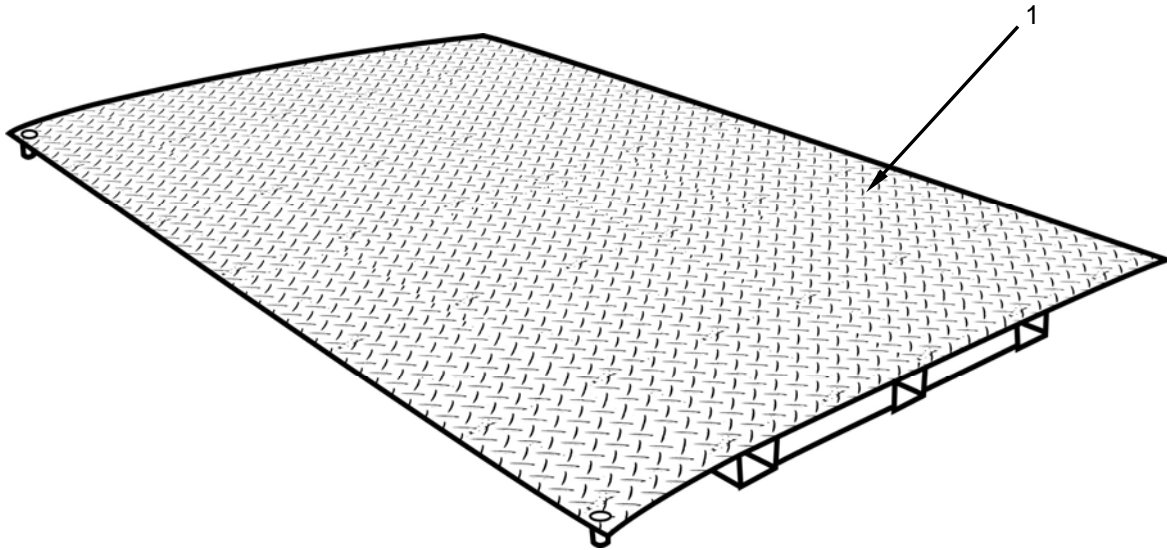


Figure 1. Repair the Ramp.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE**WASHER
REPLACE**

INITIAL SETUP:**Tools and Special Tools**

Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No. 1 (WP 0099, Item 2)
Unspecified lifting equipment, 15000-lb maximum capacity (forklift, hoist) (WP 0099, Item 1)

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)
Laundry and Shower Specialist 92S (11)

Equipment Condition

FP-CBL set up

References

TM 10-3510-226-10
WP 0055

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

It is not necessary to remove the top, side, back, or kick panels.

1. Remove the washer IAW procedures given in WP 0055.
2. Remove all items from TEMPER and strike or move TEMPER IAW procedures given in TM 10-3510-226-10.
3. Remove bolts retaining washer (Figure 1, Item 1) to caster (Figure 1, Item 2).
4. Use a forklift or suitable lifting device to lift washer (Figure 1, Item 1) from caster (Figure 1, Item 2) and remove from CBL.
5. Use a forklift or suitable lifting device to install the replacement washer (Figure 1, Item 1) into the washer caster (Figure 1, Item 2) and retain with bolts.
6. Raise and refit TEMPER IAW procedures given in TM 10-3510-226-10.
7. Install the washer IAW procedures given in WP 0055.

REPLACE - CONTINUED

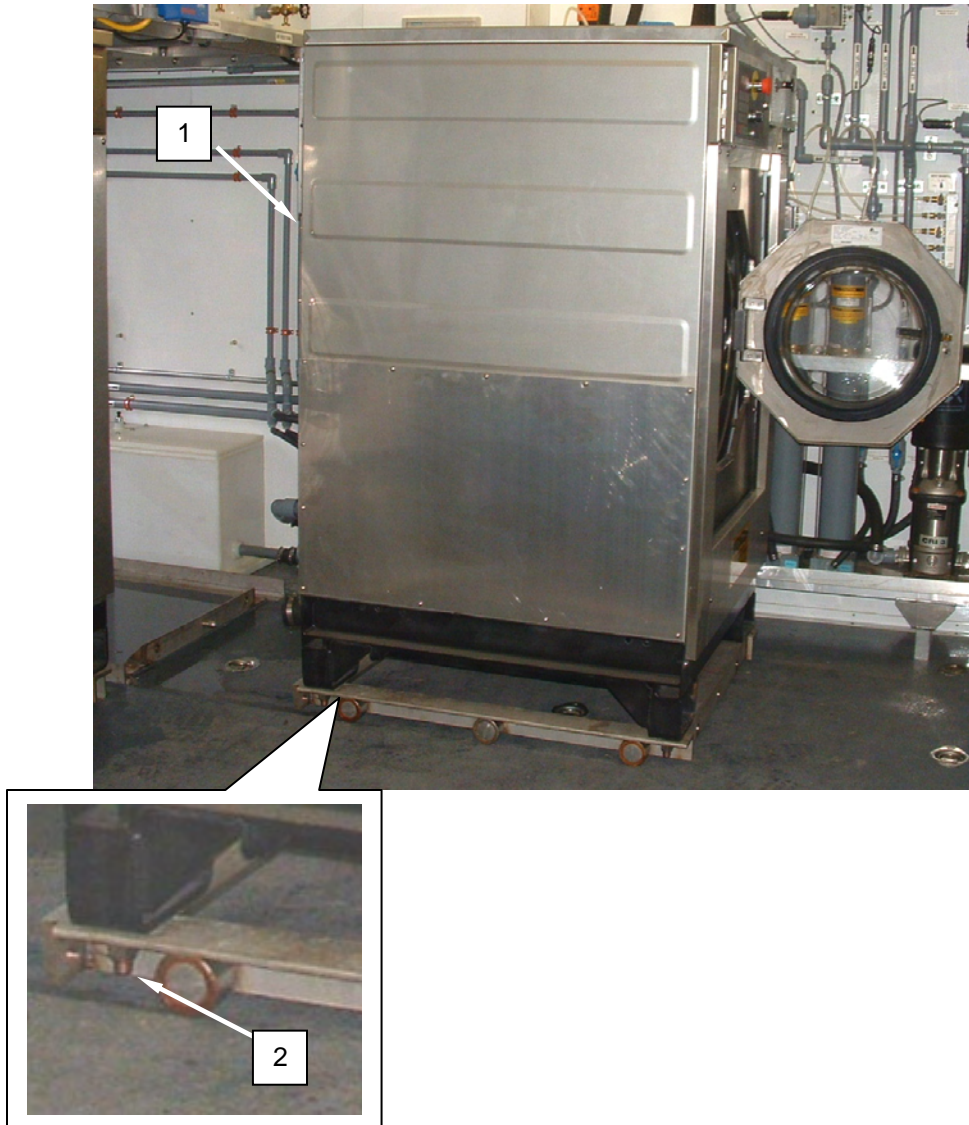


Figure 1. Replace the Washer.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE**DRYER
REPLACE****INITIAL SETUP:****Tools and Special Tools**

Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No. 1 (WP 0099, Item 2)
Unspecified lifting equipment, 15000-lb maximum capacity (forklift, hoist) (WP 0099, Item 1)

Materials/Parts

None Required.

Personnel Required

Quartermaster and Chemical Equipment Repairer 63J (1)
Laundry and Shower Specialist 92S (11)

Equipment Condition

FP-CBL set up

References

TM 10-3510-226-10

REPLACE**WARNING**

Ensure that all electrical power is shut off and disconnected before proceeding. The Circuit Breaker box should be locked by personnel following this procedure. Serious injury or death can result from electrocution if proper safety precautions are not observed.

NOTE

Dryer No. 2 must be removed from the FP-CBL before replacing Dryer No. 1.

1. Disconnect power from FP-CBL.
2. Remove all items from TEMPER and strike or move TEMPER IAW procedures given in TM 10-3510-226-10.
3. Remove screws retaining junction box cover (Figure 1, Item 2) and remove junction box cover.
4. Tag and disconnect wiring from dryer.
5. Remove conduit locknut and remove conduit (Figure 1, Item 1).
6. Remove hose clamp retaining duct (Figure 1, Item 3) to dryer (Figure 2, Item 1) and disconnect duct from dryer.
7. Remove lint compartment access door (Figure 2, Item 2).
8. Remove bolts (Figure 2, Item 3) retaining dryer (Figure 2, Item 1) to FP-CBL deck.

REPLACE - CONTINUED

9. Use lifting equipment to move dryer (Figure 2, Item 1) to center of FP-CBL operating area.
10. Remove dryer (Figure 2, Item 1) from FP-CBL.
11. Install replacement dryer (Figure 2, Item 1) into FP-CBL operating area.
12. Remove dryer lint compartment access door (Figure 2, Item 2).
13. Move replacement dryer (Figure 2, Item 1) into position and align mounting holes.
14. Install mounting bolts (Figure 2, Item 3) and tighten.
15. Remove junction box cover (Figure 1, Item 2) on replacement dryer.
16. Knock out conduit access if necessary, install conduit (Figure 1, Item 1), and retain with conduit locknut.
17. Connect wiring to replacement dryer (Figure 2, Item 1) as tagged.
18. Install junction box cover (Figure 1, Item 2) and retain with screws.
19. Install duct (Figure 1, Item 3) onto replacement dryer exhaust and secure with hose clamp.
20. Raise and refit TEMPER IAW procedures given in TM 10-3510-226-10.
21. Connect power and monitor for normal operation.

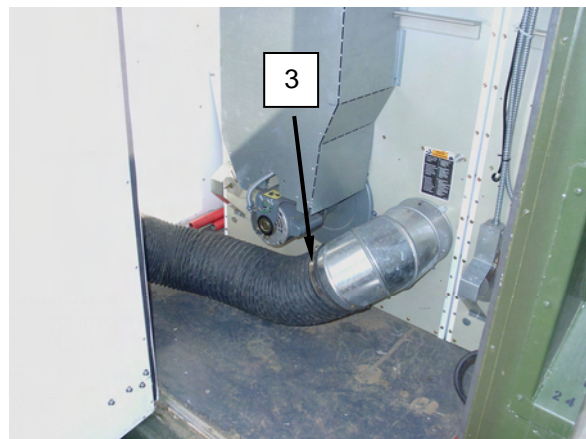
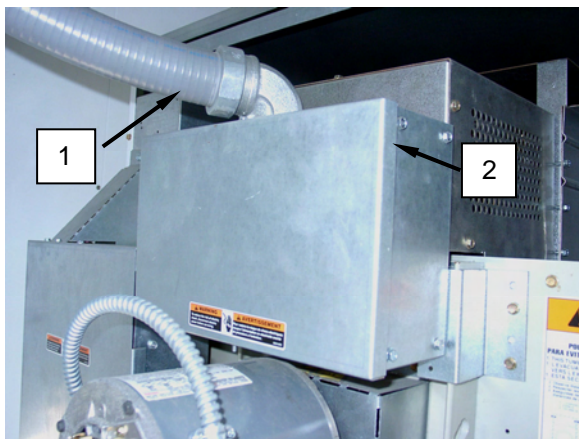


Figure 1. Replace the Dryer.

REPLACE - CONTINUED

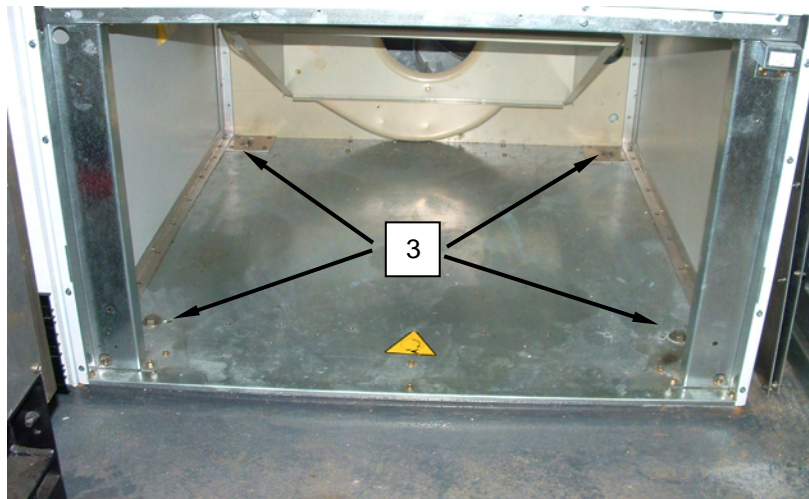
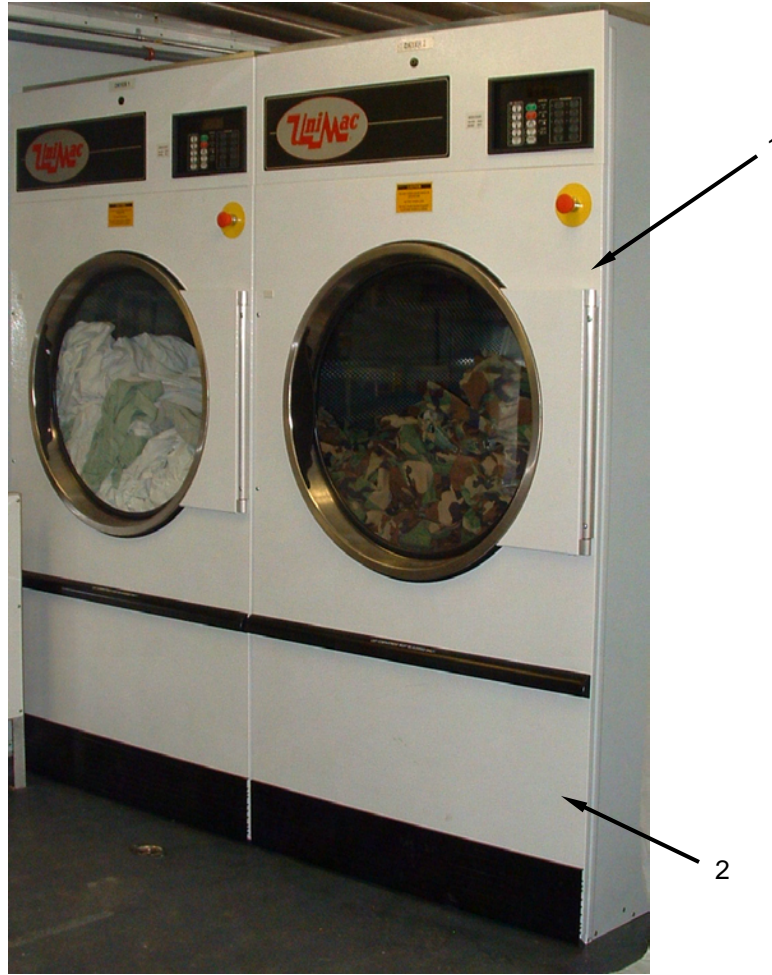


Figure 2. Replace the Dryer.

END OF TASK

END OF WORK PACKAGE

CHAPTER 9

PARTS INFORMATION
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

FIELD MAINTENANCE

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of operator and field maintenance of the Force Provider Containerized Batch Laundry (FP-CBL). 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 the Introduction work package, this RPSTL is divided into the following work packages.

1. **Repair Parts List Work Packages.** Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which 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. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts kits are listed at the end of the individual work packages. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
2. **Special Tools List Work Packages.** Work packages 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.
3. **Cross-Reference Indexes Work Packages.** There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package, and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout:

TABLE 1. SMR Code

<u>Source Code</u>		<u>Maintenance Code</u>		<u>Recoverability Code</u>
XX		XX		X
1st two positions:	3rd position:	4th position:	5th position:	
How to get an item.	Who can install, replace, or use the item.	Who can do complete repair* on the item.	Who determines disposition action on unserviceable items.	

*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 you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

<u>Source Code</u>	<u>Application/Explanation</u>
PA	
PB	
PC	
PD	
PE	
PF	
PG	
PH	
PR	
PZ	
	NOTE
	Items coded PC are subject to deterioration.
	Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the third position of the SMR code.
	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
	Items with these codes are not to be requisitioned/requested individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.
MO-Made at unit/AMC level	
MF-Made at DS/ASB level	
MH-Made at below Depot/sustainment level	
ML-Made at SRA/TASMG	
MD-Made at depot	
MG-Navy only	
	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 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.
AO-Assembled by unit/AMC Service/AMC level	
AF-Assembled by field/ASB level	
AH-Assembled by below depot Sustainment level	
AL-Assembled by SRA/TASMG	
AD-Assembled by depot	
AG-Navy only	
XA	Do not requisition an "XA" coded item. Order the next higher assembly.(Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and part number.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's part number.
XD	Item is not stocked. Order an XD-coded item through local purchase or normal supply channels using the 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 items 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 an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

Maintenance Code**Application/Explanation**

O* -	Field (Service) level/AMC maintenance can remove, replace, and use the item.
F -	Field/ASB maintenance can remove, replace, and use the item.
H -	Below Depot Sustainment maintenance can remove, replace, and use the item.
L -	Specialized repair activity/TASMG can remove, replace, and use the item.
G -	Afloat and ashore intermediate maintenance can remove, replace, and use the item (Navy only).
K -	Contractor facility can remove, replace, and use the item.
Z -	Item is not authorized to be removed, replace, or used at any maintenance Level.
D -	Depot can remove, replace, and use the item.

*NOTE - Army may use C in the third position. However, for joint service publications, Army will use O.

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (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**

O -	Field (Service)/AMC is the lowest level that can do complete repair of the item.
F -	Field/ASB is the lowest level that can do complete repair of the item.
H -	Below Depot Sustainment is the lowest level that can do complete repair of the item.
L -	Specialized repair activity/TASMG (enter specialized repair activity or TASMG designator) 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.
G -	Both afloat and ashore intermediate levels are capable of complete repair of item. (Navy only)
K -	Complete repair is done at contractor facility.
Z -	Nonreparable. No repair is authorized.
B -	No repair is authorized. No parts or special tools are authorized for maintenance of "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 shown in the fifth position of the SMR code as follows:

Recoverability

<u>Code</u>	<u>Application/Explanation</u>
Z -	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the service/AMC level.
F -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the field level/ASB.
H -	Reparable item. When uneconomically repairable, condemn and dispose of the item at the below depot sustainment level.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L -	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA) or theater aviation sustainment maintenance group (TASMG).
A -	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
G -	Field level repairable item. Condemn and dispose at either afloat or ashore intermediate levels. (Navy only)
K -	Reparable item. Condemnation and disposal to be performed at contractor facility

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 five-digit code which 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 manufacturer (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 you use an NSN to requisition an item, the item you receive may have a different part number from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.
2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.

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 a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSN's in this index are listed in National Item Identification Number (NIIN) sequence.

STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number. For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

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.

2. Part Number (P/N) Index Work Package. Part numbers in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places 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).

PART NUMBER Column. Indicates the part number 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 work packages.

ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column."

SPECIAL INFORMATION

UOC. The UOC appears in the lower left corner of the Description Column heading. Usable on codes are shown as "UOC:..." in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

<u>Code</u>	<u>Used On</u>
FSV	FP-CBL, Green
FTQ	FP-CBL, Tan

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk material are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in WP0087 of this technical manual.

Index Numbers. Items which 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 NSN / Part Number (P/N) Index work packages and the bulk material list in the repair parts list work package.

Illustrations List. The illustrations in this RPSTL contain field authorized items. Illustrations published in TM 10-3510-225-13&P that contain field authorized items also appear in this RPSTL. The tabular list in the repair parts list work package contains only those parts coded "O" in the third position of the SMR code, therefore, there may be a break in the item number sequence.

HOW TO LOCATE REPAIR PARTS

1. When NSNs or Part Numbers Are Not Known.

First. Using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second. Find the figure covering the functional group or the subfunctional 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 work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

2. When NSN Is Known.

First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. 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.

3. When Part Number Is Known.

First. If you have the part number and not the NSN, look in the PART NUMBER column of the part number index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

END OF WORK PACKAGE

FIELD MAINTENANCE

CONTAINER, SPECIAL

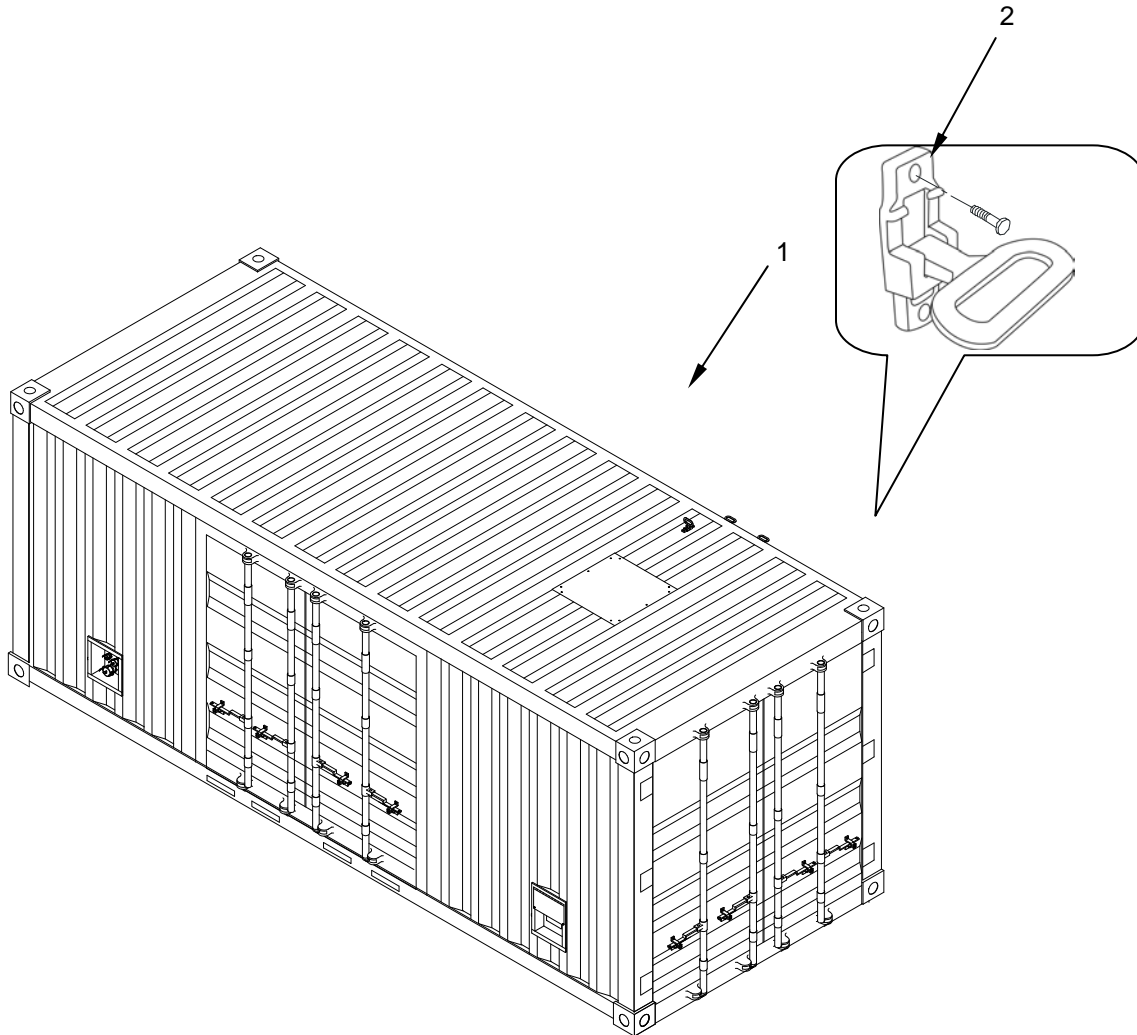


Figure 1. Container, Special (Sheet 1 of 6).

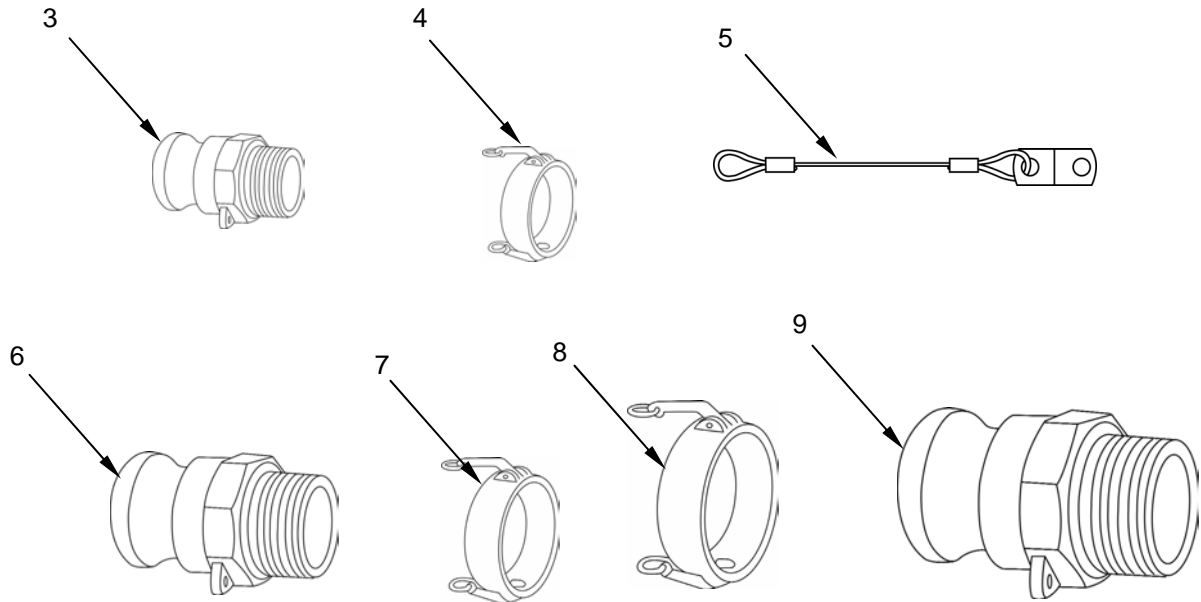
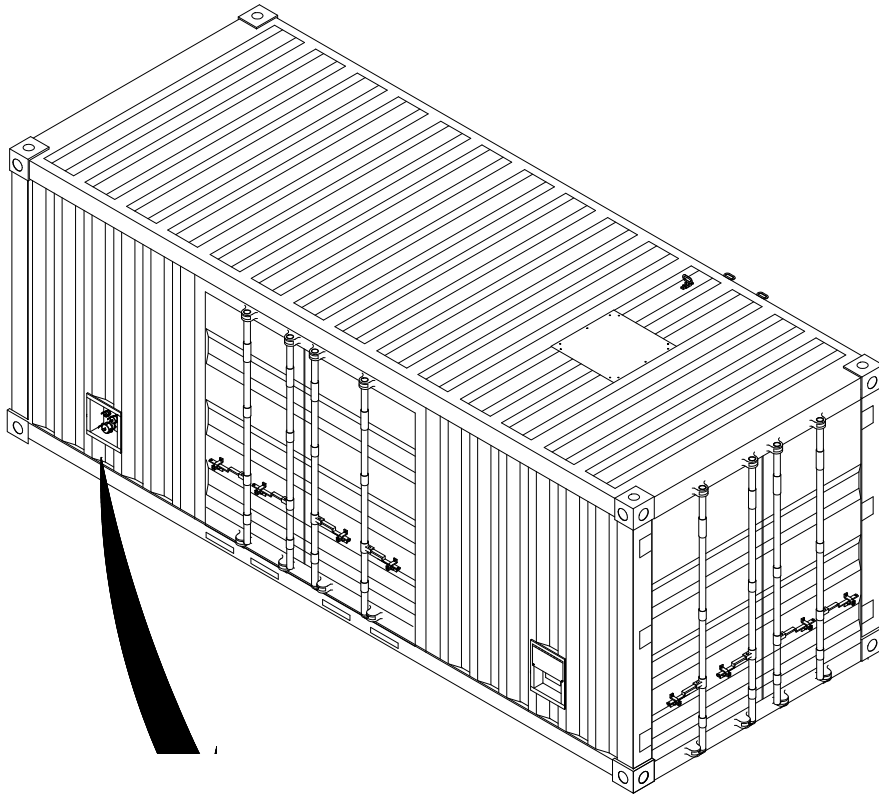


Figure 1. Container, Special (Panel, Supply Water Inlet/Waste Water Outlet) (Sheet 2 of 6).

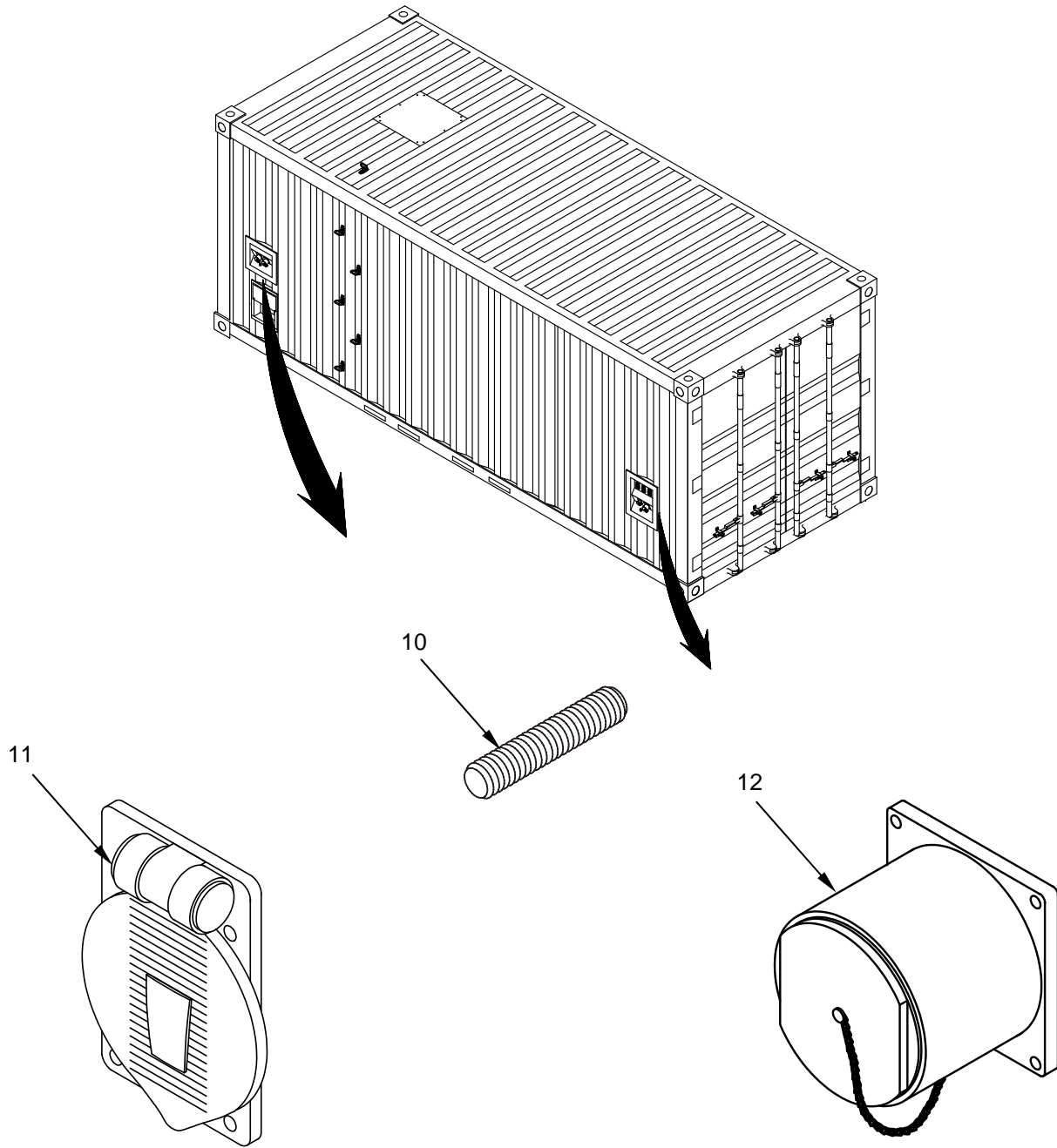


Figure 1. Container, Special (Panel, Power Inlet/Outlet) (Sheet 3 of 6).

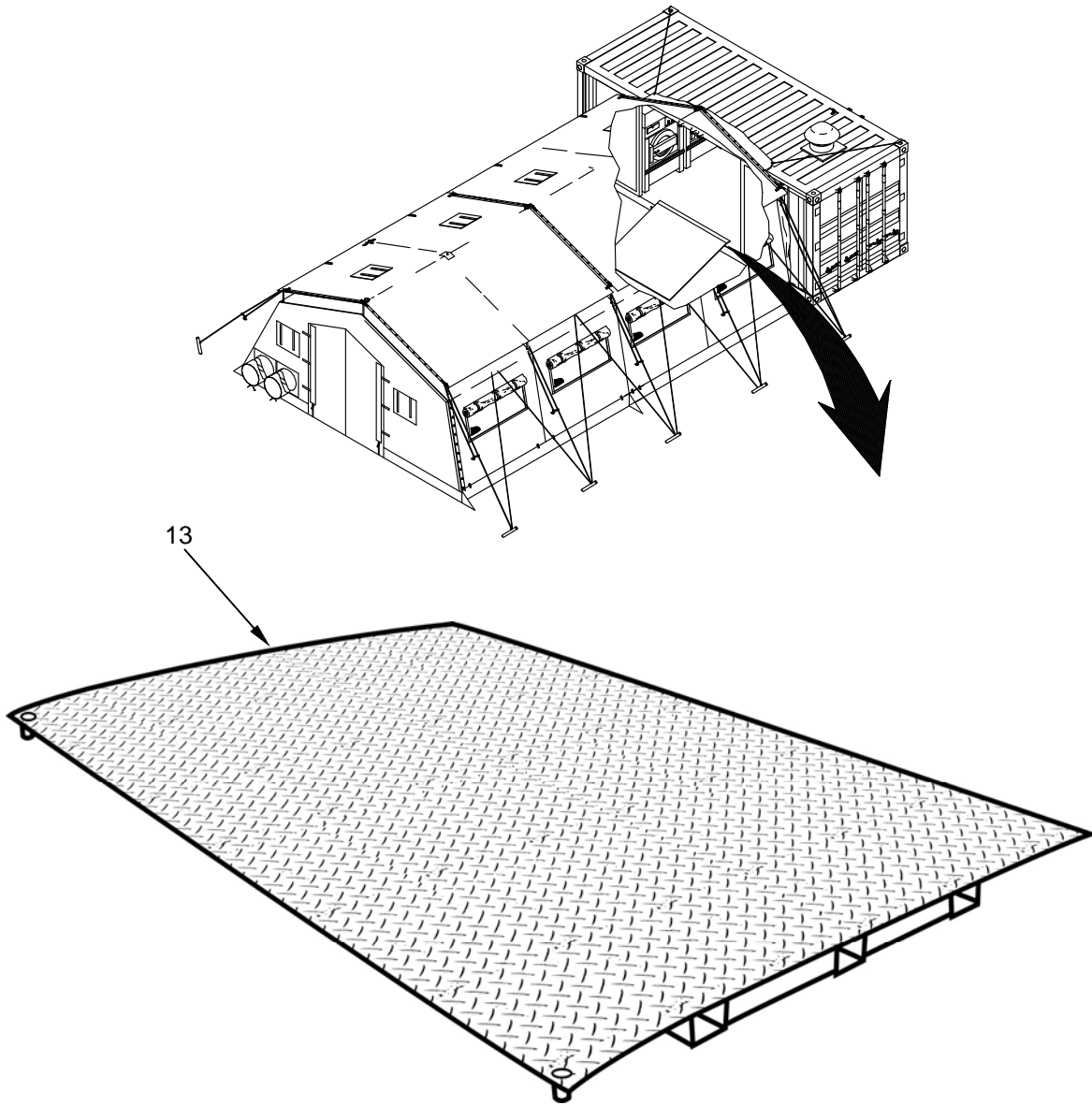


Figure 1. Container, Special (Ramp, Entry) (Sheet 4 of 6).

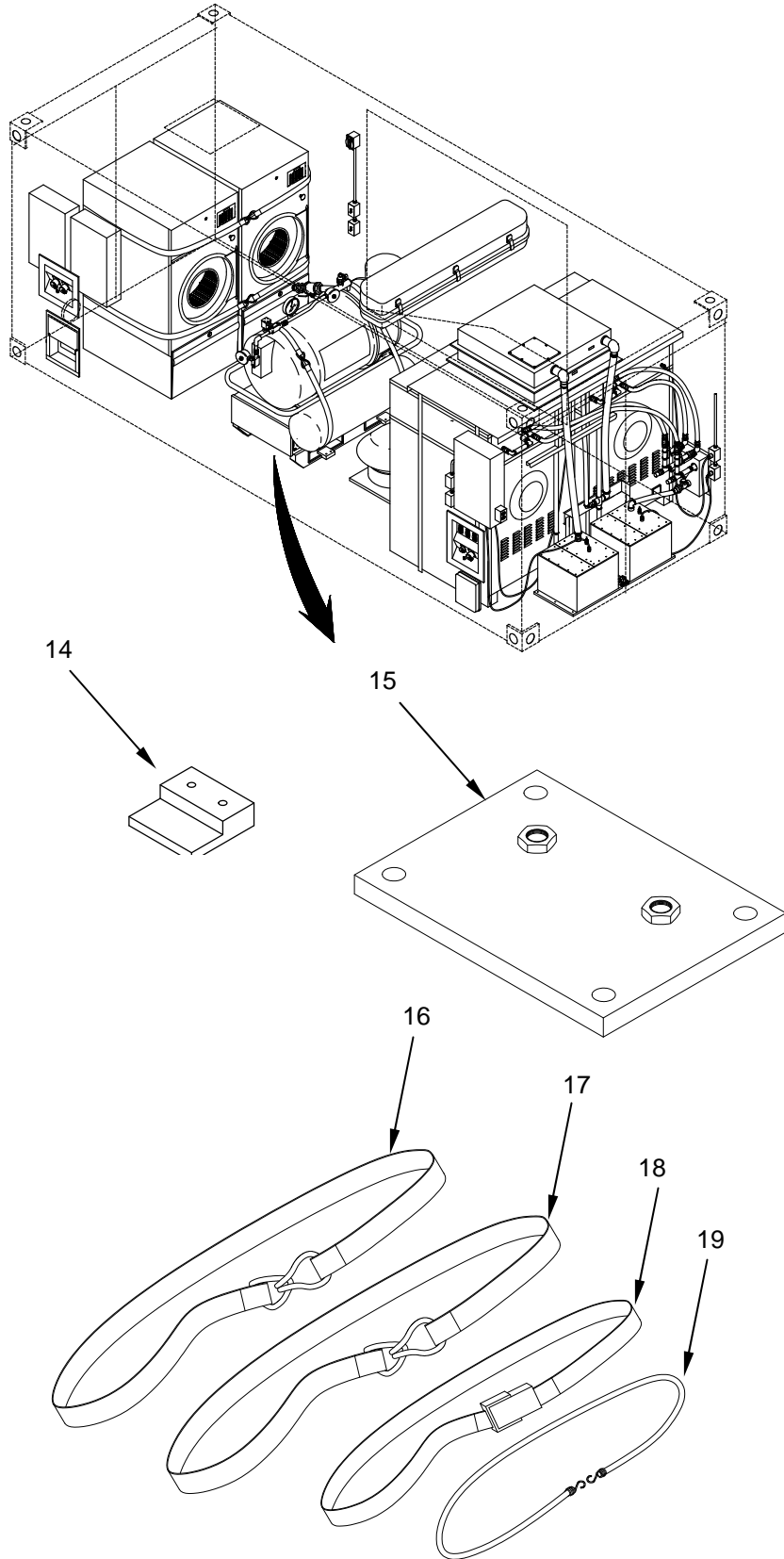


Figure 1. Container, Special (Tiedown Provisions) (Sheet 5 of 6).

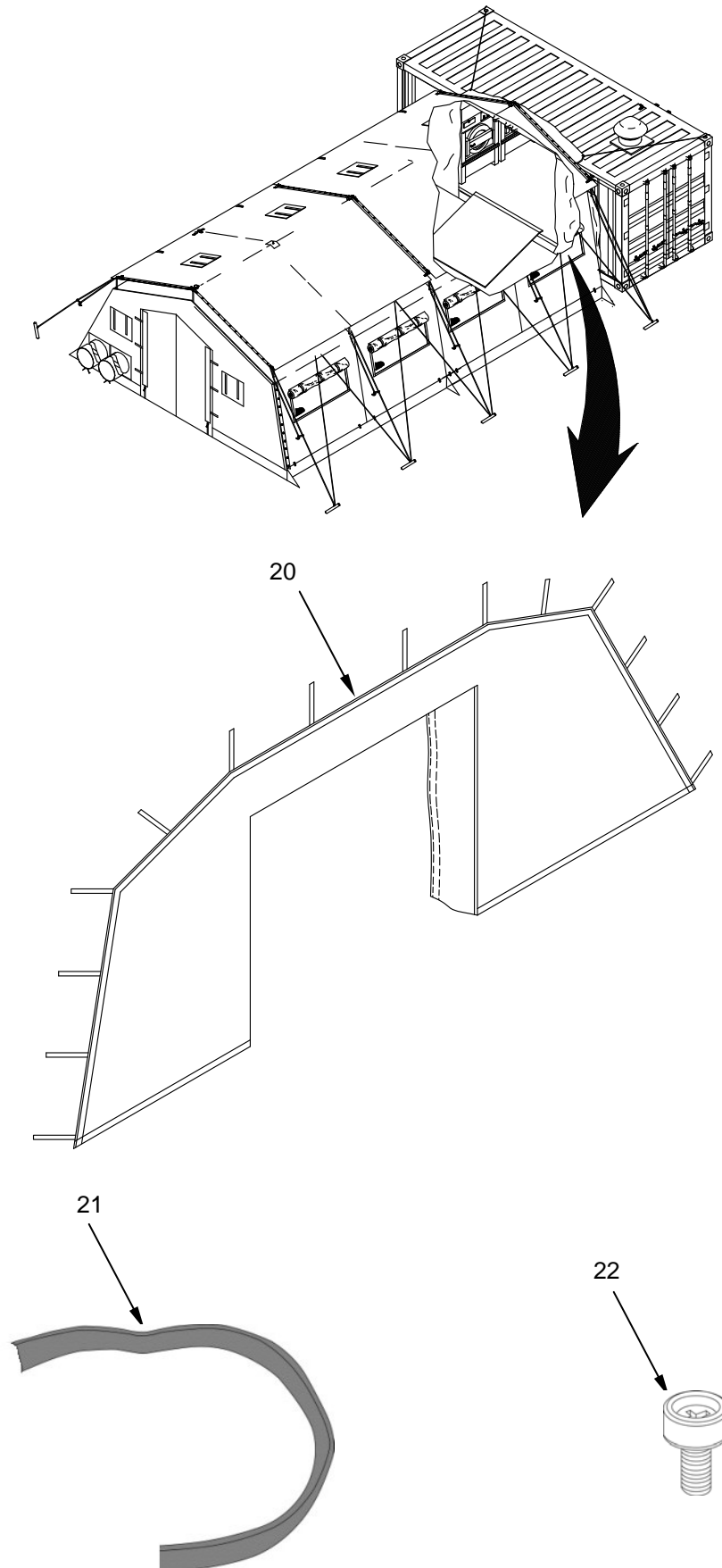


Figure 1. Container, Special (Endwall, Modified Temper) (Sheet 6 of 6).

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 01						
FIG. 1 MODIFIED CARGO CONTAINER						
1	PAFFF	8145-01-491-2727	14153	A-A-59272 TYPE III-1	CONTAINER, SPECIAL, 20' x 8' x 8' ISO, OPENINGS BOTH ENDS, 1 SET DOORS (6'-11" x 7'-8" OPENINGS) UOC: FSV	1
	PAFFF	8145-01-491-2727	14153	A-A-59272 TYPE III-2	CONTAINER, SPECIAL, 20' x 8' x 8' ISO, OPENINGS BOTH ENDS, 1 SET DOORS (6'-11" x 7'-8" OPENINGS) UOC: FTQ	1
2	PAOZZ	5340-01-530-5187	1E045	600-ZINC	. HAND GRIP, FOLDING	6
3	PAOZZ	4730-01-533-9883	39428	52155K42	. COUPLING HALF, QUICK- DISCONNECT	1
4	XBOZZ		39428	51415K462-1	. DUST CAP, QUICK-DISCONNECT, 1" BRASS (-1 GREEN) UOC: FSV	1
	PAOZZ		39428	51415K462-2	. DUST CAP, QUICK-DISCONNECT, 1" BRASS (-2 TAN) UOC: FTQ	1
5	PAOZZ	4010-01-500-3749	39428	30345T22	. LANYARD, LOOP END & TAB END, CRES TYPE 304, NYLON COATED, 8" LONG	3
6	XBOZZ		39428	52155K44	. ADAPTER X 1 1/2" MALE NPT, BRASS	1
7	XBOZZ		39428	51415K464	. DUST CAP, QUICK-DISCONNECT, 1 1/2" BRASS	1
8	XBOZZ		39428	51415K467	. DUST CAP, QUICK-DISCONNECT, 3", BRASS	1
9	XBOZZ		39428	52155K47	. COUPLING, QUICK-DISCONNECT, 3" ADAPTER X 3" MALE NPT, BRASS	1
10	MOOZZ	5306-01-454-8044	39428	98805A031	. ROD, CONTINUOUS THREAD, CUT LENGTH 3"	2
11	PAOZZ	5975-01-449-6949	74545	7425WOA	. PLATE, WEATHERPROOF, RECEPTACLE	3
12	PAOZZ	5935-01-147-9446	96906	MS90564-7C-1	. COVER, RECEPTACLE	2
13	XBOFF		81337	9-1-0970	. PERSONNEL RAMP	1
14	XBOFF		81337	9-1-1134	. ANCHOR, WATER HEATER TIE- DOWN	4
15	XBOFF		81337	9-1-0960	. NUT PLATE WELDMENT, WATER HEATER TIE-DOWN	1
16	PAOFF	5340-00-286-9416	81343	AS21919WDF2 4	. CLAMP, LOOP	1

ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
17	PAOFF	5340-00-531-6857	81343	AS21919WDG4 0	. CLAMP, LOOP	1
18	PAOFF	5342-01-522-0705	78325	126-724	. TIEDOWN, STRAP, RATCHET	8
19	PAOFF	4020-01-102-0517	2V507	5343972-0114	. CORD ASSEMBLY, ELASTIC INCLUDE S STYLE HOOK EACH END 9" LONG	5
20	XBOFF		81337	9-1-0586-1	. ENDWALL, MODIFIED TEMPER (-1 GREEN) UOC: FSV	1
	XBOFF		81337	9-1-0586-2	. ENDWALL, MODIFIED TEMPER (-2 TAN) UOC: FTQ	1
21	MOOZZ	8315-01-524-7644	57039	170068-2	. . FASTENER TAPE, HOOK (CUT FROM BULK MATERIAL – 24 FEET REQUIRED)	1
22	PAOZZ		39428	95707A685	. . STUD, BUTTON SNAP	21

END OF FIGURE

FIELD MAINTENANCE

SYSTEM, ELECTRICAL

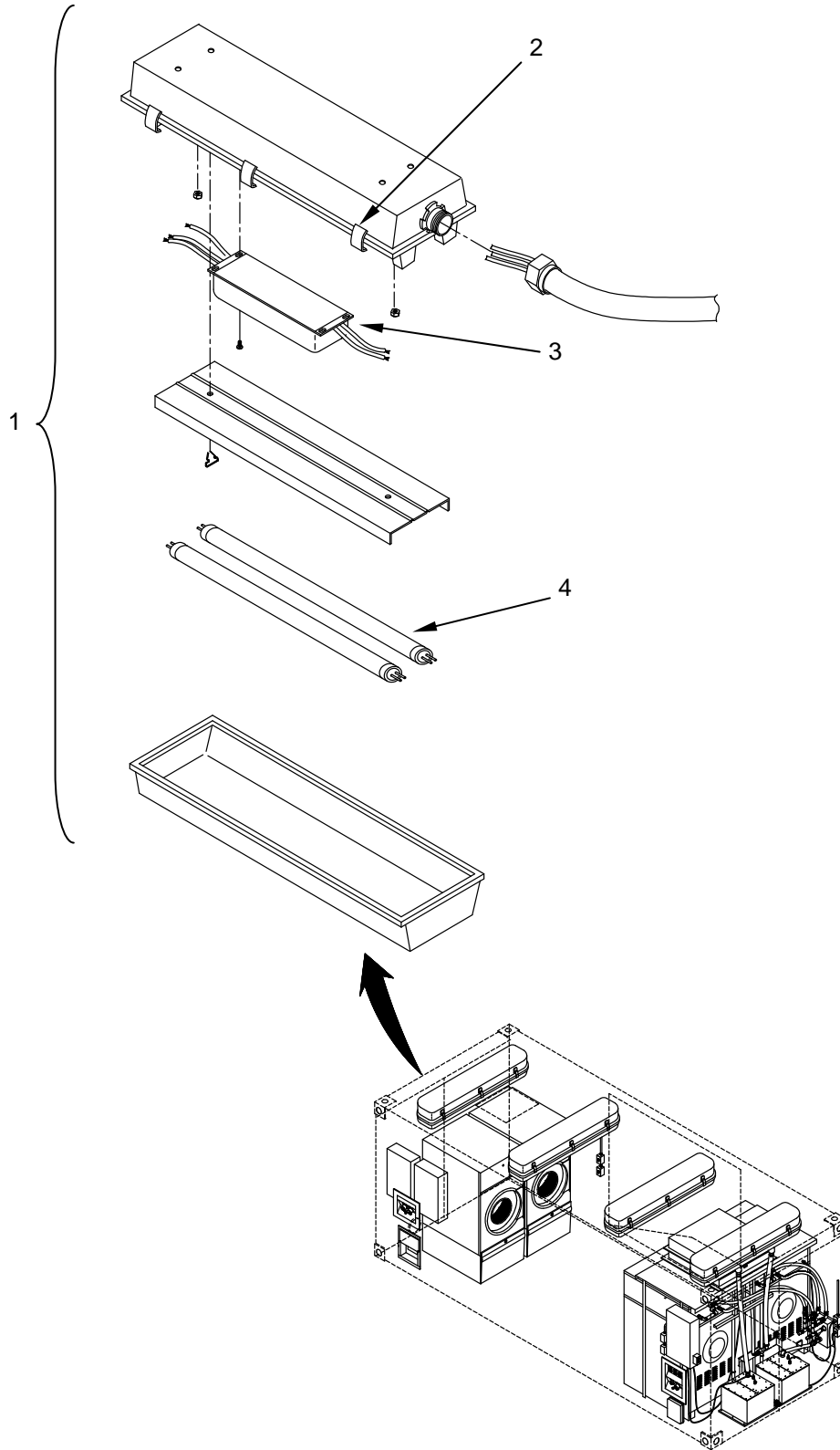


Figure 2. System, Electrical (Light Fixture, Fluorescent) (Sheet 1 of 10).

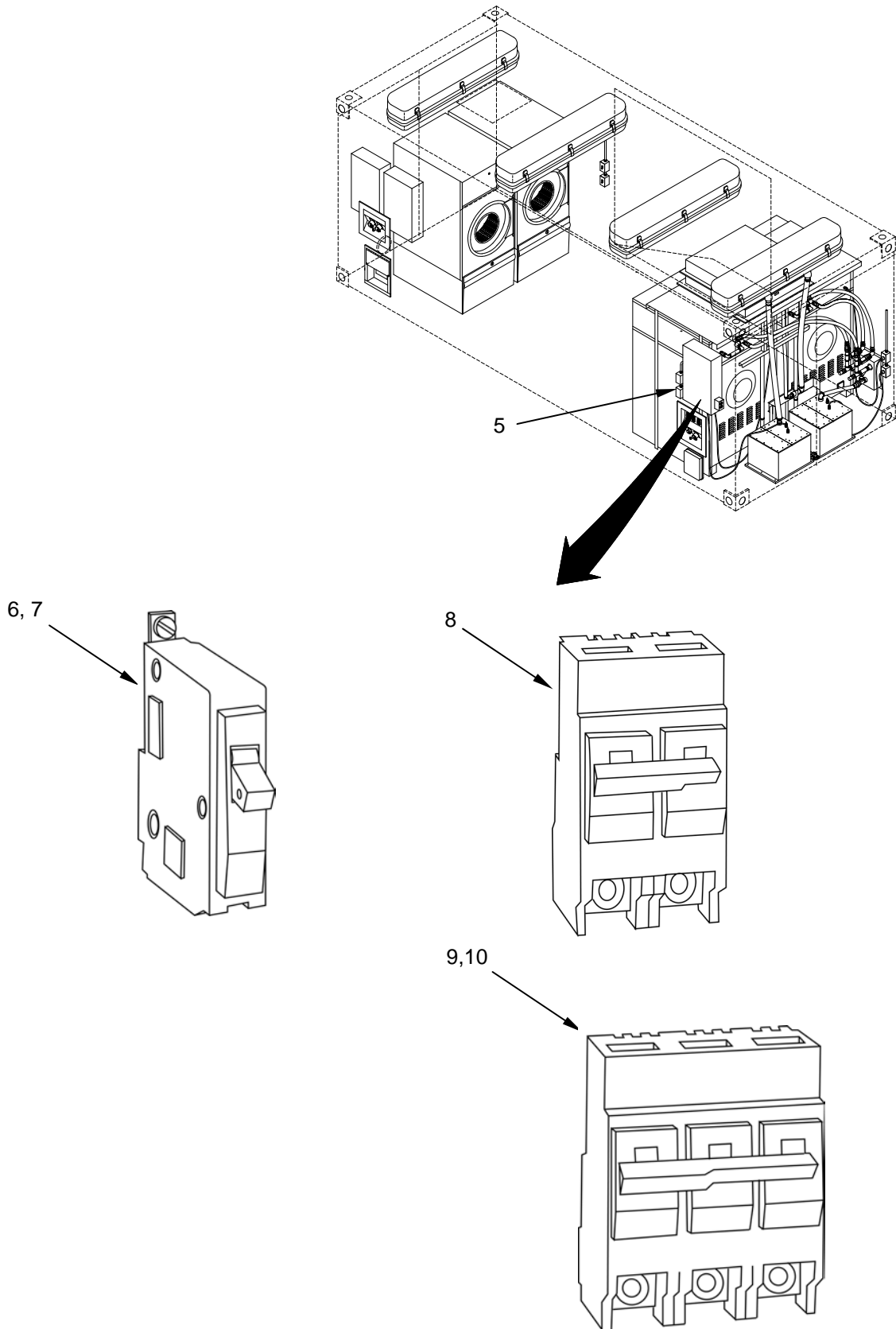


Figure 2. System, Electrical (Breakers, Circuit) (Sheet 2 of 10).

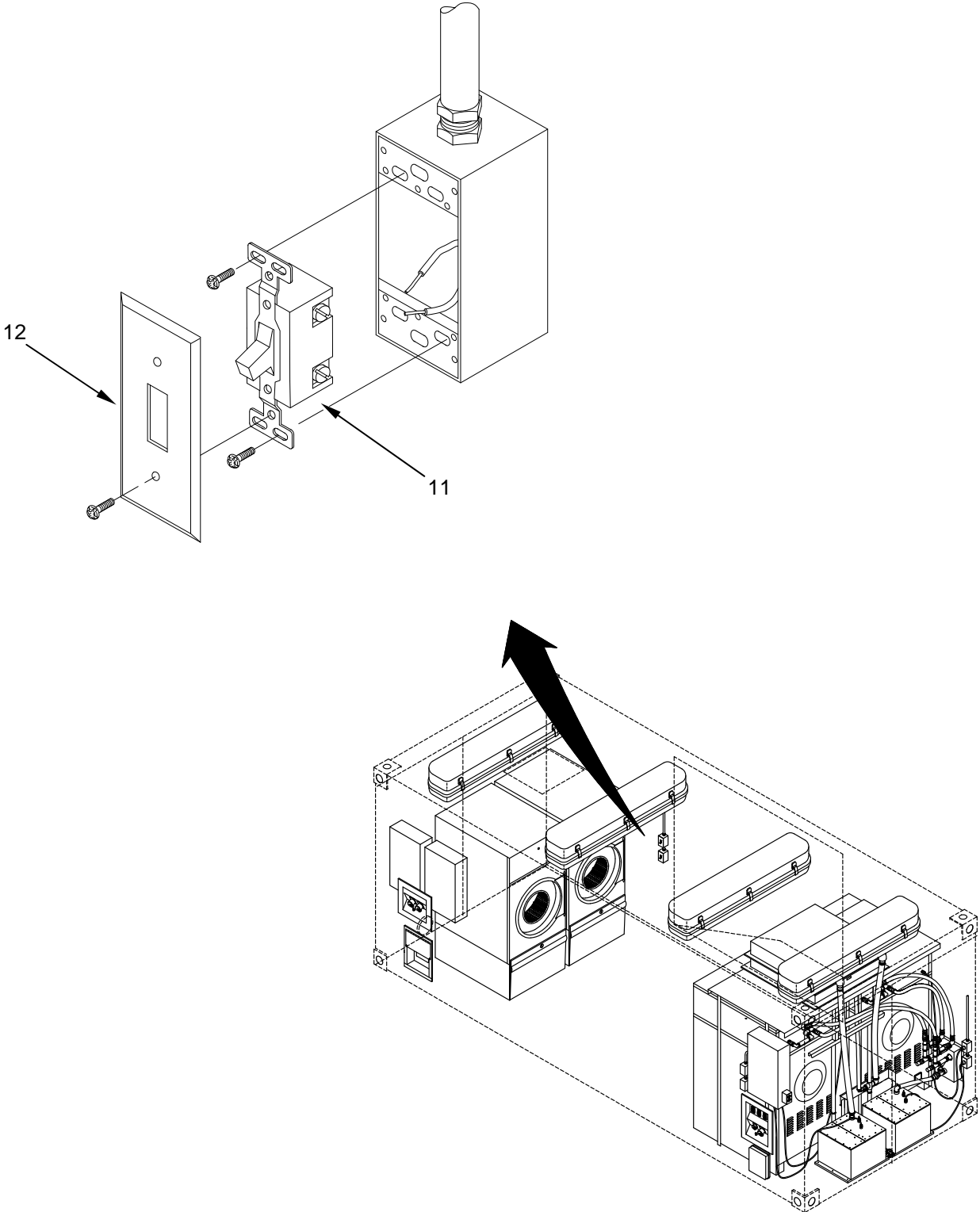


Figure 2. System, Electrical (Switches, Wall) (Sheet 3 of 10).

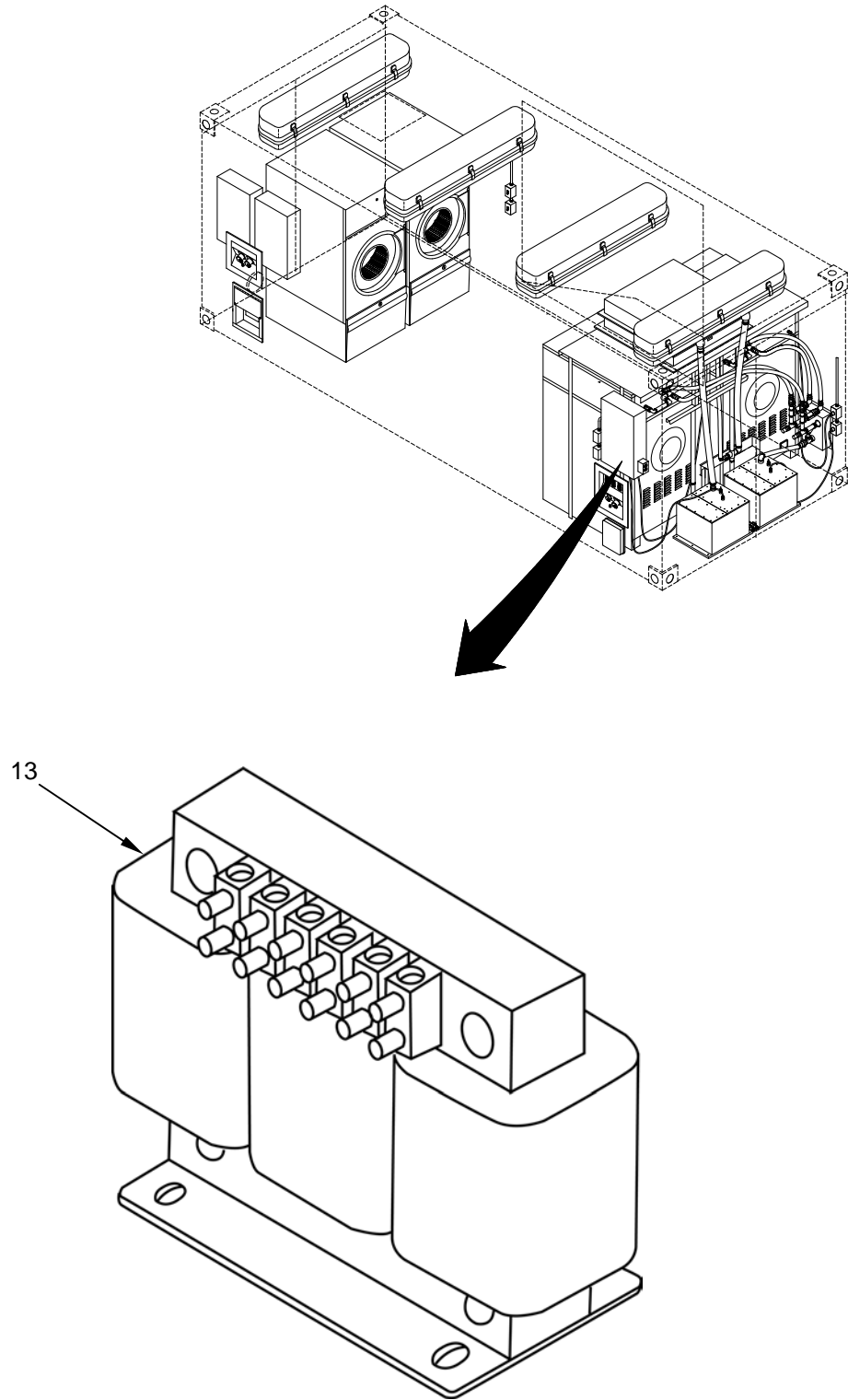


Figure 2. System, Electrical (Reactor, Line) (Sheet 4 of 10).

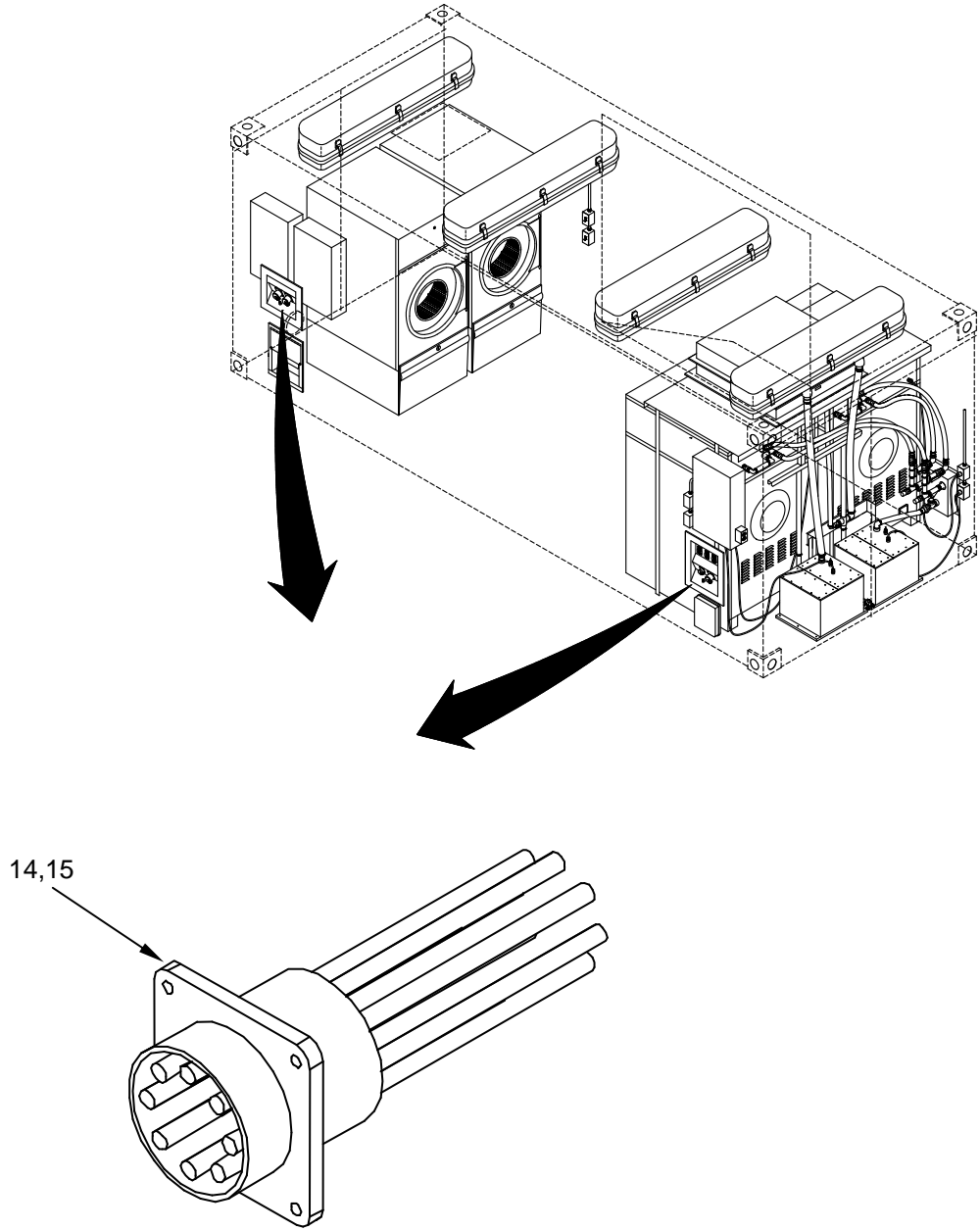


Figure 2. System, Electrical (Receptacles, Power Input) (Sheet 5 of 10).

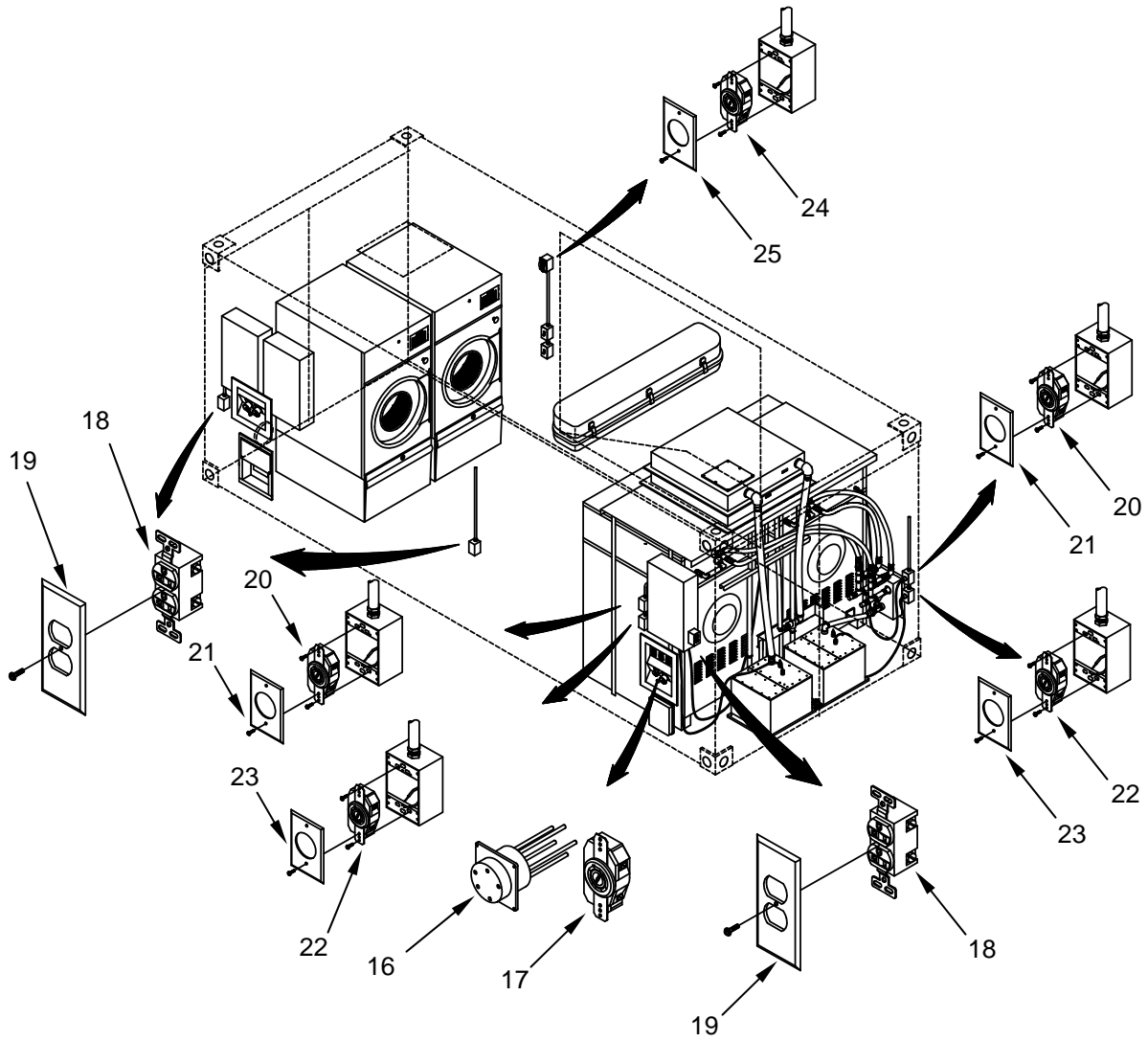
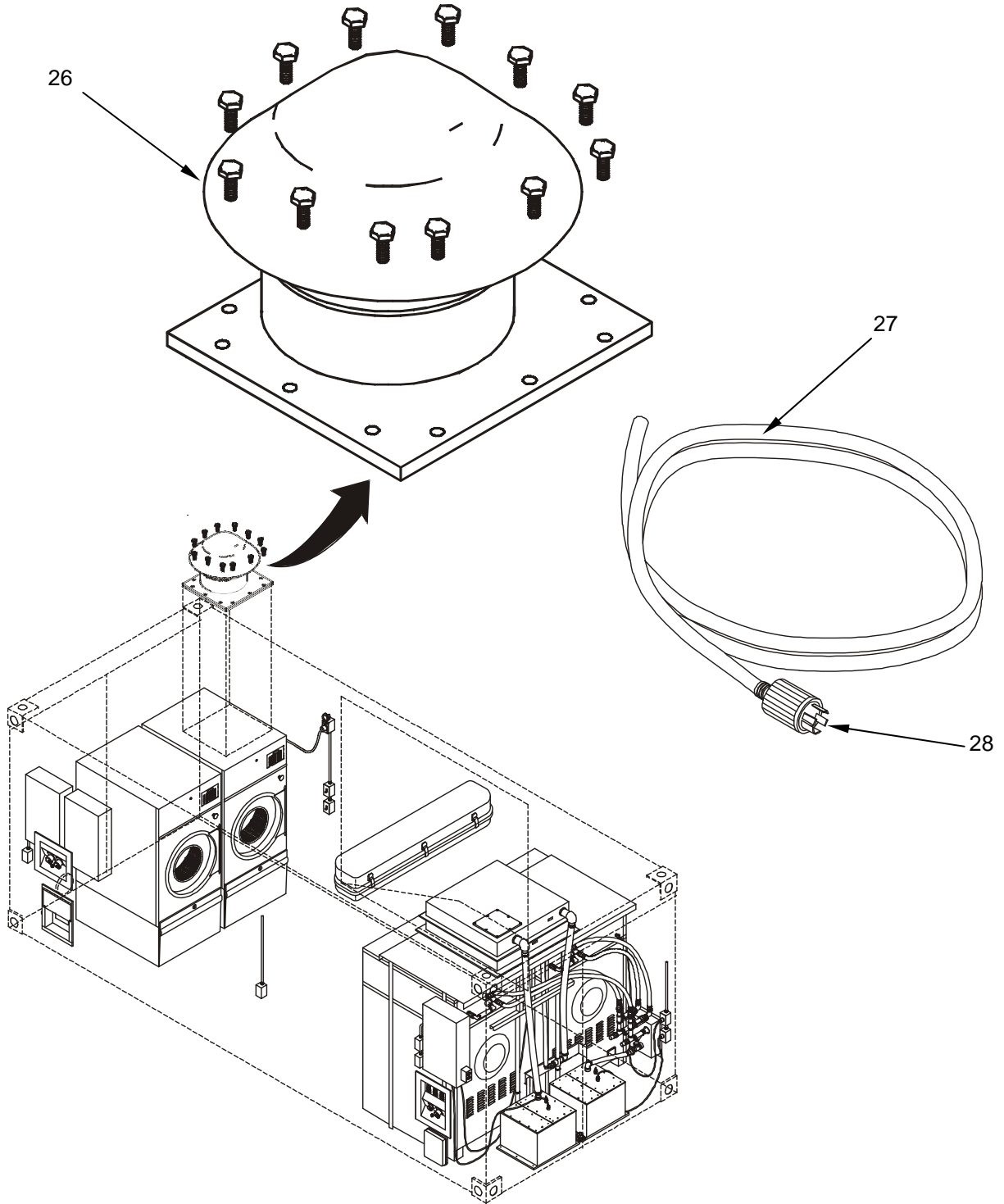


Figure 2. System, Electrical (Receptacles, Power Output) (Sheet 6 of 10).



(Fan, Exhaust) (Sheet 7 of 10).

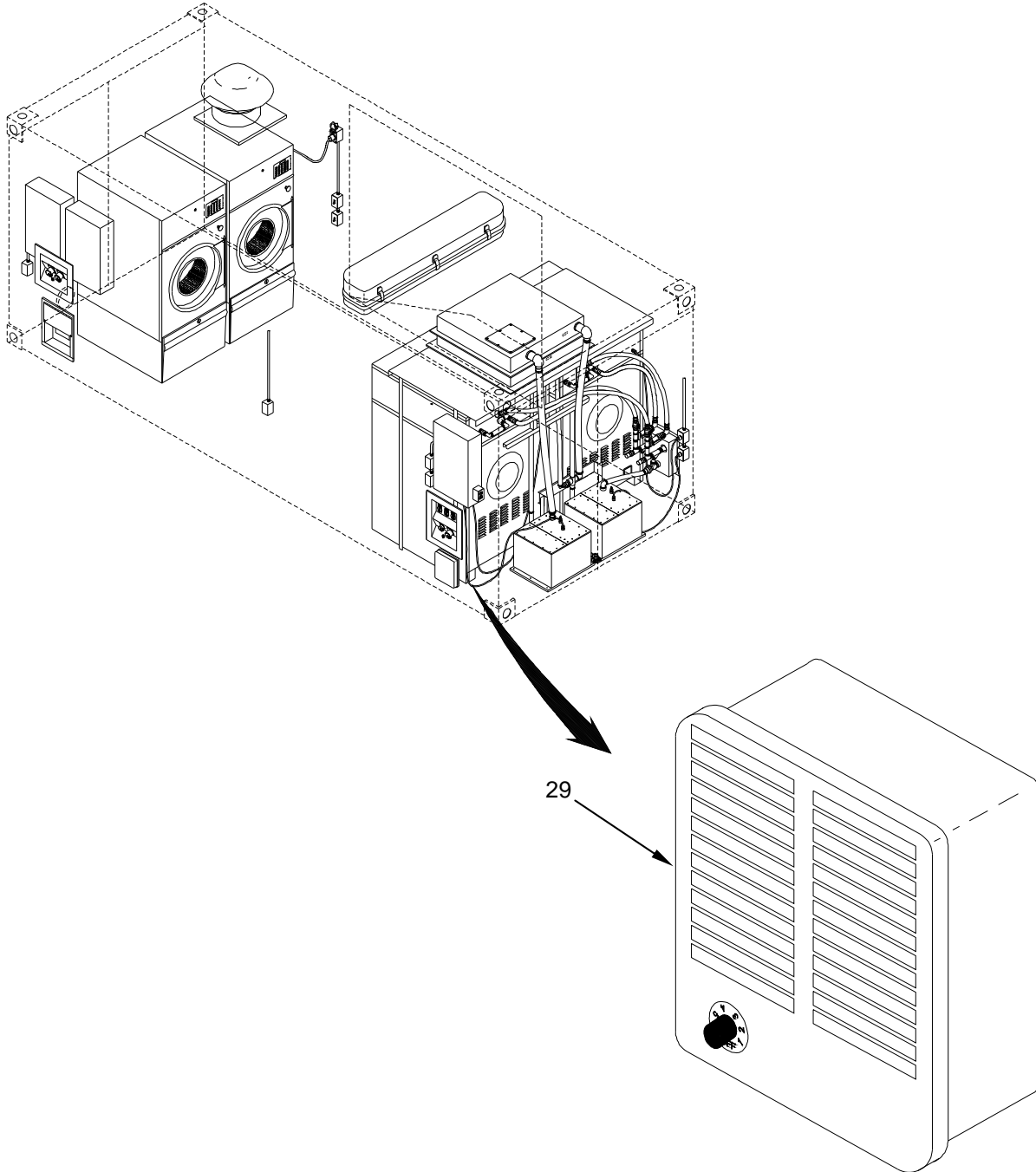


Figure 2. System, Electrical (Heater, Space, Electric Wall Mounted) (Sheet 8 of 10).

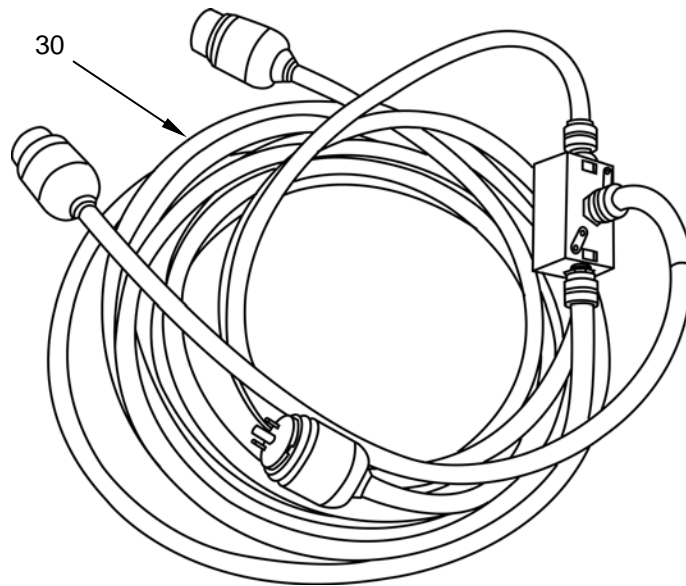


Figure 2. System, Electrical (Cable, Power Output Tee) (Sheet 9 of 10).

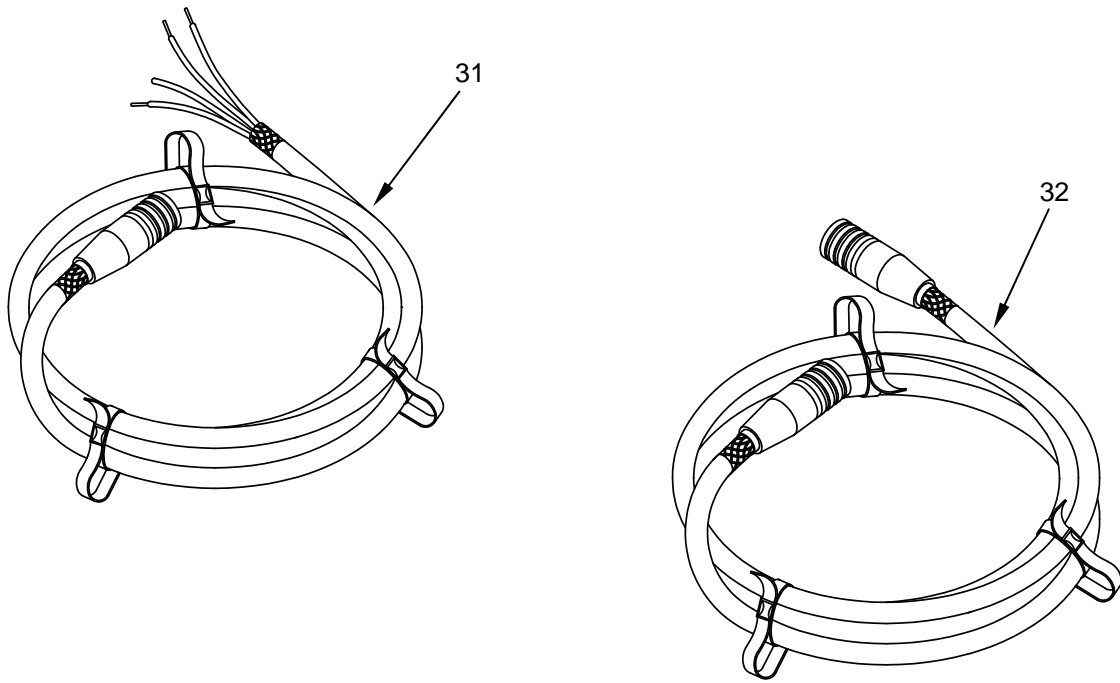


Figure 2. System, Electrical (Cables, Power) (Sheet 10 of 10).
0088-10

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 02						
FIG. 2 SYSTEM, ELECTRICAL						
1	PAOOO	6210-01-543-0660	16543	DMW232ARMV OLTGEB10IS	FIXTURE, LIGHTING	4
2	XBOZZ		1LXT3	U075301	. LATCH	6
3	PAOZZ	6250-00-892-5248	08595	8G1024WF	. BALLAST, LAMP	1
4	PAOZZ	6240-01-344-9507	62607	F32T8/TL841	. LAMP, FLUORESCENT	2
5	XBOZZ		81337	9-1-0961	ENCLOSURE ASSEMBLY, POWER DISTRIBUTION	1
6	PAOZZ	5925-00-984-2163	56303	QOB115	. CIRCUIT BREAKER, 1-POLE, 15A	2
7	PAOZZ	5925-00-728-1289	56303	QOB120	. CIRCUIT BREAKER, 1-POLE, 20A	3
8	PAOZZ	5925-01-305-6192	56303	QOB215	. CIRCUIT BREAKER, 2-POLE, 15A	2
9	PAOZZ	5925-00-728-1968	56303	QOB320	. CIRCUIT BREAKER, 3-POLE, 20A	3
10	PAOZZ	5925-00-785-4251	56303	QOB340	. CIRCUIT BREAKER, 3-POLE, 40A	1
11	XBOZZ		81091	PS20AC1-I	SWITCH, IVORY, 1-POLE, 20A, 120V	2
12	XBOZZ		74545	S-1	COVER, LIGHT SWITCH, 1-POLE, STAINLESS STEEL	2
13	PAOZZ	5950-01-517-9928	6Z539	RL-01802	REACTOR	2
14	PAFZZ		81337	9-1-0905-1	RECEPTACLE ASSEMBLY, 100A OUTLET, DRYER	2
15	XBFZZ		81337	9-1-0905-2	RECEPTACLE ASSEMBLY, 100A OUTLET, MAIN POWER	1
16	XBFZZ		81337	9-1-0904-1(-1)	RECEPTACLE ASSEMBLY, 60A OUTLET	1
17	PAFZZ	5935-00-353-2141	41326	GL2120(-1)	CONNECTOR, RECEPTACLE, ELECTRICAL	3
18	XDOZZ		07BY4	7159K89	RECEPTACLE, DUPLEX, 20A, 120V	3
19	PAOZZ	5975-01-116-0590	75582	84003	. PLATE, WALL, RECEPTACLE	3
20	XBOZZ		5P885	HBL4560	RECEPTACLE TWIST LOCK, 15A, 250V	2
21	PAOZZ	5975-00-878-4865	74545	S-7	. PLATE, WALL, RECEPTACLE	4
22	PAOZZ	5935-01-512-8569	1QRQ4	HBL4710	CONNECTOR, RECEPTACLE, ELECTRICAL	2
23	PAOZZ	5975-00-878-4865	74545	S-7	. PLATE, WALL, RECEPTACLE	4
24	PAOZZ	5935-01-525-8154	74545	HBL2310	CONNECTOR, RECEPTACLE, ELECTRICAL	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
25	PAOZZ	5975-01-449-6949	74545	7425WOA	. PLATE, WALL, RECEPTACLE	1
26	XBOZZ		81337	9-1-0953-1	VENTILATOR ASSEMBLY (GREEN) UOC: FSV	1
	XBOZZ		81337	9-1-0953-2	VENTILATOR ASSEMBLY (TAN) UOC: FTQ	1
27	MOOZZ		39428	6864K25	CORD, 12/3, S.O.-TYPE, 600V. APPROX 5" OD CUT LENGTH: 10'	1
28	PAOZZ	5935-01-525-6886	OD377	HBL2311	PLUG, TWIST-LOCK, 20A, 120V, 1- PHASE	1
29	XBOZZ		0J1V5	SED1512	HEATER, ELECTRIC, FARENHEAT, C SERIES, 120V, 1500W	1
30	XBOZZ		81337	9-1-1075	POWER TEE 20A, 120/208V 3 PH, WYE	1
31	PAOZZ	6150-01-256-6300	97403	13226E7020	PIGTAIL, CABLE	3
32	PAOZZ	6150-01-256-6304	97403	13226E7024	SERVICE FEEDER	6

END OF FIGURE

FIELD MAINTENANCE

SYSTEM, WATER

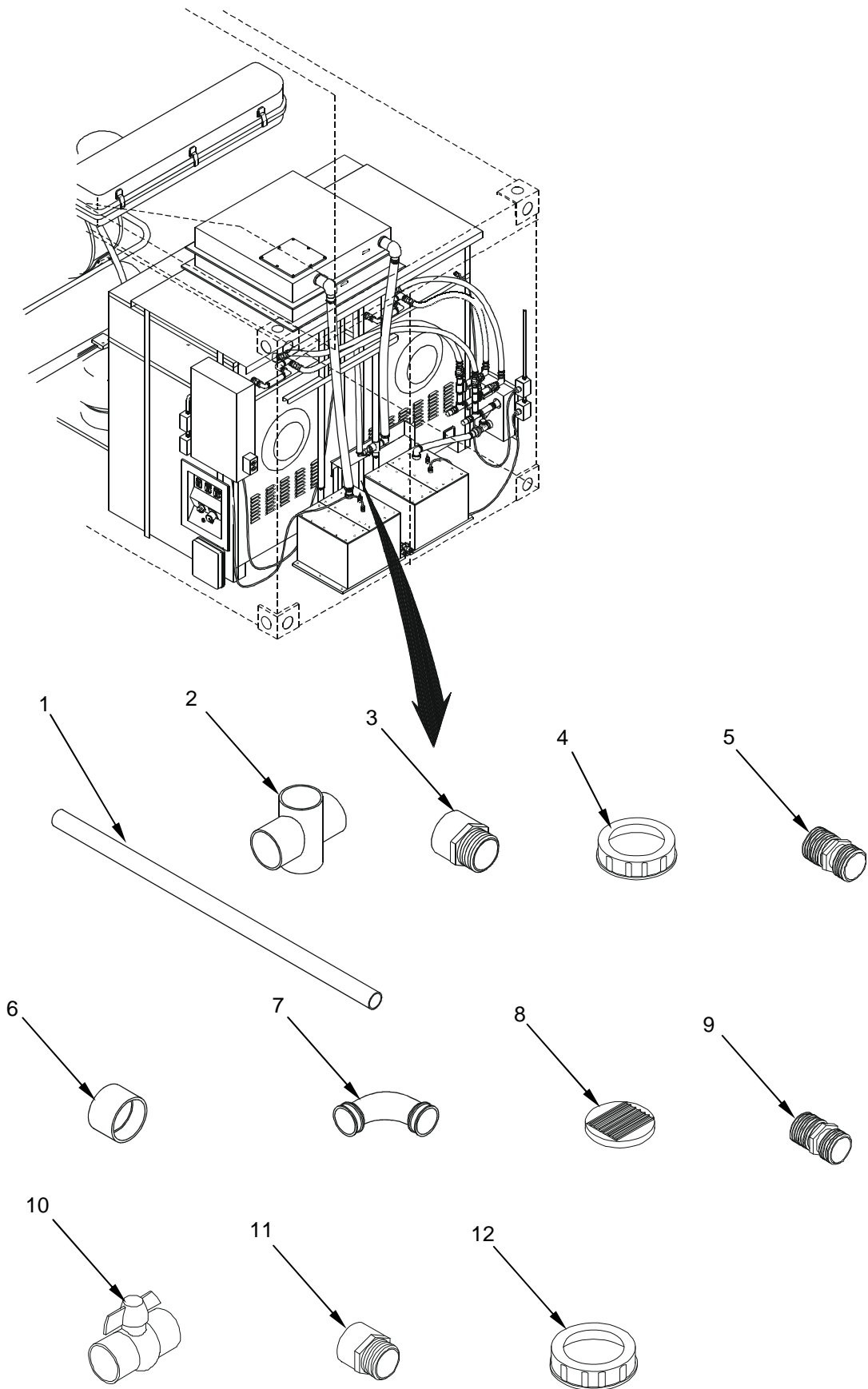


Figure 3. System, Water (Pipes and Fittings, Nonmetallic) (Sheet 1 of 5).

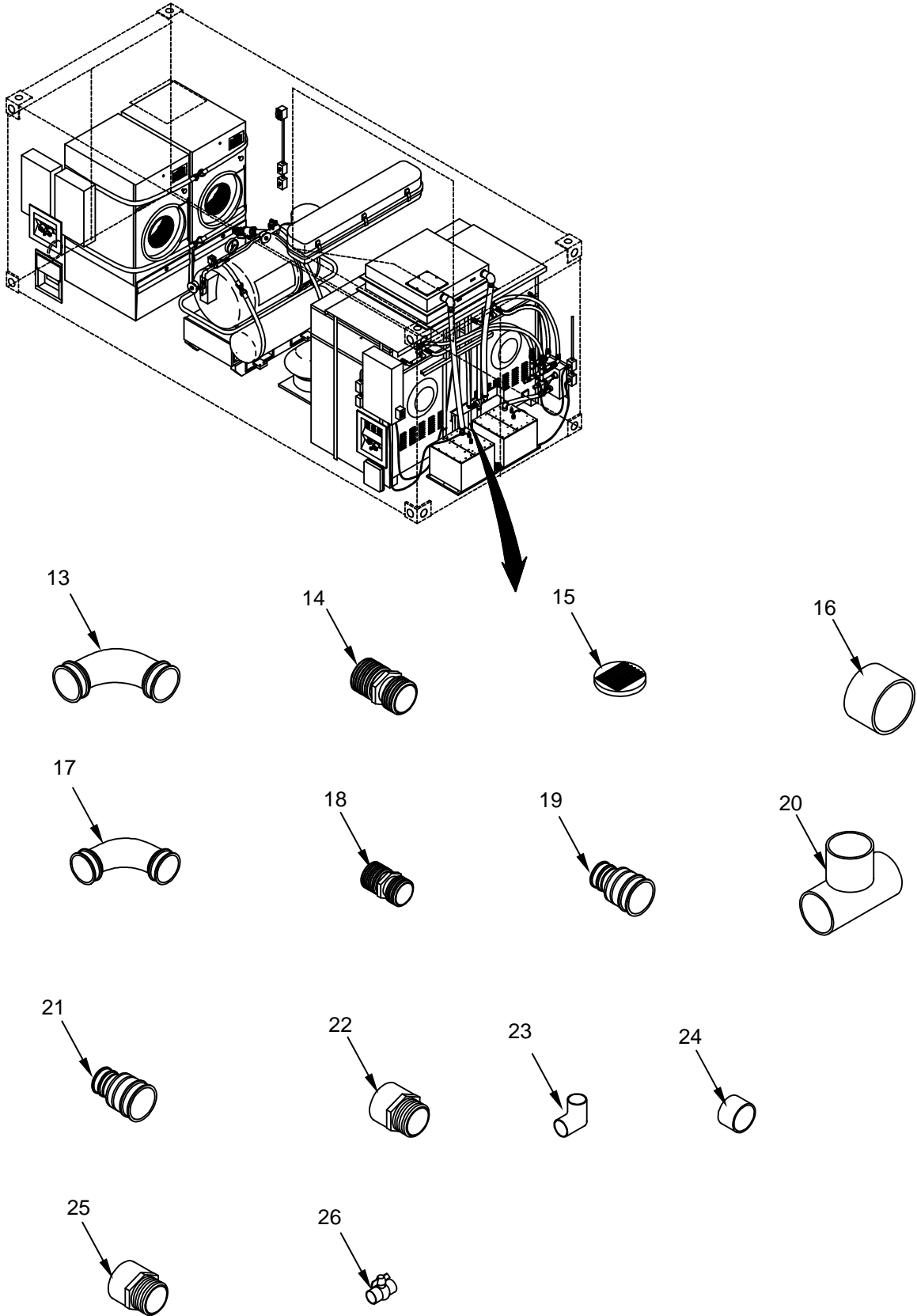


Figure 3. System, Water (Pipes and Fittings, Nonmetallic) (Sheet 2 of 5).

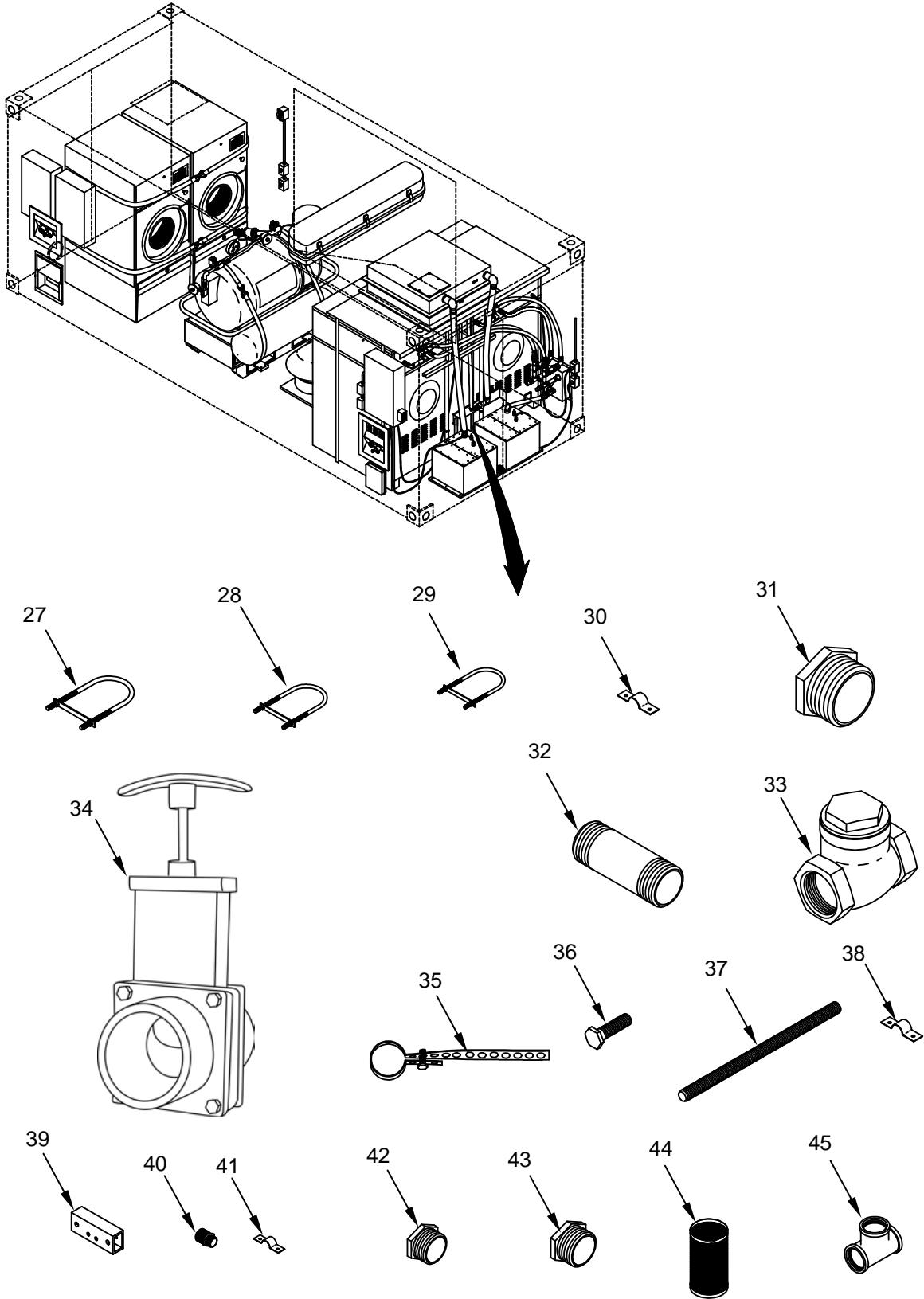


Figure 3. System, Water (Pipes and Fittings, Metallic) (Sheet 3 of 5).

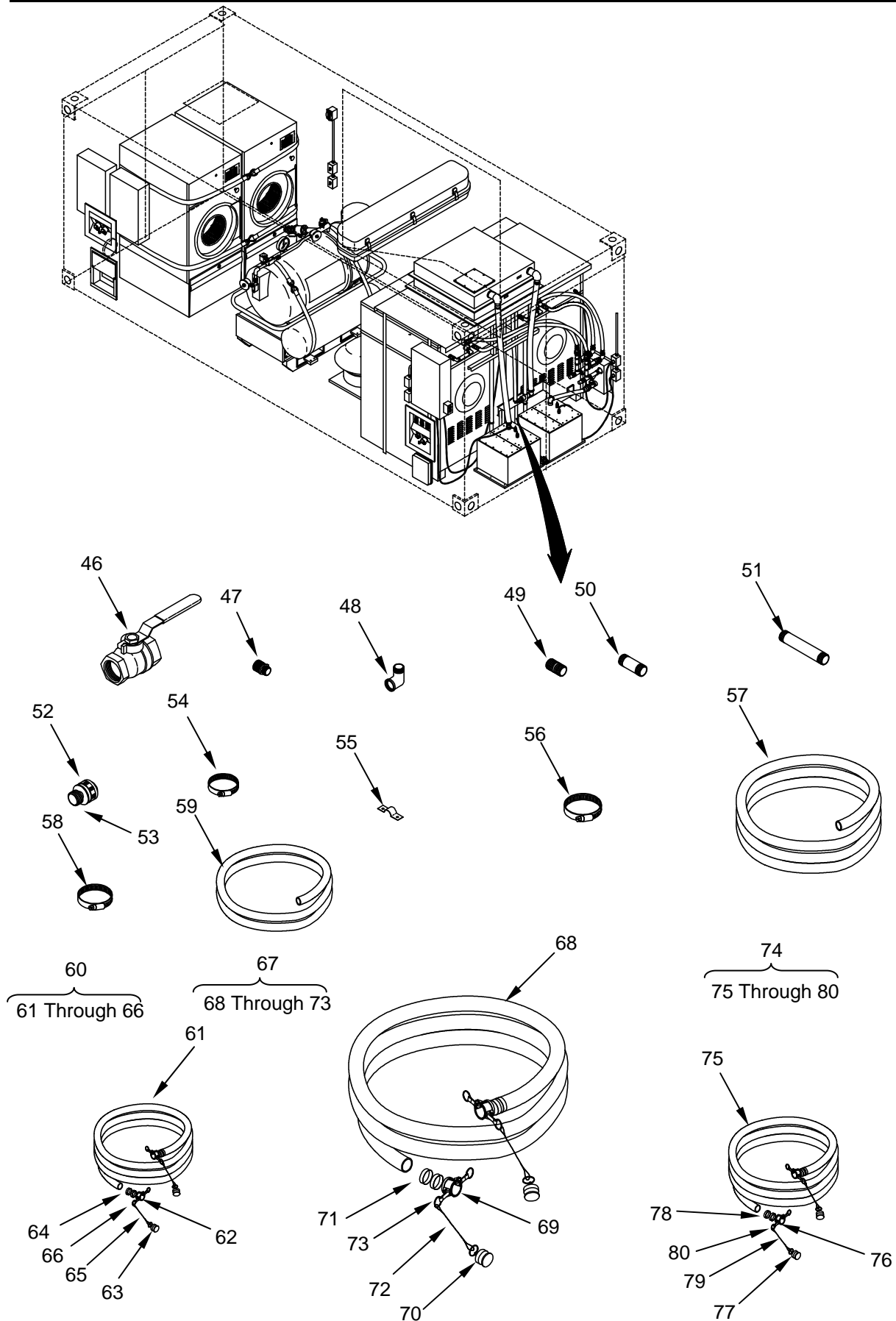


Figure 3. System, Water (Pipes and Fittings, Metallic, Hoses, Internal and External) (Sheet 4 of 5).

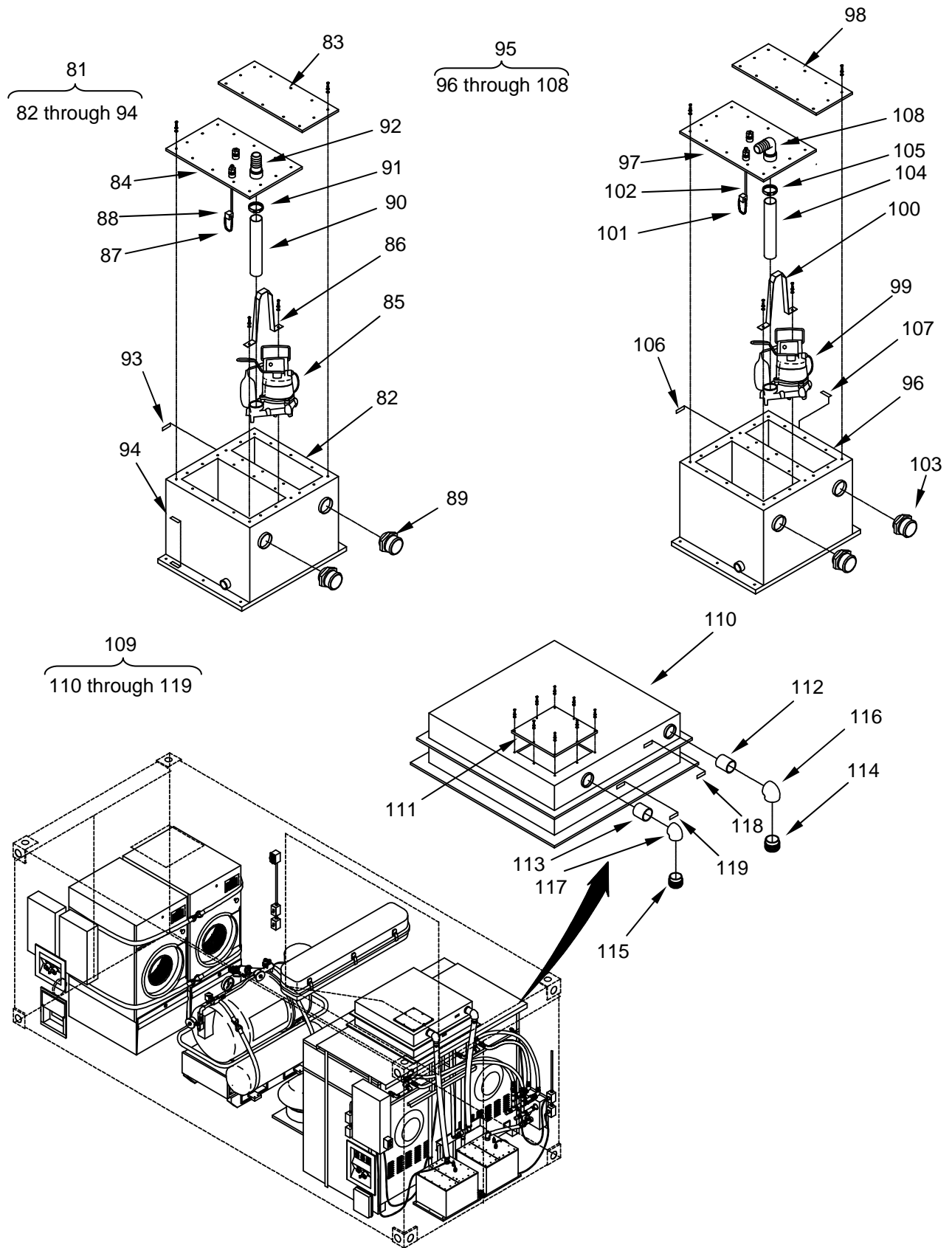


Figure 3. System, Water (Tanks, Drainage) (Sheet 5 of 5).

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 03						
FIG. 3 SYSTEM, WATER						
1	MOOZZ		39428	48925K96	2" PIPE, SCH 40, PVC, CUT LENGTH 4'	1
2	PAOZZ		14889	420-020	CROSS, SCH 40 PVC 2" SOC X SOC X SOC X SOC	2
3	PAOZZ	4730-01-146-5881	96405	436-020	ADAPTER, MALE, SCH 40 PVC 2", SPIG X MIPT	1
4	XBOZZ		96405	438-248	BUSHING, REDUCER, SCH 40 PVC 2" X 3/4", SPIG X FIPT	2
5	PAOZZ	4730-01-533-9836	39428	53055K227	ADAPTER, HOSE BARBED 3/4" TUBE I.D. X 3/4" MPT, PVDF	1
6	PAOZZ	4730-01-452-3924	0JM37	1056-22	COUPLING ASSEMBLY, TUBE, FLEXIBLE	2
7	XBOZZ		25795	2ZJ98	FLEXIBLE ELBOW, INSIDE DIAMETER 2"	2
8	PAOZZ	5670-01-534-1288	39428	2016K23	VENTILATOR, AIR CIRCULATING	1
9	PAOZZ	4730-01-533-9885	39428	53055K197	ELBOW, PIPE TO HOSE	1
10	XDOZZ		39428	4506K42	VALVE, BALL, THREADED 3/4", PVC	1
11	XDOZZ		96405	436-007	ADAPTER, MALE, SCH 40 PVC 3/4", MIPT X SOCKET	1
12	XBOZZ		96405	437-248	BUSHING, REDUCER, SCH 40 PVC 2" X 3/4", SPIG X SLIP	1
13	PAOZZ		96405	407-020	ELBOW, FLEXIBLE, 90°, SCH 40, PVC 2", SLIP X FIPT	1
14	PAOZZ	4730-01-533-9834	39428	5218K31	NIPPLE, HOSE	1
15	PAOZZ	5670-01-534-1288	39428	2016K23	VENTILATOR, AIR CIRCULATING	1
16	XBOZZ		1PTU4	8058-15SR	UNION, STEEL REINFORCED, 1 1/2", FIPT X FIPT, PVC SCH 80	1
17	XBOZZ		39428	43535K25	ELBOW, FLEXIBLE, 90°, NYLON, 1 1/2" NPT MALE X 1 1/2" HOSE, 60 PSI MAX.	1
18	PAOZZ	4730-01-533-9664	39428	5218K29	NIPPLE, HOSE	1
19	XBOZZ		39428	52265K71	COUPLING, FLEXIBLE, 2" ACCORDIAN STYLE	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
20	XBOZZ		96405	401-020	TEE, SCH 40 PVC 2" SLIP X SLIP X SLIP	2
21	XBOZZ		39428	4511K75	COUPLING, PIPE, FLEXIBLE, 2" PVC	2
22	XBOZZ		62531	461-005	ADAPTER, MALE, SCH 40, PVC 1/2", SPIG X MIPT	2
23	XBOZZ		96405	406-005	ELBOW, 90°, SCH 40, PVC 1/2", SLIP X SLIP	2
24	XBOZZ		96405	457-005	UNION, SCH 40 PVC 1/2", SOC X SOC, BUNA O-RING	2
25	XBOZZ		96405	436-005	ADAPTER, MALE, SCH 40, PVC 1/2", MIPT X SPIG	2
26	PAOZZ	4820-01-351-3432	59628	1071005	VALVE, BALL	2
27	XDOZZ		39428	3176T36	U-BOLT, 2 3/8" I.D., 5/16 -16 THD, VIBRATION DAMPENING	1
28	XDOZZ		39428	8896T128	PIPE CLAMP, U-BOLT, 2" I.D., 5/16 - 18 THD, CRES W/O MOUNTING PLATE	1
29	XDOZZ		39428	8896T129	PIPE CLAMP, U-BOLT, 2 1/2" I.D., 5/16 - 18 THD, CRES W/O MOUNTING PLATE	1
30	XBOZZ		39428	8871T38	STRAP LOOP, 2 3/4" I.D. WITH RUBBER CUSHIONED, WEDGE STYLE, ZINC PLATED	2
31	XBOZZ		39428	4429K443	BUSHING, REDUCER, HEX 3" X 1 1/2", BRASS	1
32	XBOZZ		9S781	BRNL906	NIPPLE, PIPE, CLOSE 1 1/2" X CLOSE, BRASS	2
33	XBOZZ		39428	4708K57	VALVE, SWING CHECK 1 1/2" BRASS	1
34	PAOZZ		OU5N7	34241344-1	SPRING RETURN VALVE ASSY 2" SLIP X SPIG	4
35	XBOZZ		39428	3023T87	SPLIT RING HANGERS	2
36	XDOZZ		16309	941(.38 BOLT)	PLATE, CEILING, 3/8 BOLT, ELECTRO-GALVANIZED	2
37	XBOZZ		39428	98920A031	ROD, THREADED, .375-16 UNC-2A, CUT LENGTH 8.50"	2
38	XBOZZ		39428	8871T37	STRAP LOOP, 2 1/2" I.D. WITH RUBBER CUSHIONED, ZINC PLATED	3
39	XBOZZ		81337	9-1-1010-1	BRACKET, PIPE SUPPORT REUSE/WASTE TANK DRAIN	1
40	XDOZZ		24994	30-058	ADAPTER, GARDEN HOSE, BRASS 3/4 GHT TO 1/2 MPT	2

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
41	PAOZZ	5340-01-533-8252	39428	3225T68	CLAMP LOOP	2
42	PAOZZ	4730-01-481-8175	39728	4429K415	BUSHING, HEX REDUCING 1" MPT X 3/4" FPT, BRASS	1
43	PAOZZ	4730-01-506-4633	38428	4429K425	BUSHING, HEX REDUCING 1 1/2" MPT X 3/4" FPT, BRASS	1
44	XBOZZ		39428	4385K246	Y-STRAINER, REPLACEMENT SCREEN, 3/4" MESH, 150 WSP (SAME AS P/N 4385K44)	2
45	PAOZZ	4730-01-481-5455	39428	4429K254	TEE, BRASS THREADED, 125 PSI 3/4" PIPE SIZE	4
46	PAOZZ	4820-01-454-2024	39428	47865K24	VALVE, BALL 3/4" THREADED, BRASS	4
47	PAOZZ	4730-01-317-5265	39428	5346K28	HOSE NIPPLE, BARBED 3/4 PIPE X 3/4 HOSE, BRASS	4
48	PAOZZ	4730-01-506-4407	39428	4429K154	ELBOW, PIPE, 90°, STREET, 3/4" NPT, BRASS	2
49	PAOZZ	4730-00-222-1840	39428	4568K191	NIPPLE, PIPE	4
50	PAOZZ	4730-00-196-1999	39428	4568K193	NIPPLE, PIPE	2
51	PAOZZ	4730-01-506-4429	39428	4568K196	NIPPLE, PIPE	4
52	XDOZZ		62661	5FLD60611012	COUPLING BODY, QUICK CONNECT, 3/4" HOSE, BLACK ALUMINUM	4
53	XDOZZ		62661	5FLD60612412	COUPLING INSERT, QUICK CONNECT, 3/4" MNPT, BLACK ALUMINUM	2
54	PAFZZ	4730-01-171-9519	76599	4212	CLAMP, HOSE, WORM DRIVE, 11/16-1 1/4" RANGE, 300 SERIES STAINLESS STEEL, HIGH CORROSION RESISTANCE	8
55	XDFZZ		39428	7429K48	STRAP, TUBE AND HOSE, UV- RESISTANT ACETAL, 7/8" - 1" TUBE O.D., .17 DIA. MTG HOLE	3
56	PAOZZ	4730-01-273-3671	76599	H28SS	CLAMP, HOSE, WORM DRIVE, SAE #28, 1 5/16 TO 2 1/4" DIA X 1/2" WIDE, SS W/SS SCREW	4
57	PAOZZ		39428	5301K16	HOSE, GENERAL SERVICE AIR/WATER DISCHARGE, 2" I.D. EPDM JACKET AND TUBE, BLACK (DAYCO GSTII OR EQUIV.), CUT LENGTH 54"	1
58	PAOZZ	4730-01-375-8073	39428	5416K21	CLAMP, HOSE	2

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
59	XDOZZ		39428	5301K15	HOSE, GENERAL SERVICE AIR/WATER DISCHARGE, 1 1/2" I.D. EPDM JACKET AND TUBE, BLACK (DAYCO GSTII OR EQUIV.), CUT LENGTH 9"	1
60	XDOZZ		81337	9-1-0966	HOSE ASSEMBLY, HOT WATER	1
61	PAOZZ	4720-01-533-8711	1FFH9	4686-0701	. HOSE, 1", WATER SUPPLY CUT LENGTH:25'	1
62	XDOZZ		1FFH9	10C	. COUPLER, QUICK DISCONNECT, BRASS, 1"	2
63	XDOZZ		1FFH9	10W	. DUST PLUG, QUICK DISCONNECT, BRASS, 1"	2
64	XDOZZ		39428	5423K16	. HOSE CLAMP, PUNCH-LOK, SS, 1- 3/4"	4
65	XDOZZ		39428	30345T15	. LANYARD, LOOP EACH END, CRES TYPE 304, NYLON COATED LENGTH: 8"	2
66	PAOZZ	5325-01-328-4742	39428	90177A221	. RING, RETAINING	2
67	XDOZZ		81337	9-1-0967	HOSE ASSEMBLY, WASTE WATER	1
68	XDOZZ		1FFH9	EPDM7257- 300150	. HOSE, DRAIN, 3" ID, CUT LENGTH:10'	1
69	PAOZZ		1FFH9	30C	. COUPLER, QUICK DISCONNECT, BRASS, 3"	2
70	XDOZZ		1FFH9	30W	. DUST PLUG, QUICK DISCONNECT, BRASS, 3"	2
71	XDOZZ		39428	5423K34	. HOSE CLAMP, PUNCH-LOK, SS, 4"	4
72	XDOZZ		39428	30345T15	. LANYARD, LOOP EACH END, CRES TYPE 304, NYLON COATED LENGTH: 8"	2
73	PAOZZ	5325-01-328-4742	39428	90177A221	. RING, RETAINING	2
74	XDOZZ		81337	9-1-0968	HOSE ASSEMBLY, COLD WATER	1
75	PAOZZ		39428	5301K15	. HOSE, GENERAL SERVICE AIR/WATER DISCHARGE, 1 1/2" I.D. EPDM JACKET AND TUBE, BLACK (DAYCO GSTII OR EQUIV.), CUT LENGTH 20'	1
76	XDOZZ		1FFH9	15C	. COUPLER, QUICK DISCONNECT, BRASS, 1-1/2"	2
77	XDOZZ		1FFH9	15W	. DUST PLUG, QUICK DISCONNECT, BRASS, 1-1/2"	2
78	XDOZZ		39428	5655K17	. HOSE CLAMP, PUNCH-LOK, SS, 2"	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
79	XDOZZ		39428	30345T15	. LANYARD, LOOP EACH END, CRES TYPE 304, NYLON COATED LENGTH: 8"	2
80	PAOZZ	5325-01-328-4742	39428	90177A221	. RING, RETAINING	2
81	XBOZZ		81337	9-1-0907	TANK ASSEMBLY, REUSE TRANSFER	1
82	XBOZZ		81337	9-1-0973-1	. TANK, REUSE TRANSFER, HDPE, 21" X 19" X 16	1
83	XDOZZ		81337	9-1-0931-1	. LID ASSEMBLY, REUSE TRANSFER TANK	1
84	XBOZZ		81337	9-1-0934-1	. LID ASSEMBLY, CLEANOUT	1
85	PAOZZ	4320-01-532-3872	02JD2	M59	. PUMP,UNIT, CENTRIFUGAL	1
86	XBOZZ		81337	9-1-1016-1	. PUMP BRACKET, REUSE TRANSFER TANK	1
87	PAOZZ	4010-01-128-0940	39428	3606T19	. CHAIN, BALL, CRES, #10 BALL SIZE:11.50	1
88	PAOZZ	4030-01-285-2882	39428	3606T33	. END COUPLING, BALL CHAIN, CRES, #10 BALL, SIZE:11.50	2
89	XDOZZ		62531	461-020	. ADAPTER, MALE, SCH 40 PVC, 2" SPIGOT X MIPT	1
90	PAOZZ	4720-01-541-0656	87373	7093-150204	. HOSE, NONMETALLIC, CUT LENGTH 10.00"	1
91	PAOZZ	4730-01-273-3671	76599	H28SS	. HOSE CLAMP WORM DRIVE, SAE#28, 1-5/16" TO 2-1/4" DIA X 1/2" WIDE,SS W/SS SCREW	2
92	PAOZZ	4730-01-533-9664	39428	5218K29	. NIPPLE, HOSE	1
93	XBOZZ		81337	9-1-1085-1	. LABEL, ID	1
94	XBOZZ		81337	9-1-1089-1	. LABEL, ID	1
95	XBOZZ		81337	9-1-0908-1	TANK ASSEMBLY, WASTE	1
96	XBOZZ		81337	9-1-1080	TANK, WASTE	1
97	XBOZZ		81337	9-1-0932-1	. LID ASSEMBLY, REUSE	1
98	XBOZZ		81337	9-1-0934-1	. LID ASSEMBLY, CLEANOUT	1
99	XDOZZ		3Y232	MODEL #98	. PUMP, SUBMERSIBLE, CAST IRON, MIN 25 GPM X 20' LIFT, 1/2 HP, 115VAC, THERMAL OVERLOAD PROTECTED	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
100	XBOZZ		81337	9-1-1017-1	. PUMP BRACKET, REUSE TRANSFER TANK	1
101	PAOZZ	4010-01-128-0940	39428	3606T19	. CHAIN, BALL, CRES, #10 BALL SIZE: 8.50	1
102	PAOZZ	4030-01-285-2882	39428	3606T33	. END COUPLING, BALL CHAIN, CRES, 310 BALL SIZE	2
103	XDOZZ		6Z531	461-020	. ADAPTER, MALE, SCH 40 PVC, 2" SPIGOT X MIPT	2
104	XDOZZ		39428	5301K15	. HOSE, GENERAL SERVICE AIR/WATER DISCHARGE, 1 1/2" I.D. EPDM JACKET AND TUBE, BLACK (DAYCO GSTII OR EQUIV.), CUT LENGTH 10.00"	1
105	PAOZZ	4730-01-273-3671	76599	H28SS	. HOSE CLAMP WORM DRIVE, SAE#28, 1-5/16" TO 2-1/4" DIA X 1/2" WD, SS W/SS SCREW	2
106	XBOZZ		81337	9-1-1085-41	. LABEL, ID	1
107	XBOZZ		81337	9-1-1084-6	. LABEL, ID	1
108	XBOZZ	4730-01-533-9664	39428	5218K29	. NIPPLE, HOSE	1
109	XBOZZ		81337	9-1-0909	TANK ASSEMBLY, REUSE	1
110	XBOZZ		81337	9-1-1081-1	. TANK, REUSE	1
111	XBOZZ		81337	9-1-0933-1	. LID ASSEMBLY, WASTE	1
112	XDOZZ		39428	9173K78	. NIPPLE, PIPE, 2" NPT X 4" LG, SCH 80 PVC	1
113	XDOZZ		39428	9173K77	. NIPPLE, PIPE, 1-1/2" NPT X 4" LG, SCH 80 PVC	1
114	PAOZZ	4730-01-533-9834	39428	5218K31	. NIPPLE, HOSE	1
115	PAOZZ	4730-01-533-9664	39428	5218K29	. NIPPLE, HOSE	1
116	PAOZZ	4730-01-208-9226	96405	808-020	. 90 DEG ELBOW, PVC, 2" FPT X FPT, SCH 80	1
117	PAOZZ	4730-00-328-4805	96405	808-015	. ELBOW, PIPE	1
118	XBOZZ		81337	9-1-1085-39	. LABEL, ID	1
119	XBOZZ		81337	9-1-1084-5	. LABEL, ID	1

END OF FIGURE

FIELD MAINTENANCE

WASHER/EXTRACTOR, LAUNDRY

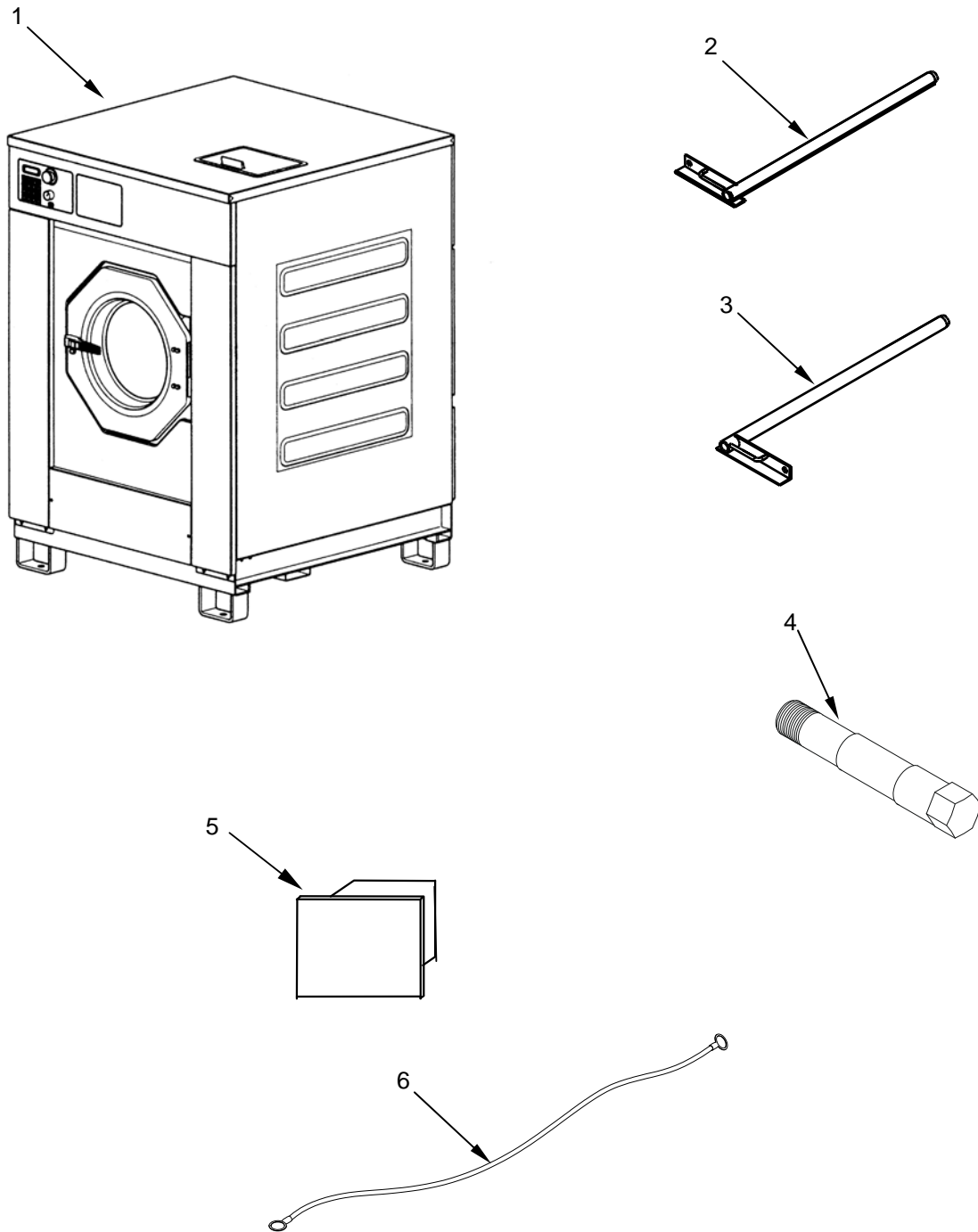


Figure 4. Washer/Extractor, Laundry (Sheet 1 of 12).

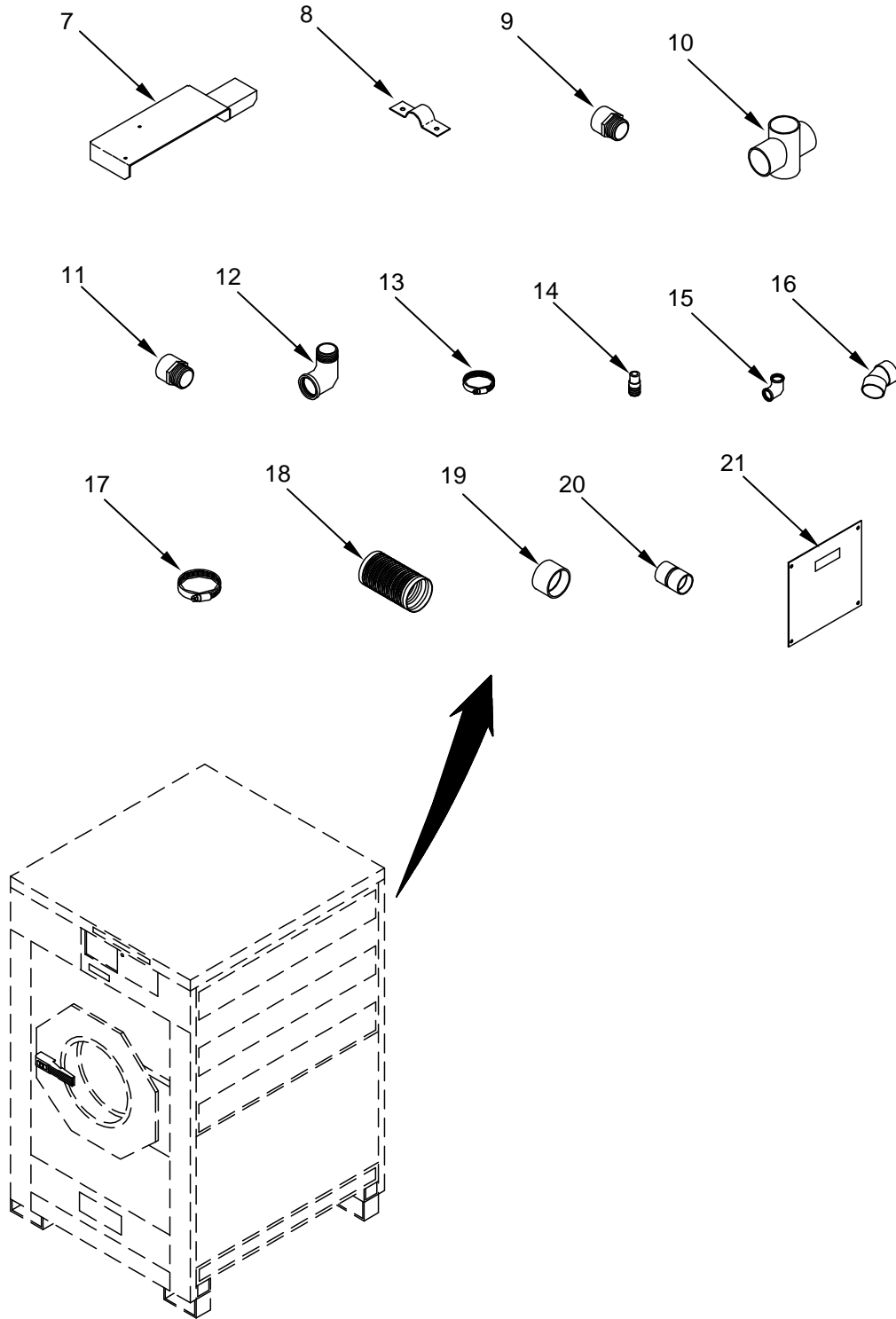


Figure 4. Washer/Extractor, Laundry (Sheet 2 of 12).

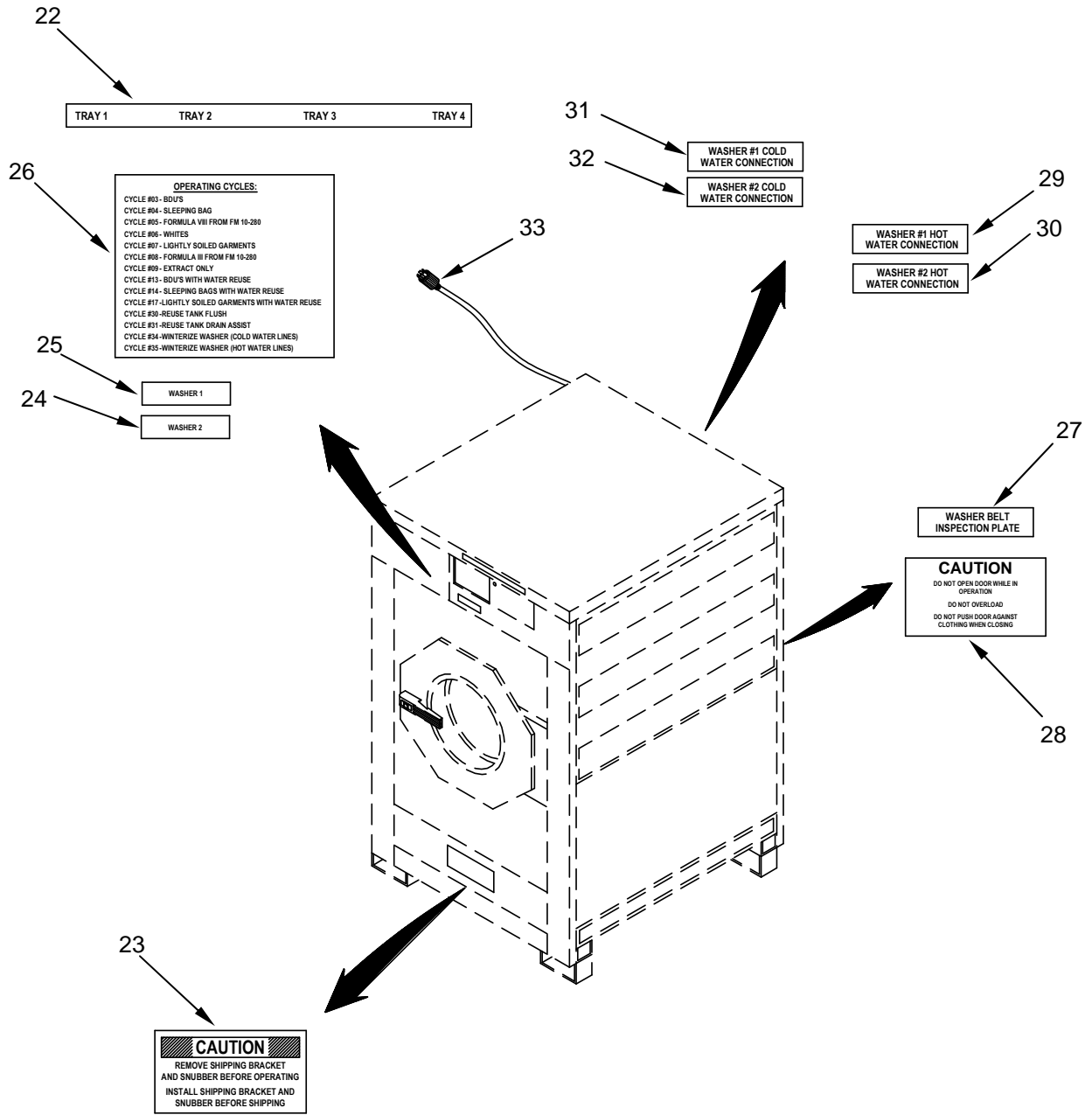


Figure 4. Washer/Extractor, Laundry (Labels) (Sheet 3 of 12).

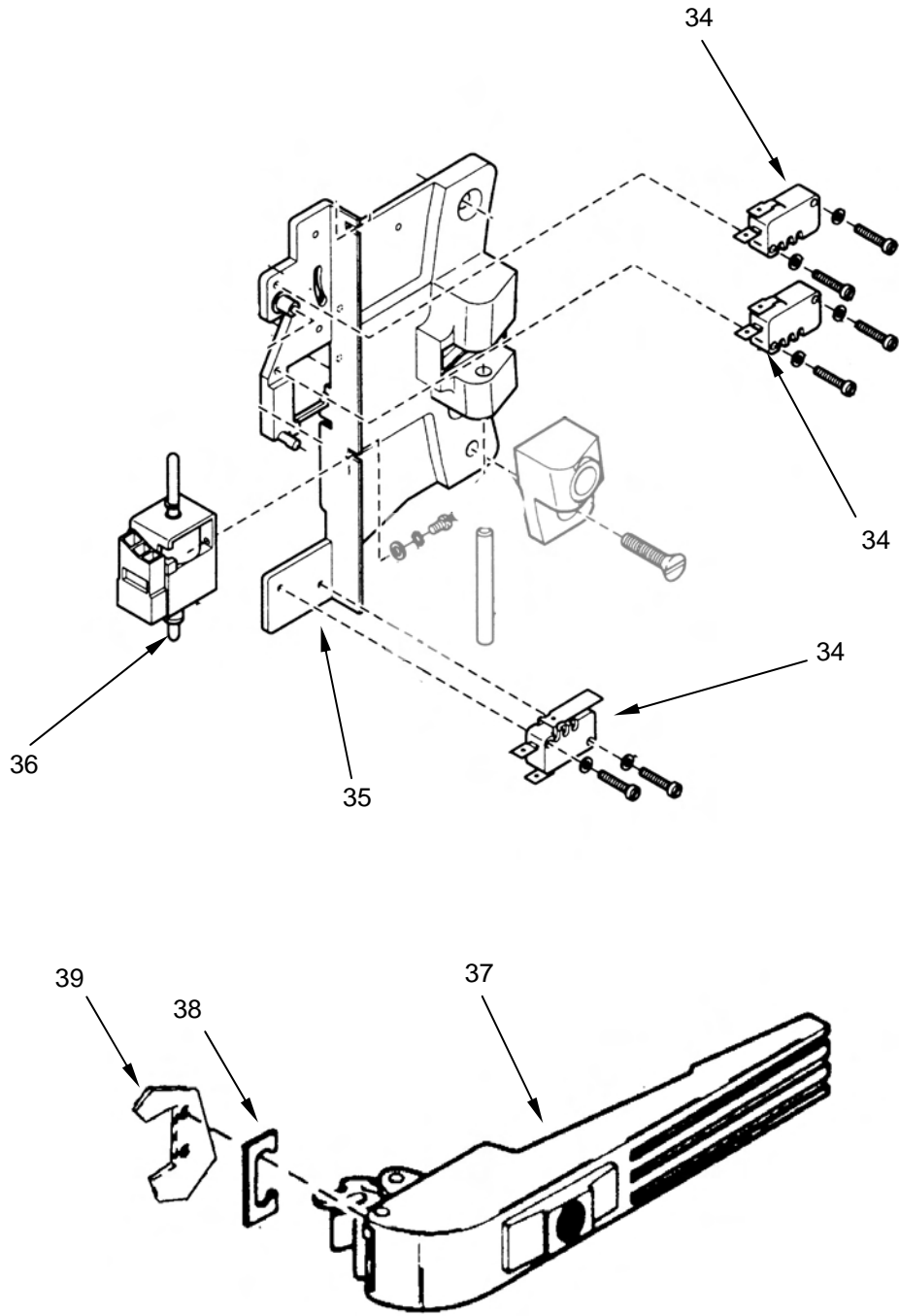


Figure 4. Washer/Extractor, Laundry (Assembly, Door Lock) (Sheet 4 of 12).

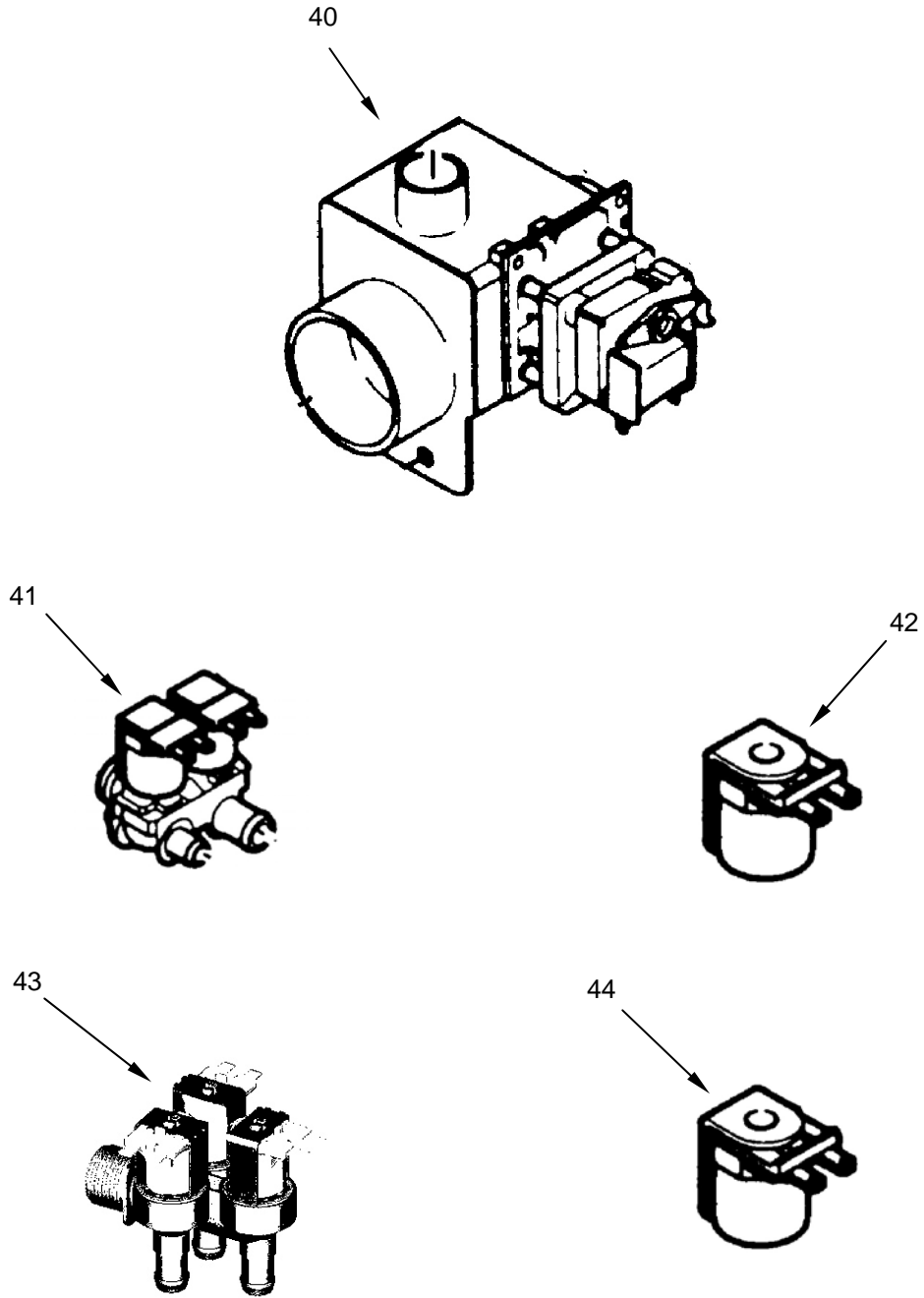


Figure 4. Washer/Extractor, Laundry (Pumps and Valves) (Sheet 5 of 12).

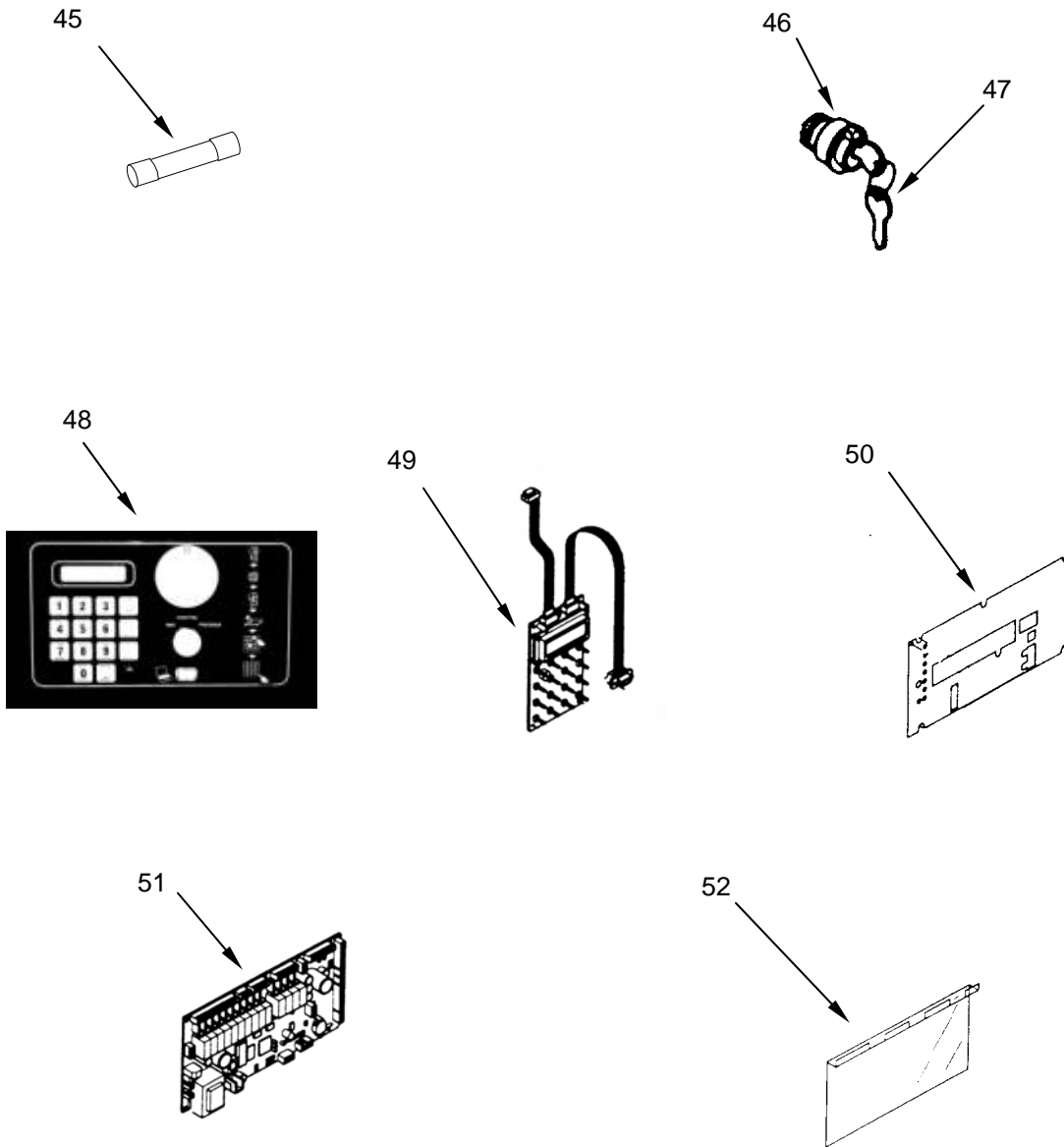


Figure 4. Washer/Extractor, Laundry (Control Pad Assembly) (Sheet 6 of 12).

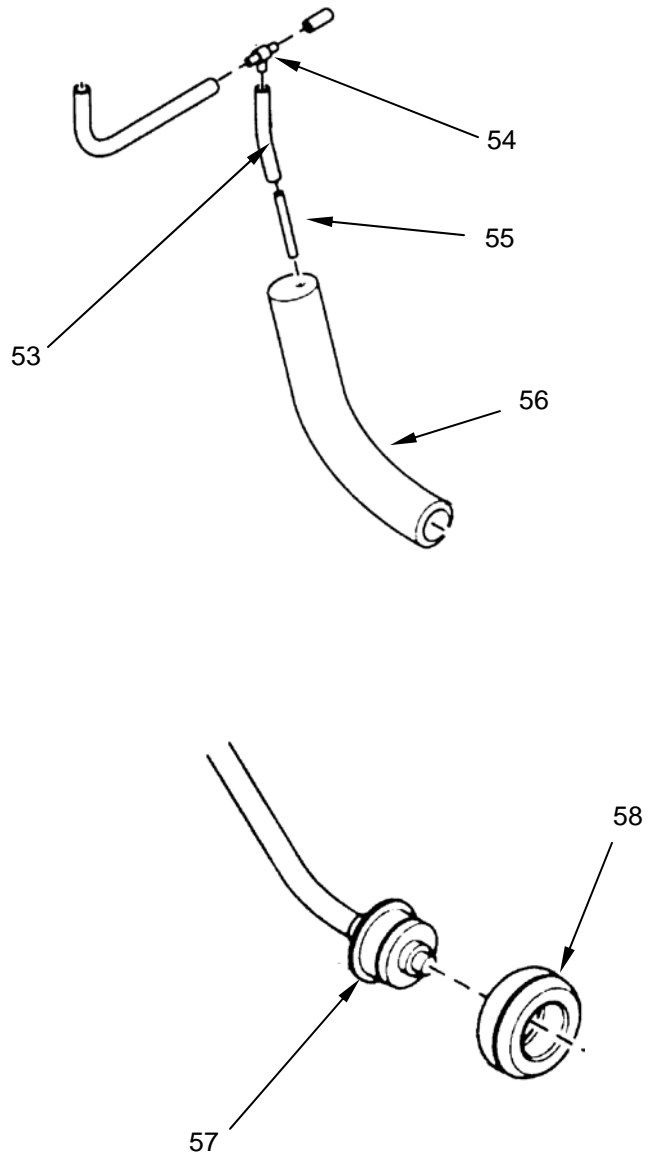


Figure 4. Washer/Extractor, Laundry (Hose Assemblies) (Sheet 7 of 12).

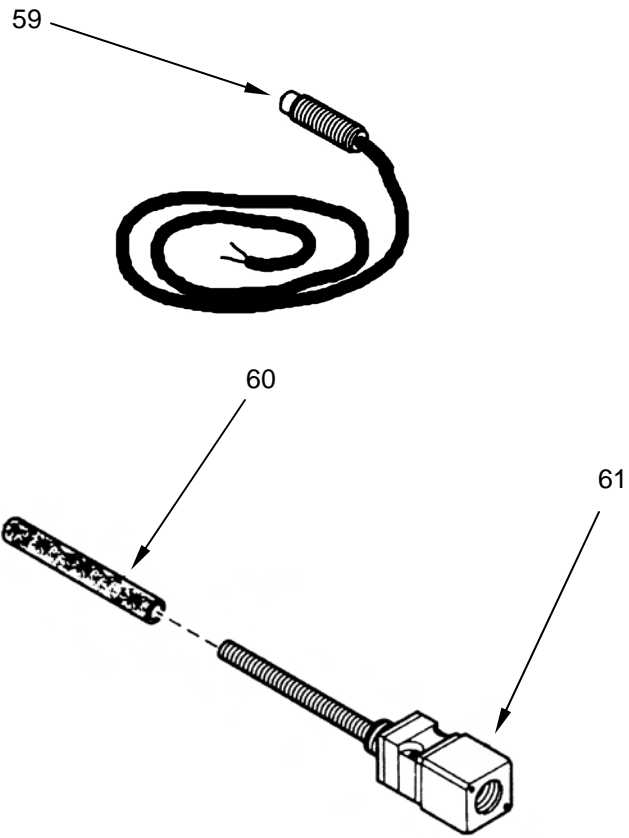


Figure 4. Washer/Extractor, Laundry (Transducer, Pressure Switch) (Sheet 8 of 12).

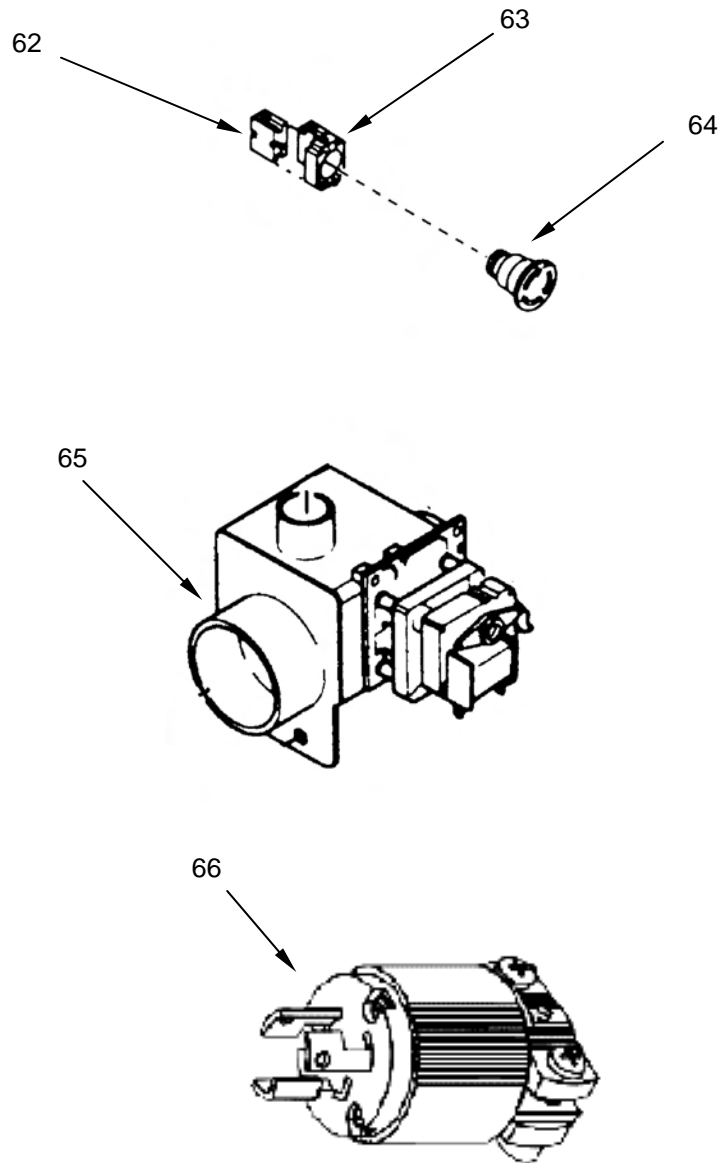


Figure 4. Washer/Extractor, Laundry (Receptacle, Valve, Plug) (Sheet 9 of 12).

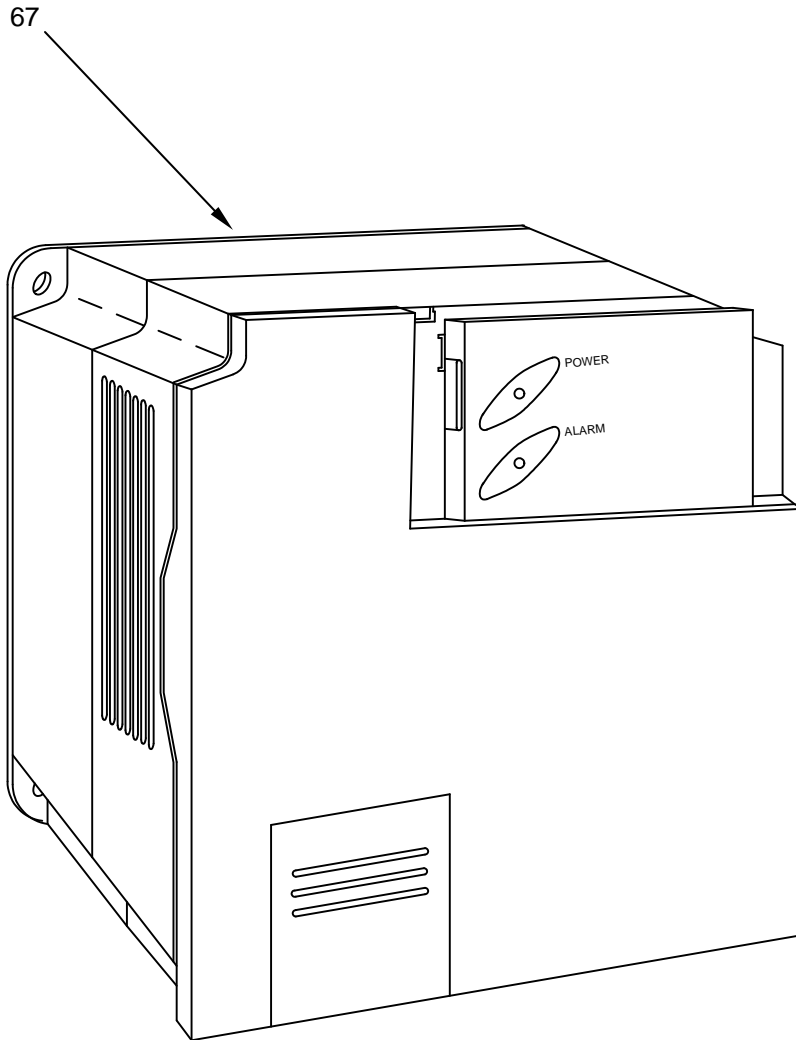


Figure 4. Washer/Extractor, Laundry (Power Inverter) (Sheet 10 of 12).

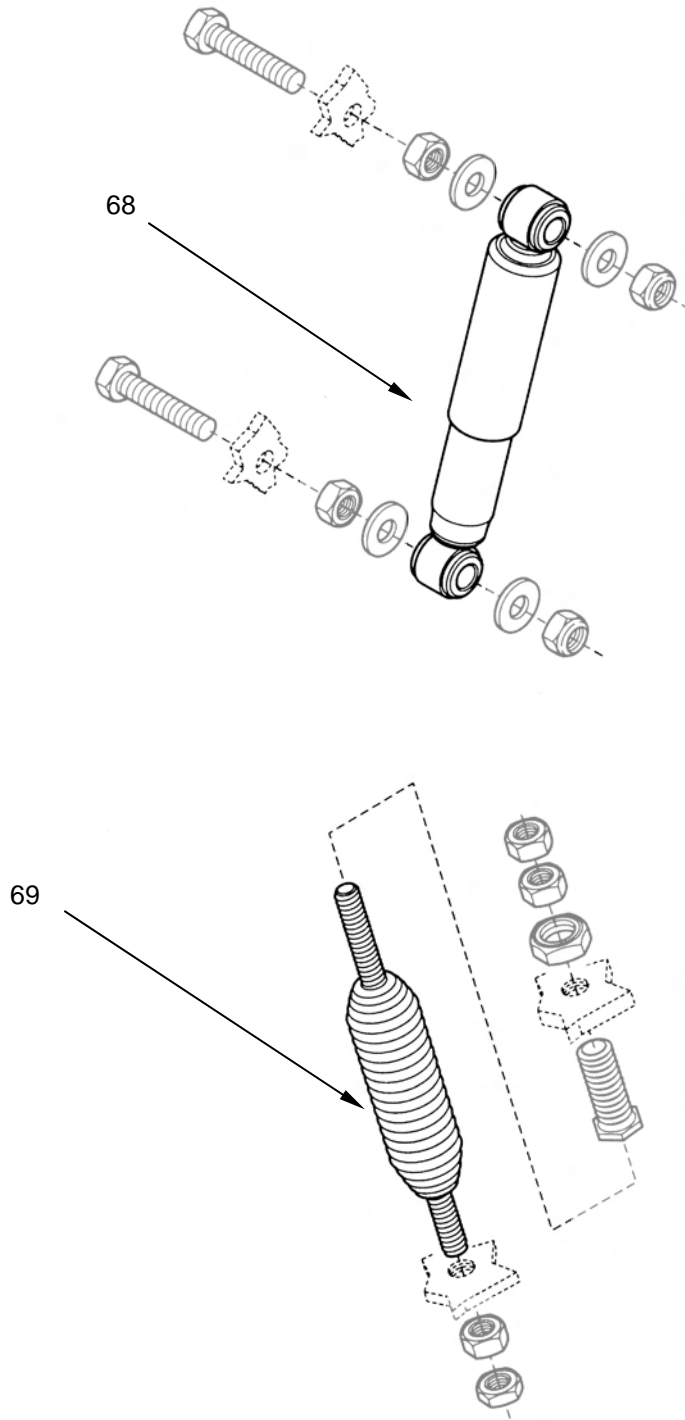


Figure 4. Washer/Extractor, Laundry (Absorber, Shock, Spring) (Sheet 11 of 12).

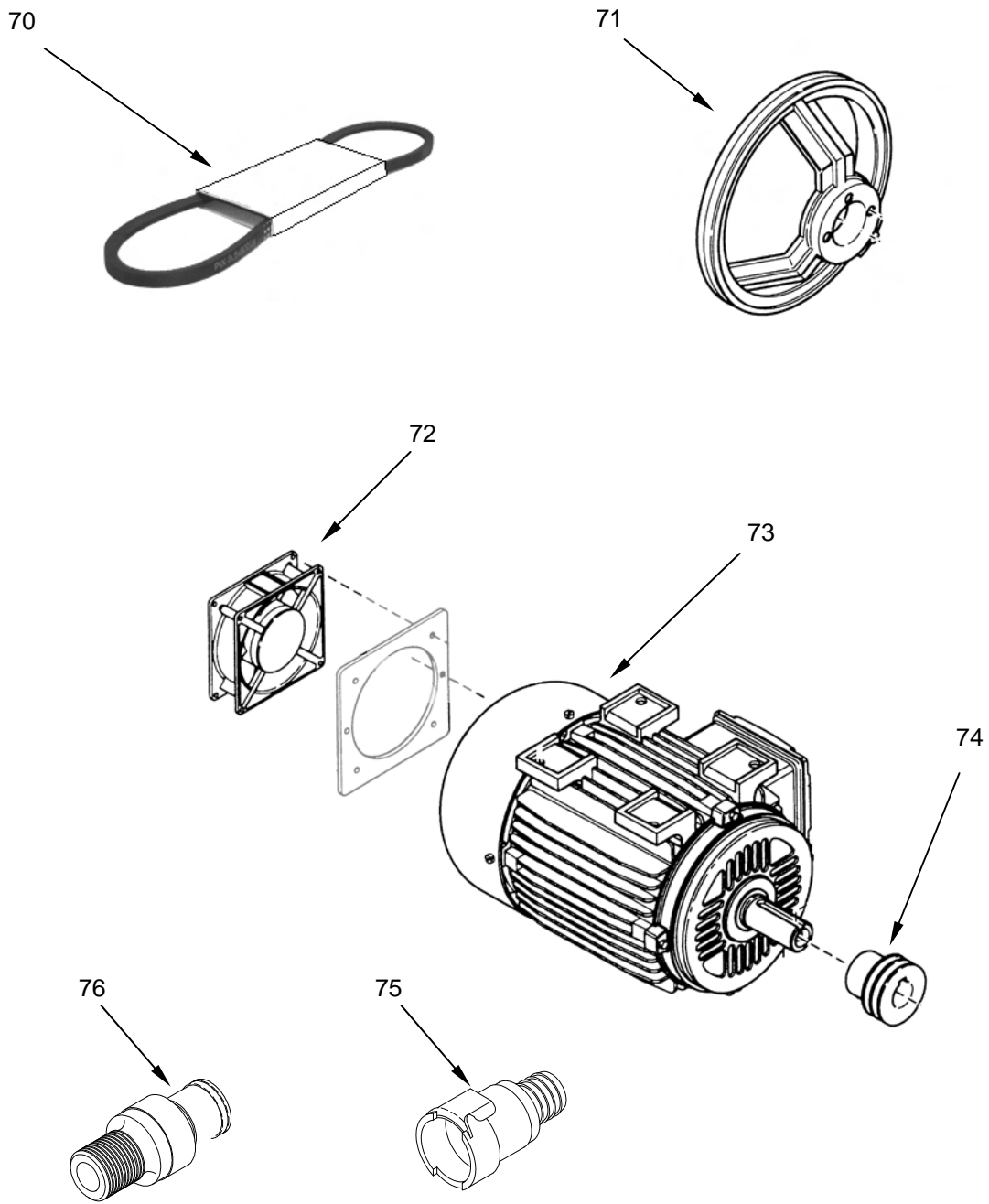


Figure 4. Washer/Extractor, Laundry (Belt, Motor, Quick Disconnect Fittings) (Sheet 12 of 12).

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 04						
					FIG. 4 WASHER/EXTRACTOR, LAUNDRY	
1	PFFFF		81337	9-1-0924	WASHER/EXTRACTOR, LAUNDRY ASSEMBLY	2
2	PAOZZ		81337	9-1-0923-1	. SHIPPING PIN WELDMENT, WASHER, LEFT SIDE	1
3	PAOZZ		81337	9-1-0923-2	. SHIPPING PIN WELDMENT, WASHER, RIGHT SIDE	1
4	XDOZZ		81337	9-1-0937-1	. BOLT, SHIPPING STABILIZER	2
5	XDOZZ		81337	9-1-0922-1	. SNUBBER WELDMENT, SHIPPING STABILIZER	1
6	XDOZZ	4010-01-476-2507	39428	30345T2	. WIRE ROPE ASSEMBLY, SINGLE LEG	1
7	XDOZZ		81337	9-1-0914-1	. SUPPORT BRACKET WELDMENT, WASHER PIPING	1
8	XDOZZ		39428	3225T69	. STRAP LOOP, 1.50 ID, CUSHIONED, FITS PIPE SIZE 1-1/4"	3
9	MOOZZ		1UD63	63011	. HOSE ADAPTER, NYLON, STRAIGHT, 3/4", FEMALE GHT X 3/4" MPT	2
10	XDOZZ		62531	805-007C	. TEE, PIPE, 3/4" FIPT X FIPT X FIPT, SCH 80, CPVC	1
11	XDOZZ		1UD63	63005	. HOSE ADAPTER, 3/4" FEMALE GARDEN HOSE X 3/4" HOSE	1
12	XDOZZ	4730-01-533-9885	39428	53055K197	. ELBOW, PIPE TO HOSE	1
13	XDOZZ	4730-01-171-9519	76599	4212	. CLAMP, HOSE	4
14	XDOZZ		62661	5FLD60612412	. COUPLING INSERT, QUICK CONNECT, 3/4" MNPT, BLACK ALUM	2
15	XDOZZ		39428	53055K167	. ELBOW, HOSE BARBED, 90°, 3/4" TUBE ID, 3/4" TUBE ID, PVDF	2
16	XDOZZ	4730-00-045-2656	96405	819-007	. ELBOW, PIPE	2
17	XDOZZ	5340-01-533-8252	39428	3225T68	. CLAMP, LOOP	1
18	XDOZZ		39428	52265K71	. COUPLING, FLEXIBLE, 2", ACCORDION STYLE	3
19	XDOZZ	4730-01-452-3924	0JM37	1056-22	. COUPLING ASSEMBLY, TUBE, FLEXIBLE	2

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
20	XDOZZ	4730-01-371-6594	39428	6810K13	. NIPPLE, PIPE	1
21	XDOZZ		81337	9-1-1057-1	. ACCESS PANEL, BELT INSPECTION, WASHER	1
22	XDOZZ		81337	9-1-1087-1	. LABEL, ID	1
23	XDOZZ		81337	9-1-1082-1	. LABEL, CAUTION	1
24	XDOZZ		81337	9-1-1084-1	. LABEL, ID	2
25	XDOZZ		81337	9-1-1084-2	. LABEL, ID	2
26	XDOZZ		81337	9-1-1083-1	. LABEL, ID	1
27	XDOZZ		81337	9-1-1085-19	. LABEL, ID, "WASHER BELT INSPECTION PLATE"	1
28	XDOZZ		81337	9-1-1086-1	. LABEL, CAUTION	1
29	XDOZZ		81337	9-1-1085-38	. LABEL, ID, "WASHER #1 HOT WATER CONNECTION"	1
30	XDOZZ		81337	9-1-1085-17	. LABEL, ID, "WASHER #2 HOT WATER CONNECTION"	1
31	XDOZZ		81337	9-1-1085-16	. LABEL, ID, "WASHER #1 COLD WATER CONNECTION"	1
32	XDOZZ		81337	9-1-1085-30	. LABEL, ID, "WASHER #2 COLD WATER CONNECTION"	1
33	XDOZZ	5935-01-533-8682	5P885	HBL4570C	. CONNECTOR, PLUG, ELECTRICAL	1
34	PAOZZ	5930-01-533-9601	59618	9001371	. SWITCH, SENSITIVE	3
35	PAOZZ	5340-01-533-8689	59618	9001885	. STRIKE, CATCH	1
36	PAOZZ	5945-01-533-5998	59618	9001373	. SOLENOID, ELECTRICAL	1
37	PAOZZ	5340-01-533-8708	59618	9001478	. LEVER, MANUAL CONTROL	1
38	PAOZZ	5340-01-533-8671	59618	9001467	. CLIP, RETAINING	1
39	PAOZZ	5365-01-533-9249	59618	9001477	. SPACER, RING	1
40	PAOZZ	4820-01-533-8667	59618	F380632	. VALVE, FLOW CONTROL	1
41	PAOZZ	4810-01-533-8257	59618	9001377	. VALVE, FLOW CONTROL, DOUBLE	2
42	PAOZZ	5945-01-533-9597	59618	9001753	. . SOLENOID, ELECTRICAL	1
43	PAOOO	4820-01-533-8213	59618	F0381737-00	. VALVE, FLOW CONTROL	1
44	PAOZZ	5945-01-533-9597	59618	9001753	. . SOLENOID, ELECTRICAL	1
45	PAOZZ	5920-01-533-9103	59618	9001379	. FUSE, CARTRIDGE	1
46	PAOZZ	5340-01-533-8210	59618	9001756	. KEY, BLANK	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
47	PAOZZ	5930-01-533-9602	59618	9001378	. KEY SWITCH	1
48	PAOZZ	5340-01-533-8227	59618	9001561	. OVERLAY	1
49	PAOZZ	7025-01-533-8763	59618	9001415	. TERMINAL, DATA, PROCESSING	1
50	PAOZZ	5970-01-533-9596	59618	9001595	. INSULATION SHEET, ELECTRICAL	1
51	PAOZZ	5998-01-532-3879	59618	9001414	. CIRCUIT CARD ASSEMBLY	1
52	PAOZZ	5340-01-533-9248	59618	9001596	. COVER, ACCESS	1
53	MOOZZ		59618	9001542	. HOSE, NONMETALLIC	1
54	XDOZZ		59618	9001529	. TEE, HOSE	1
55	XDOZZ		59618	9001496	. HOSE BARB	1
56	XDOZZ		59618	9001544	. HOSE, NONMETALLIC	1
57	PAOZZ	5930-01-533-8907	59618	9001669	. SWITCH, THERMOSTATIC	1
58	PAOZZ	5325-01-534-0448	59618	9001564	. GROMMET, NONMETALLIC	1
59	PAOZZ	6680-01-534-0827	59618	9001381	. TRANSDUCER, VELOCITY, ANGULAR	1
60	PAOZZ		59618	9001341	. SLEEVE	1
61	PAOZZ	5930-01-533-9816	59618	9001369	. SWITCH, PRESSURE	1
62	PAOZZ	5999-01-533-9599	59618	9001357	. CONTACT, ELECTRICAL	1
63	PAOZZ	5930-01-533-8691	59618	9001368	. RETAINER, ELECTRICAL SWITCH	1
64	PAOZZ	5355-01-533-8672	59618	9001367	. KNOB	1
65	PAOZZ	4810-01-533-9726	59618	F800619	. VALVE, FLOW CONTROL	2
66	PAOZZ	5935-00-205-9408	74545	4570C	. CONNECTOR, PLUG, ELECTRICAL	2
67	PAOZZ	6130-01-533-8237	59618	9001581	. INVERTER, POWER, STATIC	1
68	PAOZZ	3510-01-534-0812	59618	9001617	. SHOCK ABSORBER	3
69	XDOZZ		59618	9001556	. SUSPENSION SPRING	4
70	PAOZZ	3030-01-533-9370	59618	9001569	. BELT, V	1
71	XDOZZ		59618	9001568	. PULLEY, GROOVE	1
72	XDOZZ		59618	9001375	. FAN, VENTILATING	1
73	PAOZZ	6105-01-533-8230	59618	9001589	. MOTOR, ALTERNATING CURRENT	1
74	XDOZZ		59618	9001570	. PULLEY, GROOVE	1
75	PAOZZ	4730-01-533-9208	8S760	5FLD60612412	. COUPLING HALF, QUICK DISCONNECT	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
76	PAOZZ	4730-01-534-0543	8S760	5FLD60611712	. COUPLING HALF, QUICK DISCONNECT	1

END OF FIGURE

FIELD MAINTENANCE

DRYER

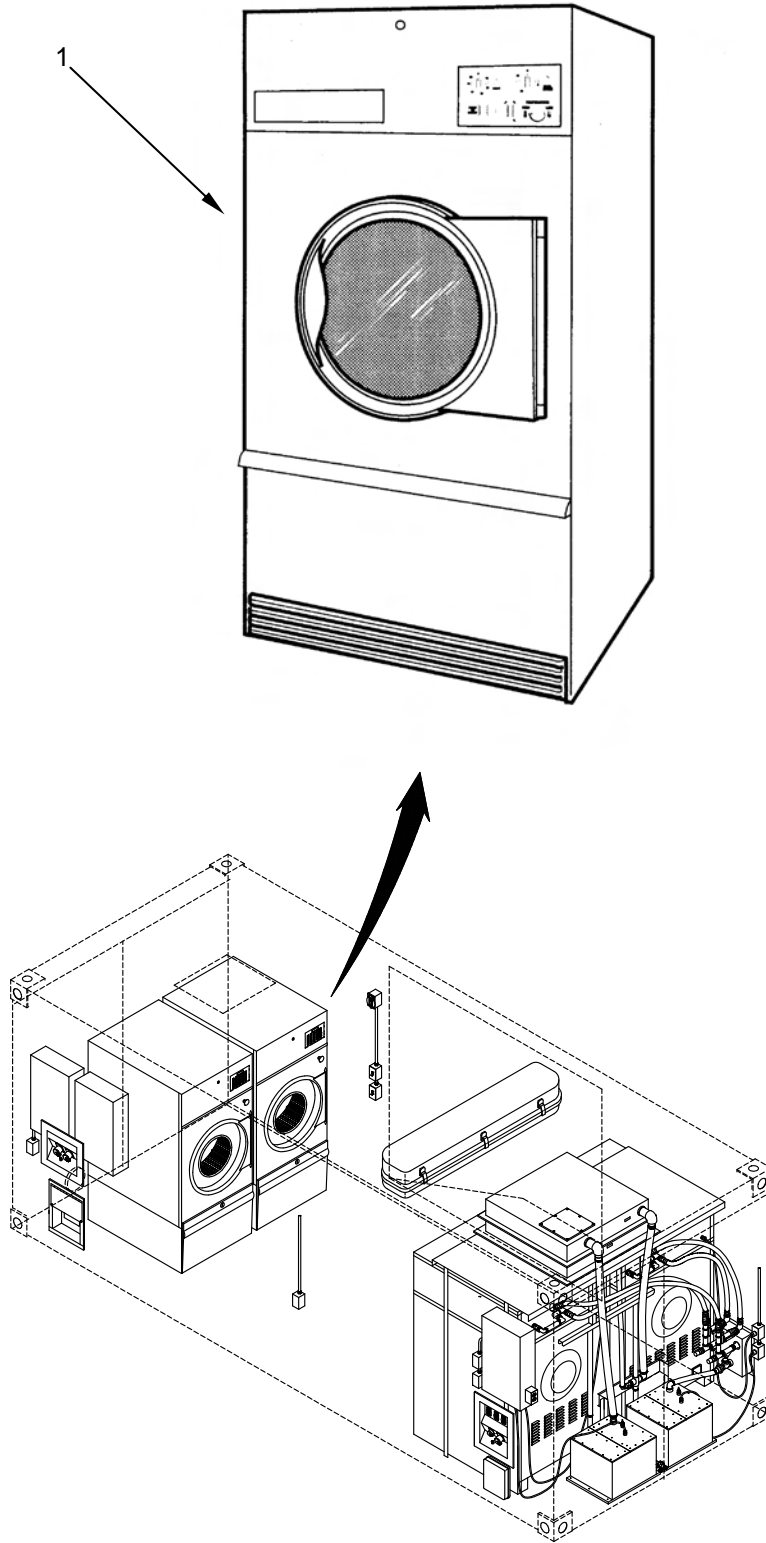


Figure 5. Dryer (Sheet 1 of 13).

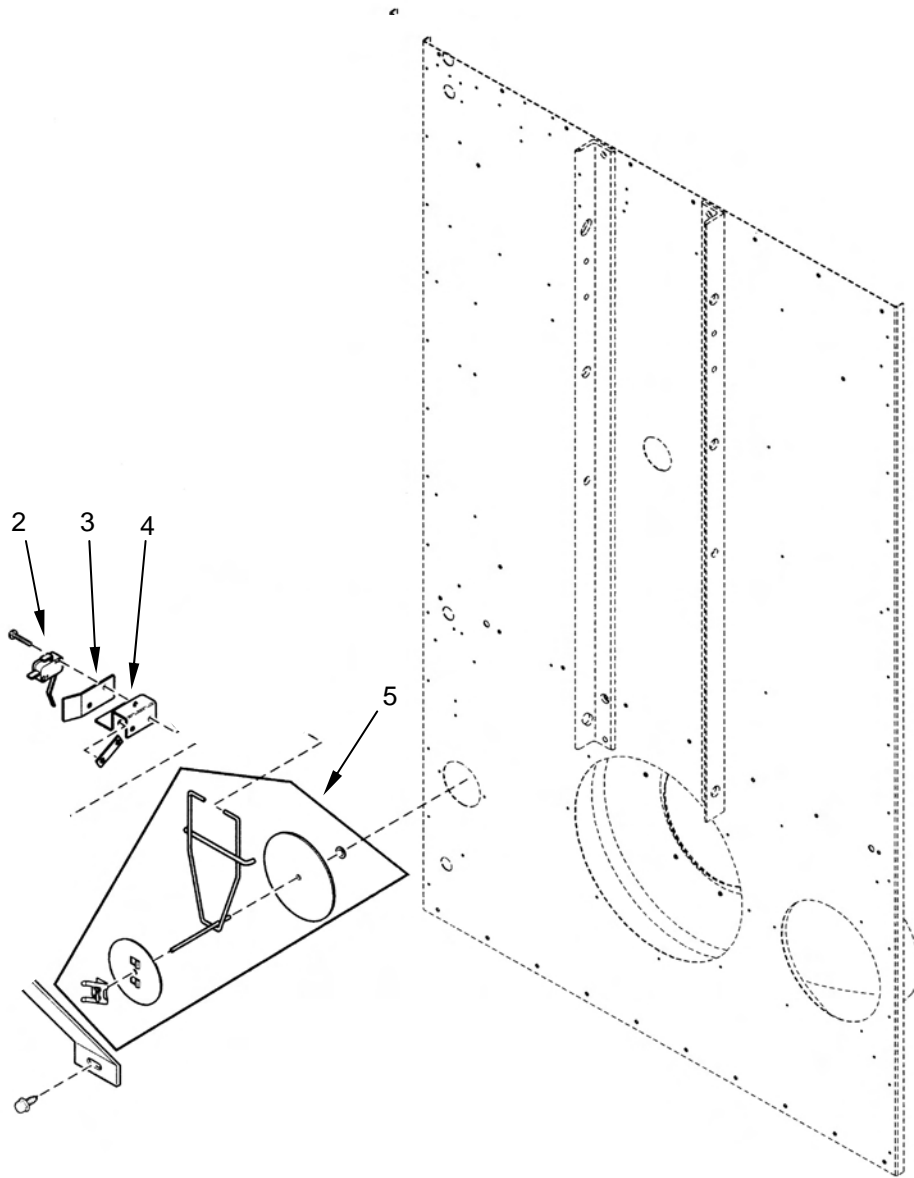


Figure 5. Dryer (Sheet 2 of 13).

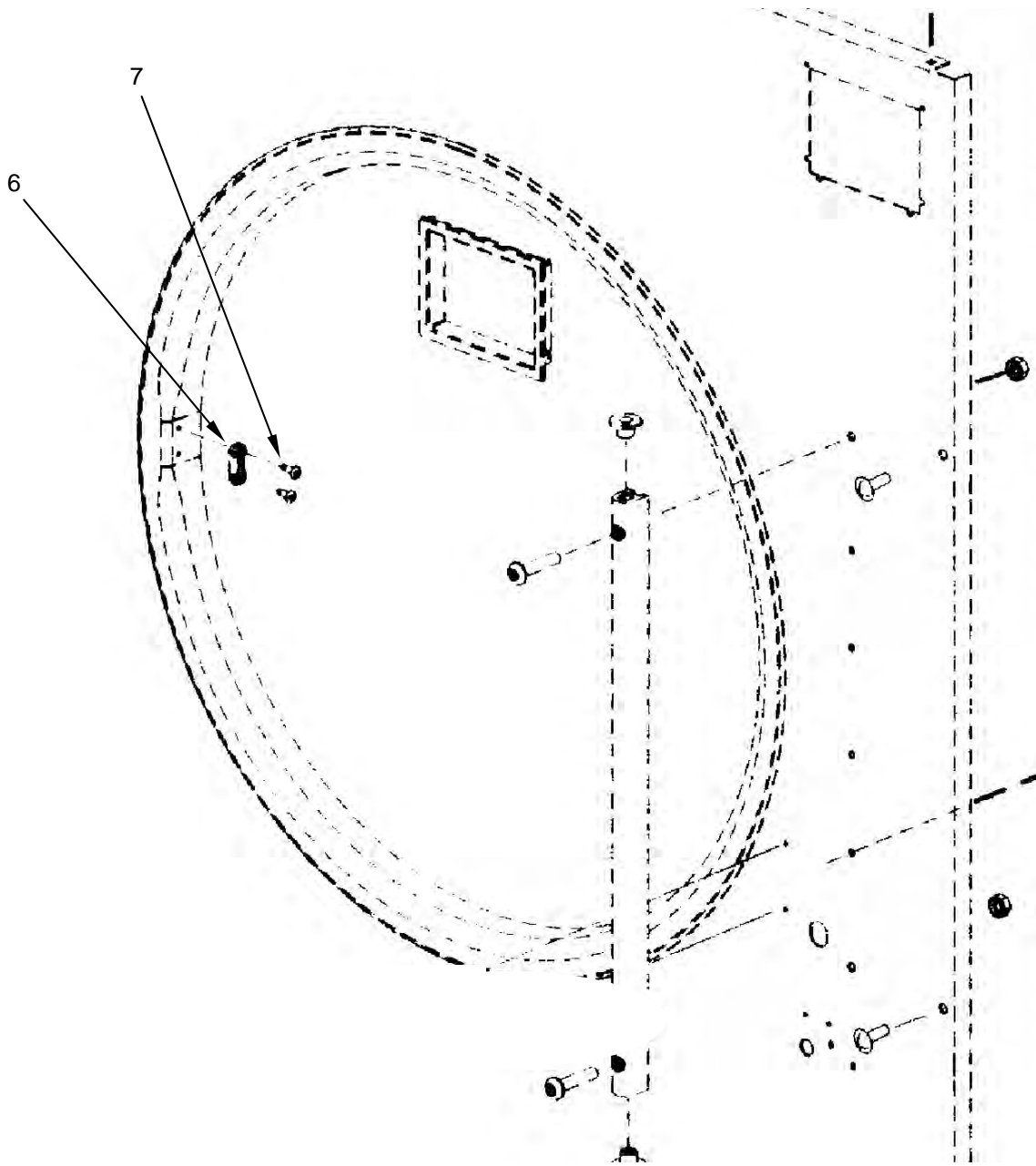


Figure 5. Dryer (Sheet 3 of 13).

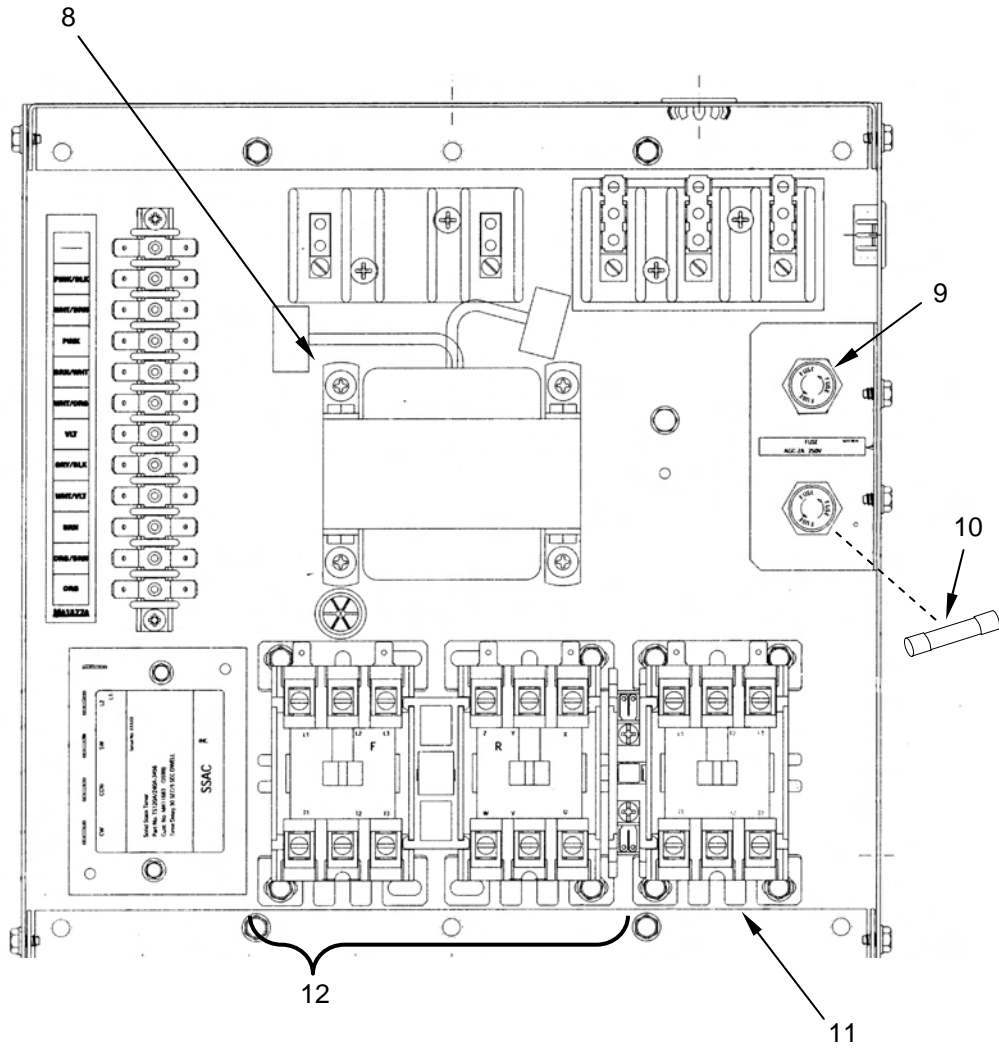


Figure 5. Dryer (Sheet 4 of 13).

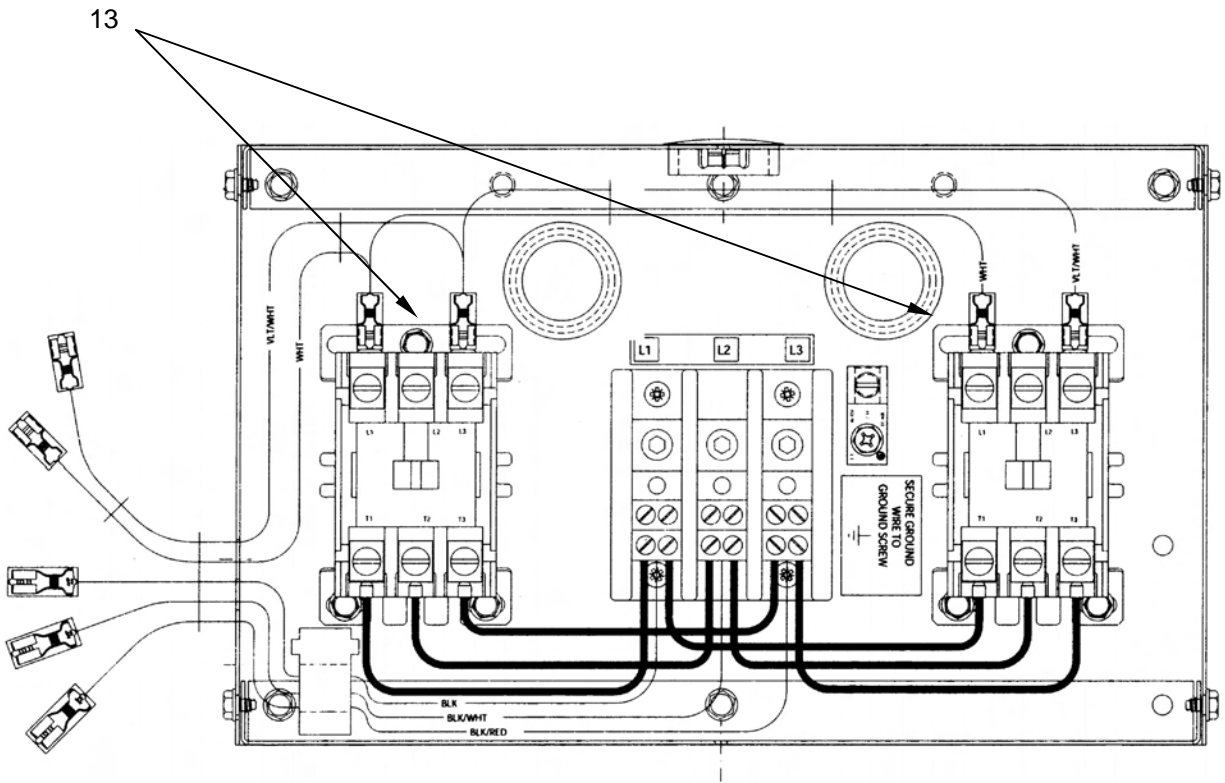


Figure 5. Dryer (Sheet 5 of 13).
0091-6

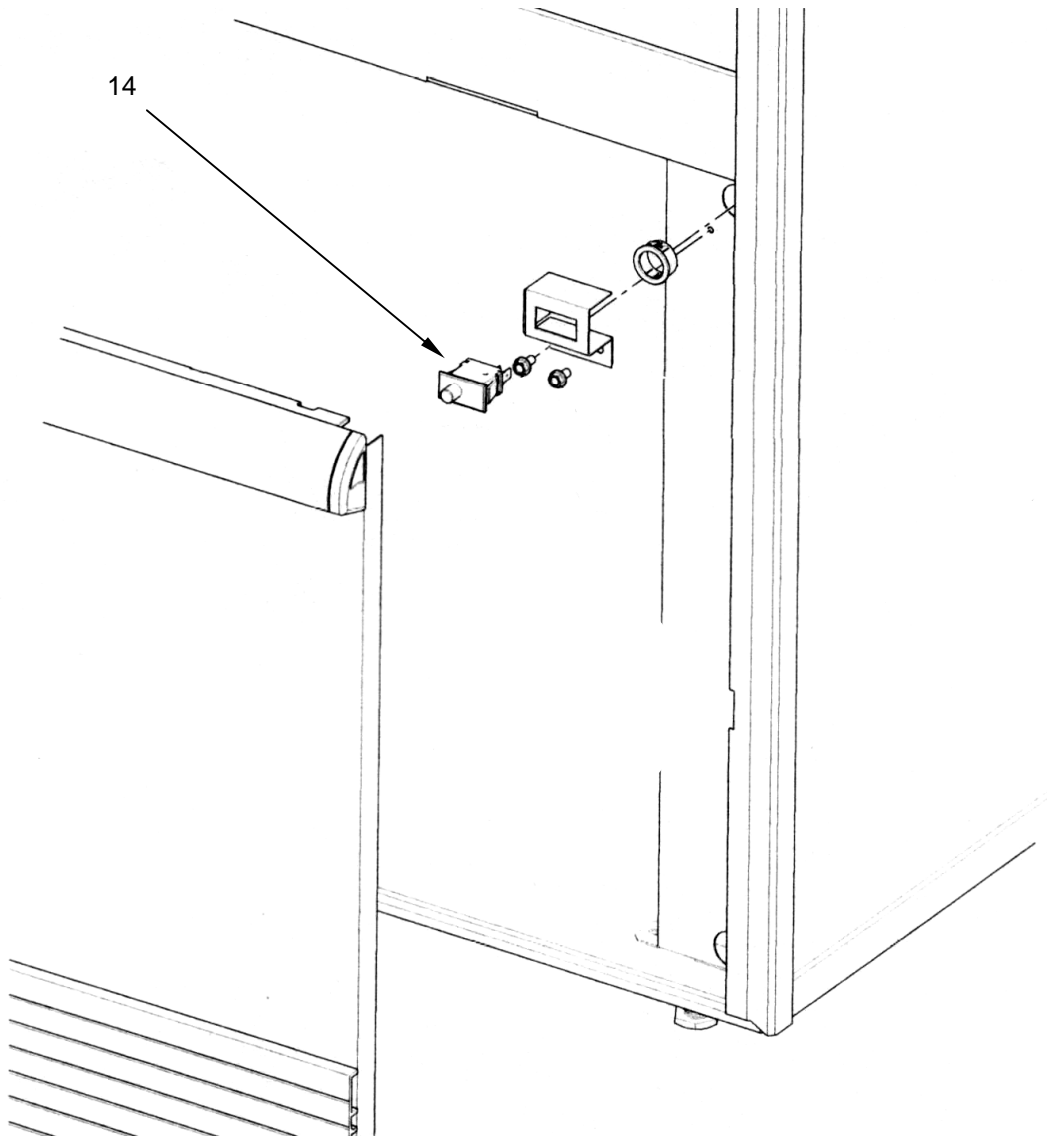


Figure 5. Dryer (Sheet 6 of 13).

0091-7

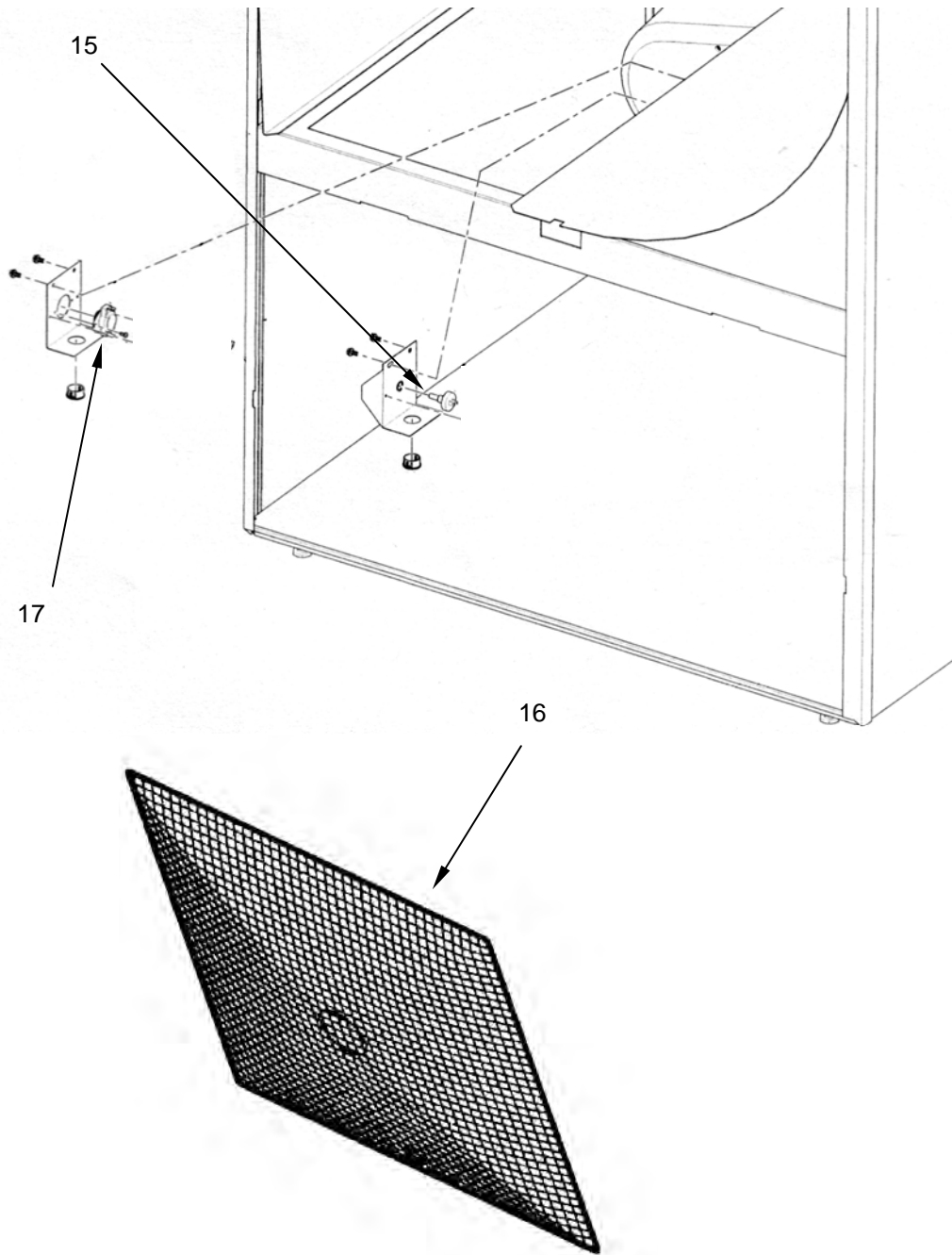


Figure 5. Dryer (Sheet 7 of 13).
0091-8

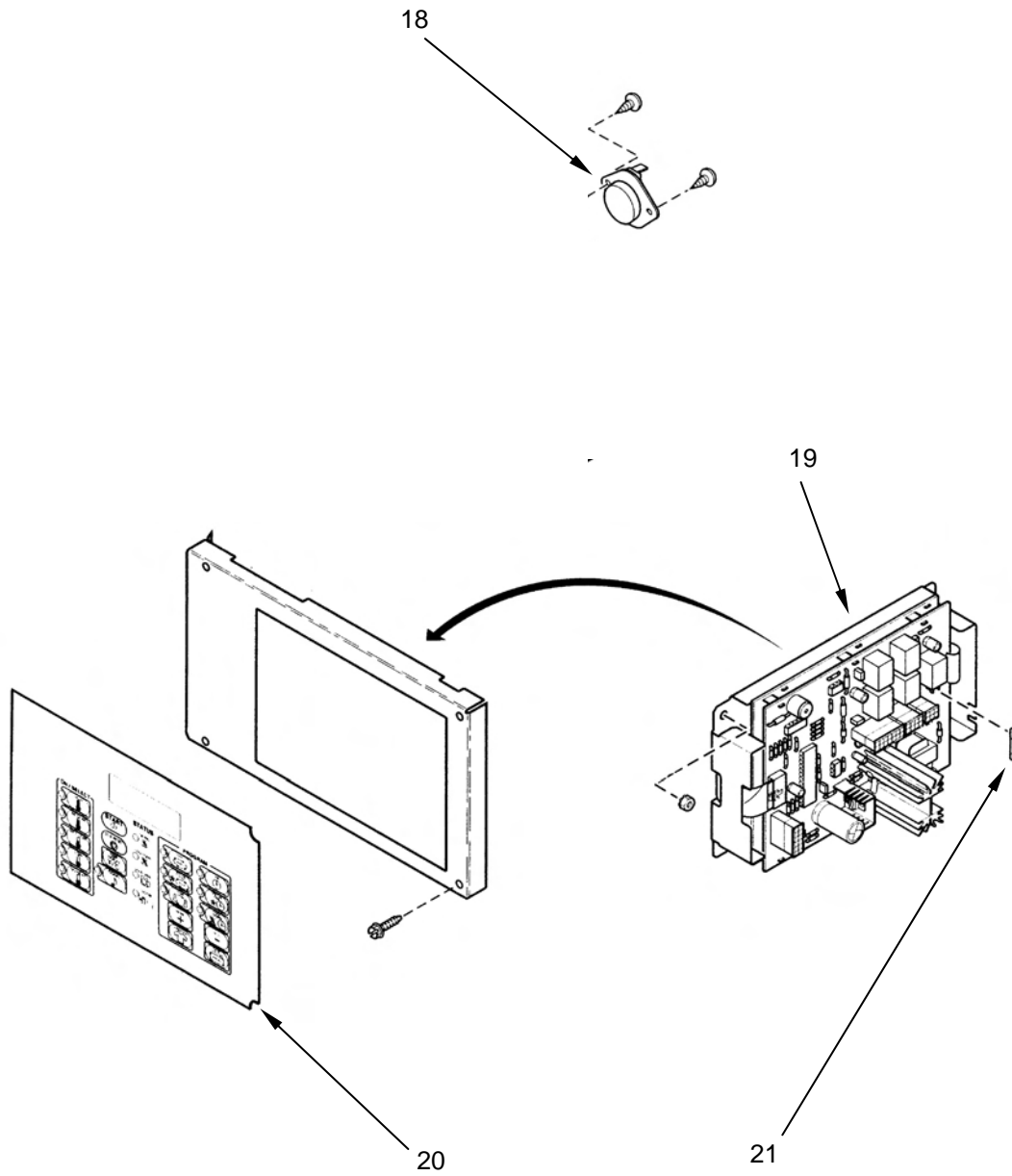


Figure 5. Dryer (Sheet 8 of 13).

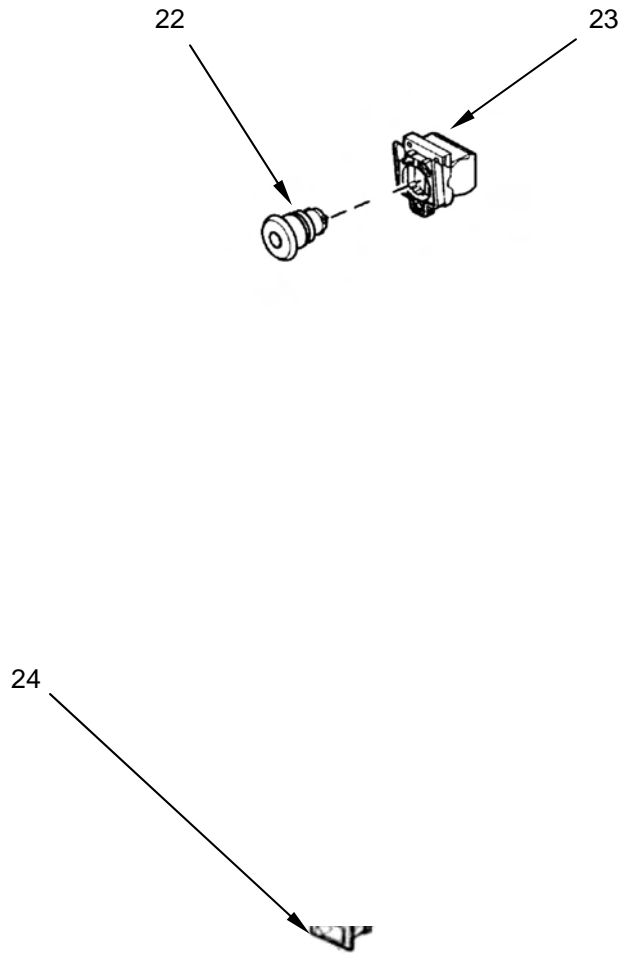


Figure 5. Dryer (Sheet 9 of 13).
0091-10

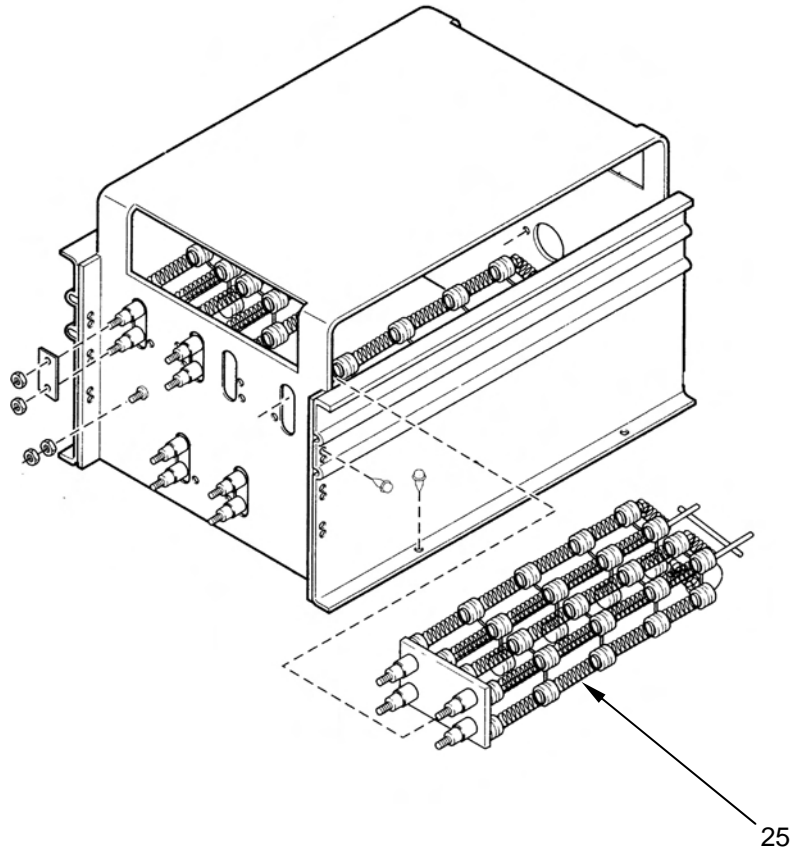


Figure 5. Dryer (Sheet 10 of 13).

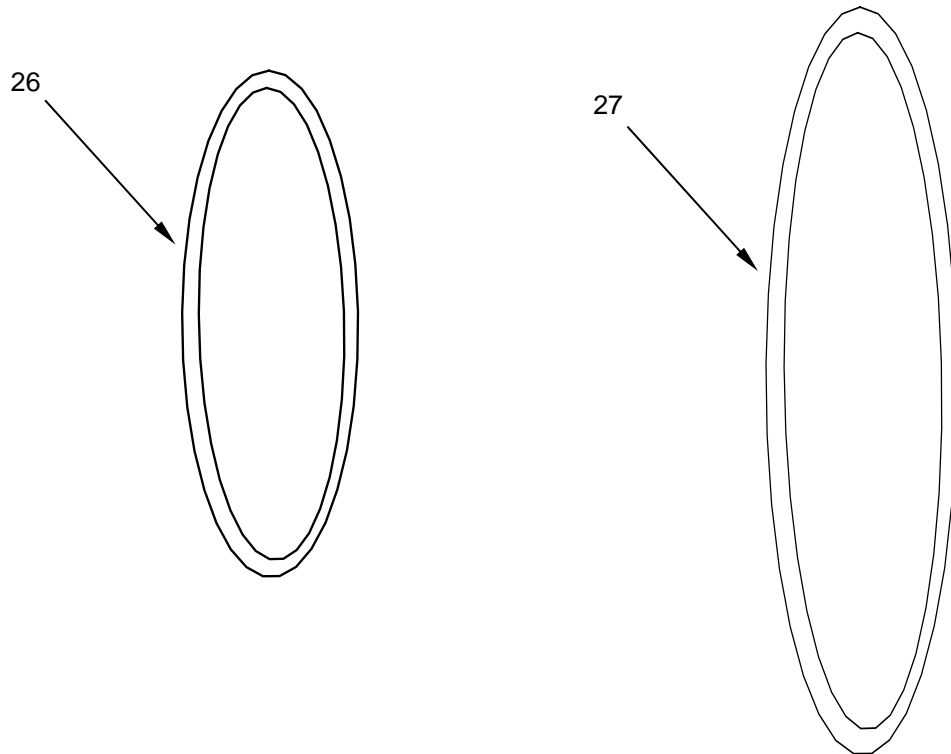


Figure 5. Dryer (Sheet 11 of 13).

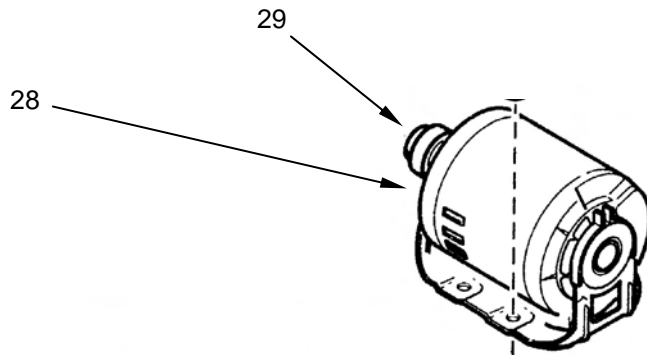


Figure 5. Dryer (Sheet 12 of 13).

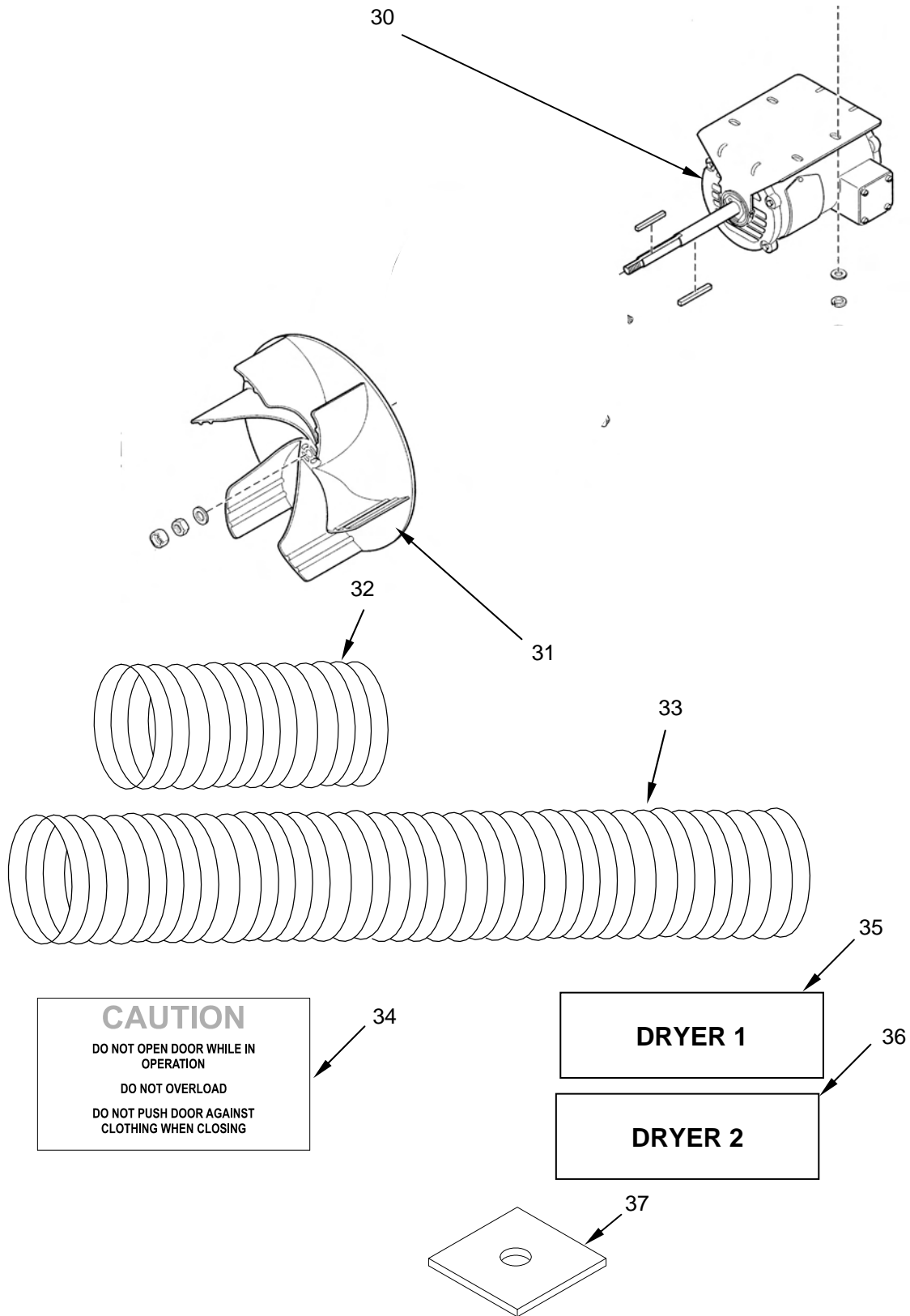


Figure 5. Dryer (Sheet 13 of 13).

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 05						
FIG. 5 DRYER						
1	PFFFF		81337	9-1-0971-1	DRYER ASSY	1
2	PAOZZ	5930-01-321-7269	59618	M400944	. SWITCH, SENSITIVE	1
3	PAOZZ	5930-01-534-0318	59618	M400712	. GUARD, SWITCH	1
4	PAOZZ	5340-01-533-8261	59618	M409202	. BRACKET, MOUNTING	1
5	PAOZZ	5930-01-533-9997	59618	M400541	. SWITCH ASSEMBLY	1
6	PAOZZ	5340-01-533-8685	59618	M401223	. LATCH, MORTISE	1
7	PAOZZ	5320-01-534-1013	59618	M400003	. RIVET, BLIND	2
8	PAOZZ	5950-01-533-9972	59618	M414228	. TRANSFORMER, POWER	1
9	PAOZZ	5920-01-533-9613	59618	M413544	. FUSEHOLDER, RECEPTACLE	2
10	XDOZZ		59618	M413118	. FUSE, CARTRIDGE	2
11	PAOZZ	5945-01-533-9605	59618	M413614	. RELAY, ELECTROMAGNETIC	1
12	PAOZZ	5945-01-533-8869	59618	M413615	. RELAY, ELECTROMAGNETIC	1
13	PAOZZ	5945-01-533-8873	59618	M413616	. RELAY, ELECTROMAGNETIC	1
14	PAOZZ	5930-01-533-8694	59618	70107001	. SWITCH, PUSH	1
15	PAOZZ	5905-01-533-8877	59618	M414704	. RESISTOR, THERMAL	1
16	PAOZZ	3510-01-534-1346	59618	44020701	. FILTER, LINT, DRYING TUMBLER	1
17	PAOZZ	5930-01-533-9616	59618	M410542	. SWITCH, THERMOSTATIC	1
18	PAOZZ	5930-01-533-8876	59618	M409433	. SWITCH, THERMOSTATIC	1
19	PAOZZ	5998-01-533-8878	59618	44013601	. CIRCUIT CARD ASSEMBLY	1
20	PAOZZ	7045-01-533-8725	59618	70128401	. COVER, KEYBOARD, DATA ENTRY	1
21	PAOZZ	5920-01-533-8881	59618	M414103	. FUSE, INCLOSED LINK	2
22	PAOZZ	5930-01-533-9998	59618	44018801	. SWITCH, PUSH	1
23	PAOZZ	5945-01-533-8867	59618	44018701	. RELAY, ELECTROMAGNETIC	1
24	PAOZZ	5930-01-533-8694	59618	70107001	. SWITCH, PUSH	1
25	PAOZZ	4520-01-534-0817	59618	M410940P	. HEATER ELEMENT, ELECTRICAL, NONIM	3
26	PAOZZ	3030-01-534-0810	59618	M412981	. BELT, V	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
27	PAOZZ	3030-01-533-8799	59618	M412090	. BELT, V	2
28	PAOZZ	6105-01-533-8178	59618	M412519P	. MOTOR, ALTERNATING CURRENT	1
29	XDOZZ		59618	M414565	. PULLEY, GROOVE	1
30	PAOZZ	6105-01-534-2282	59618	4407101	. MOTOR, ALTERNATING CURRENT	1
31	PAOZZ	4140-01-121-7902	59618	M400086P	. IMPELLER, FAN, AXIAL	1
32	XDOZZ		0U5N7	342423144-1	. HOSE, AIR DUCT (DRYER #1)	1
33	XDOZZ		0U5N7	342423144-2	. HOSE, AIR DUCT (DRYER #2)	1
34	XBOZZ		81337	9-1-1086-2	. LABEL	1
35	XBOZZ		81337	9-1-1084-3	. LABEL, ID (DRYER #1)	2
36	XBOZZ		81337	9-1-1084-4	. LABEL, ID (DRYER #2)	2
37	XBOZZ		81337	9-1-1051	. SHIM, LEVELING DRYER	AR

END OF FIGURE

FIELD MAINTENANCE

COMPRESSOR, AIR

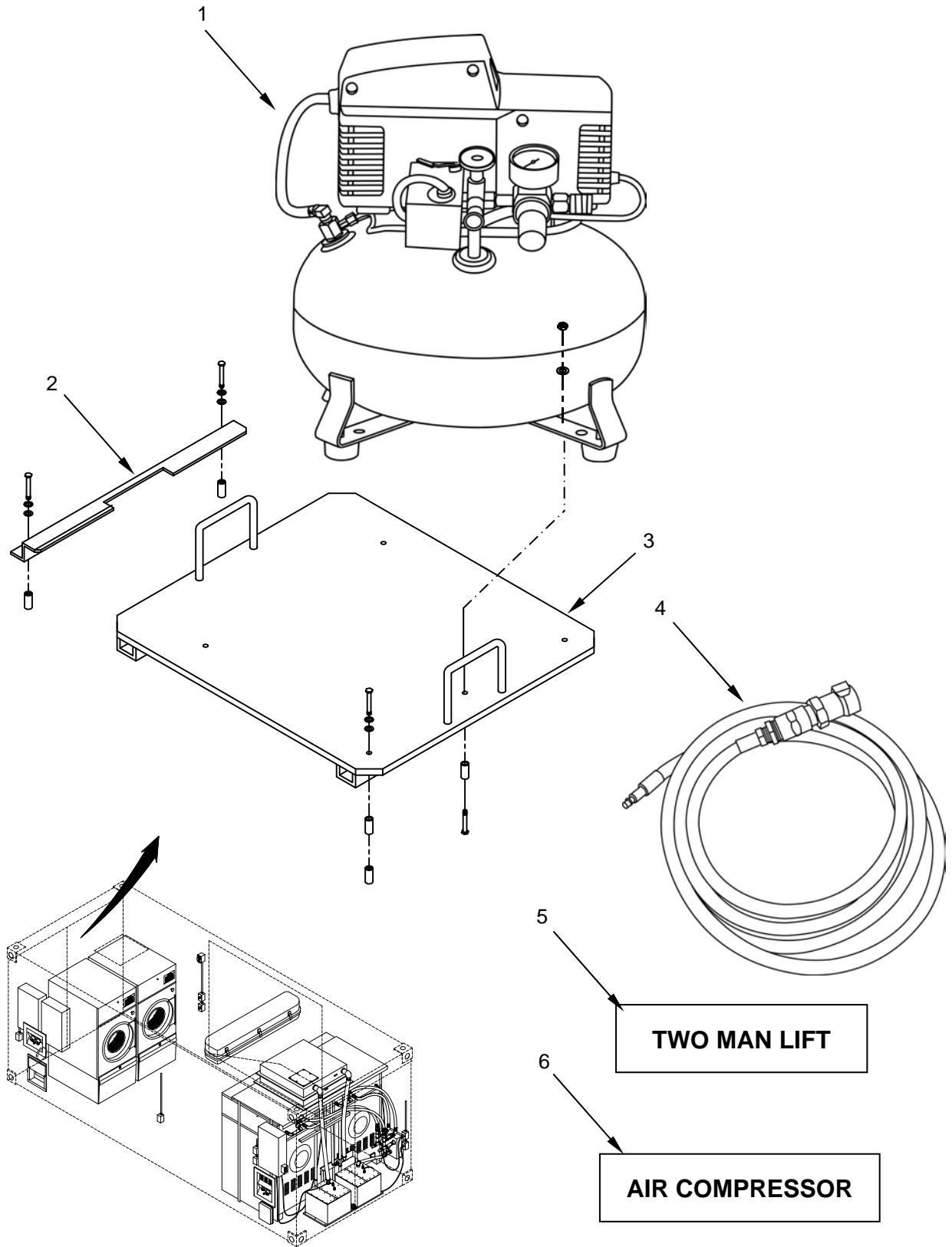


Figure 6. Compressor, Air.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 06						
FIG. 6 COMPRESSOR, AIR						
1	PAOZZ	4310-01-531-0626	68821	CPFAC2600P	COMPRESSOR UNIT, RECIPROCATING	1
2	XBOZZ		81337	9-1-1061-1	CLAMP, MOUNTING PLATE, AIR COMPRESSOR	1
3	XBOZZ		81337	9-1-0929	AIR COMPRESSOR MOUNTING BASE ASSEMBLY	1
4	XDOZZ		0U5N7	34241387	HOSE ASSEMBLY, NONMETALLIC	1
5	XBOZZ		81337	9-1-1085-18	LABEL, ID, "TWO MAN LIFT"	2
6	XBOZZ		81337	9-1-1085-34	LABEL, ID, "AIR COMPRESSOR"	1

END OF FIGURE

FIELD MAINTENANCE

BULK MATERIAL

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
<p>GROUP 99 GENERAL USE STANDARD PARTS GROUP 99 BULK MATERIAL FIG. 99 BULK</p>						
1	XDOZZ		39428	8451A54	EDGE TRIM, PUSH-ON, VINYL, WHITE	1
2	XDOZZ		39428	9489K279	FASTENER TAPE, HOOK	1
3	PAOZZ	8315-01-534-0944	39428	96055K35	FASTENER TAPE, HOOK AND LOOP	1
4	XDOZZ		39428	5301K16	HOSE, GENERAL SERVICE AIR/WATER DISCHARGE, 2" I.D. EPDM JACKET AND TUBE, BLACK (DAYCO GSTII OR EQUIV.), CUT LENGTH 54"	1
5	PAOZZ	4720-01-533-7682	1FFH9	3204-1422	HOSE, NONMETALLIC	1
6	PAOZZ	4720-01-541-0656	87373	7093-150204	HOSE, NONMETALLIC, CUT LENGTH 9"	1
7	XDOZZ		39428	48925K11	PIPE, SCH 40, PVC 1/2"	1
8	XDOZZ		39428	4592K11	SEALANT COMPOUND, PIPE THREAD, UNIVERSAL (POTABLE WATER ETC)	1
9	XDOZZ		0XJ45	T225X000YK1	TAPE, POLY OVERLAMINATE, 2" WD	1
10	XDOZZ		0XJ45	T425X000YK1	TAPE, POLY OVERLAMINATE, 4" WD	1

END OF FIGURE

FIELD MAINTENANCE

SPECIAL TOOLS LIST

SPECIAL TOOLS LIST

No special tools are required for the FP-CBL.

FIELD MAINTENANCE

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM		
3030	-01-	5	27	4730	-01-	3	18
3030	-01-	4	70	4730	-01-	3	92
3030	-01-	5	26	4730	-01-	3	108
3510	-01-	4	68	4730	-01-	3	14
3510	-01-	5	16	4730	-01-	3	114
4010	-01-	3	87	4730-01-533-9836		3	5
4010	-01-	3	101	4730-01-533-9883		1	3
4010	-01-	4	6	4730	-01-	3	9
4010-01-500-3749		1	5	4730	-01-	4	12
4020-01-102-0517		1	19	4730	-01-	4	76
4030	-01-	3	88	4810	-01-	4	41
4030	-01-	3	102	4810	-01-	4	65
4140	-01-	5	31	4820	-01-	3	26
4310	-01-	6	1	4820	-01-	3	46
4320	-01-	3	85	4820	-01-	4	43
4520	-01-	5	25	4820	-01-	4	40
4720	-01-	99	5	5306-01-454-8044		1	10
4720	-01-	3	61	5320	-01-	5	7
4720	-01-	3	90	5325	-01-	3	66
4720	-01-	99	6	5325	-01-	3	73
4730	-00-	4	16	5325	-01-	3	80
4730	-00-	3	50	5325	-01-	4	58
4730	-00-	3	49	5340-00-286-9416		1	16
4730	-00-	3	117	5340-00-531-6857		1	17
4730	-01-	3	54	5340-01-530-5187		1	2
4730	-01-	4	13	5340	-01-	4	46
4730	-01-	3	116	5340	-01-	4	48
4730	-01-	3	56	5340	-01-	3	41
4730	-01-	3	91	5340	-01-	4	17
4730	-01-	3	105	5340	-01-	5	4
4730	-01-	3	47	5340	-01-	4	38
4730	-01-	4	20	5340	-01-	5	6
4730	-01-	3	58	5340	-01-	4	35
4730-01-452-3924		3	6	5340	-01-	4	37
4730	-01-	4	19	5340	-01-	4	52
4730	-01-	3	45	5342	-01-	1	18
4730	-01-	3	42	5355	-01-	4	64
4730	-01-	3	48	5365	-01-	4	39
4730	-01-	3	51	5670	-01-	3	8
4730	-01-	3	43	5670	-01-	3	15
4730	-01-	3	115	5905	-01-	5	15
4730	-01-	4	75	5920	-01-	5	21

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM		
5920	-01-	4	45	6105	-01-	5	30
5920	-01-	5	9	6130	-01-	4	67
5925-00-728-1289		2	7	6150-01-256-6300		2	31
5925	-00-	2	9	6150-01-256-6304		2	32
5925-00-785-4251		2	10	6210	-01-	2	1
5925-00-984-2163		2	6	6240-01-344-9507		2	4
5925-01-305-6192		2	8	6250-00-892-5248		2	3
5930	-01-	5	2	6680	-01-	4	59
5930	-01-	4	63	7025	-01-	4	49
5930	-01-	5	14	7045	-01-	5	20
5930	-01-	5	24	8145-01-491-2727		1	1
5930	-01-	5	18	8315-01-524-7644		1	21
5930	-01-	4	57	8315	-01-	99	3
5930	-01-	4	34				
5930	-01-	4	47				
5930	-01-	5	17				
5930	-01-	4	61				
5930	-01-	5	5				
5930	-01-	5	22				
5930	-01-	5	3				
5935	-00-	4	66				
5935-00-353-2141		2	17				
5935-01-147-9446		1	12				
5935-01-512-8569		2	22				
5935-01-525-6886		2	28				
5935-01-525-8154		2	24				
5935	-01-	4	33				
5945	-01-	4	36				
5945	-01-	5	23				
5945	-01-	5	12				
5945	-01-	5	13				
5945	-01-	4	42				
5945	-01-	4	44				
5945	-01-	5	11				
5950	-01-	2	13				
5950	-01-	5	8				
5970	-01-	4	50				
5975-00-878-4865		2	21				
5975-00-878-4865		2	23				
5975-01-116-0590		2	19				
5975-01-449-6949		2	25				
5998	-01-	4	51				
5998	-01-	5	19				
5999	-01-	4	62				
6105	-01-	5	28				
6105	-01-	4	73				

FIELD MAINTENANCE

PART NUMBER INDEX

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
1056-22	3	6	43535K25	3	17
1056-22	4	19	436-005	3	25
1071005	3	26	436-007	3	11
10C	3	62	436-020	3	3
10W	3	63	437-248	3	12
126-724	1	18	438-248	3	4
13226E7020	2	31	4385K246	3	44
13226E7024	2	32	44013601	5	19
15C	3	76	44018701	5	23
15W	3	77	44018801	5	22
170068-2	1	21	44020701	5	16
2016K23	3	8	4407101	5	30
2016K23	3	15	4429K154	3	48
2ZJ98	3	7	4429K254	3	45
30-058	3	40	4429K415	3	42
3023T87	3	35	4429K425	3	43
30345T15	3	65	4429K443	3	31
30345T15	3	72	4506K42	3	10
30345T15	3	79	4511K75	3	21
30345T2	4	6	4568K191	3	49
30345T22	1	5	4568K193	3	50
30C	3	69	4568K196	3	51
30W	3	70	457-005	3	24
3176T36	3	27	4570C	4	66
3204-1422	99	5	4592K11	99	8
3225T68	3	41	461-005	3	22
3225T68	4	17	461-020	3	89
3225T69	4	8	461-020	3	103
34241344-1	3	34	4686-0701	3	61
34241387	6	4	4708K57	3	33
342423144-1	5	32	47865K24	3	46
342423144-2	5	33	48925K11	99	7
3606T19	3	87	48925K96	3	1
3606T19	3	101	51415K462-1	1	4
3606T33	3	88	51415K462-2	1	4
3606T33	3	102	51415K464-1	1	7
401-020	3	20	51415K464-2	1	7
406-005	3	23	51415K467	1	8
407-020	3	13	52155K42	1	3
420-020	3	2	52155K44	1	6
4212	3	54	52155K47	1	9
4212	4	13	5218K29	3	18

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
5218K29	3	92	8451A54	99	1
5218K29	3	108	8871T37	3	38
5218K29	3	115	8871T38	3	30
5218K31	3	14	8896T128	3	28
5218K31	3	114	8896T129	3	29
52265K71	3	19	8G1024WF	2	3
52265K71	4	18	9001341	4	60
5301K15	3	59	9001357	4	62
5301K15	3	75	9001367	4	64
5301K15	3	104	9001368	4	63
5301K16	3	57	9001369	4	61
5301K16	99	4	9001371	4	34
53055K167	4	15	9001373	4	36
53055K197	3	9	9001375	4	72
53055K197	4	12	9001377	4	41
53055K227	3	5	9001378	4	47
5343972-0114	1	19	9001379	4	45
5346K28	3	47	9001381	4	59
5416K21	3	58	9001414	4	51
5423K16	3	64	9001415	4	49
5423K34	3	71	9001467	4	38
5655K17	3	78	9001477	4	39
5FLD60611012	3	52	9001478	4	37
5FLD60611712	4	76	9001496	4	55
5FLD60612412	3	53	9001529	4	54
5FLD60612412	4	14	9001542	4	53
5FLD60612412	4	75	9001544	4	56
600-ZINC	1	2	9001556	4	69
63005	4	11	9001561	4	48
63011	4	9	9001564	4	58
6810K13	4	20	9001568	4	71
6864K25	2	27	9001569	4	70
70107001	5	14	9001570	4	74
70107001	5	24	9001581	4	67
70128401	5	20	9001589	4	73
7093-150204	3	90	9001595	4	50
7093-150204	99	6	9001596	4	52
7159K89	2	18	9001617	4	68
7425WOA	2	25	9001669	4	57
7429K48	3	55	9001753	4	42
805-007C	4	10	9001753	4	44
8058-15SR	3	16	9001756	4	46
808-015	3	117	9001885	4	35
808-020	3	116	90177A221	3	66
819-007	4	16	90177A221	3	73
84003	2	19	90177A221	3	80

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
9-1-0586-1	1	20	9-1-1084-3	5	35
9-1-0586-2	1	20	9-1-1084-4	5	36
9-1-0904-1(-1)	2	16	9-1-1084-5	3	119
9-1-0904-1(-2)	2	16	9-1-1084-6	3	107
9-1-0905-1(-1)	2	14	9-1-1085-1	3	93
9-1-0905-1(-2)	2	14	9-1-1085-16	4	31
9-1-0905-2(-1)	2	15	9-1-1085-17	4	30
9-1-0905-2(-2)	2	15	9-1-1085-18	6	5
9-1-0907	3	81	9-1-1085-19	4	27
9-1-0908-1	3	95	9-1-1085-30	4	32
9-1-0909	3	109	9-1-1085-34	6	6
9-1-0914-1	4	7	9-1-1085-38	4	29
9-1-0922-1	4	5	9-1-1085-39	3	118
9-1-0923-1	4	2	9-1-1085-41	3	106
9-1-0923-2	4	3	9-1-1086-1	4	28
9-1-0924	4	1	9-1-1086-2	5	34
9-1-0929	6	3	9-1-1087-1	4	22
9-1-0931-1	3	83	9-1-1089-1	3	94
9-1-0932-1	3	97	9-1-1134	1	14
9-1-0933-1	3	111	9173K77	3	113
9-1-0934-1	3	84	9173K78	3	112
9-1-0934-1	3	98	941 (.38 BOLT)	3	36
9-1-0937-1	4	4	9489K279	99	2
9-1-0953-1	2	26	95707A685	1	22
9-1-0953-2	2	26	96055K35	99	3
9-1-0960	1	15	98813A031	1	10
9-1-0961	2	5	98920A031	3	37
9-1-0966	3	60	A-A-59272 TYPE III-1	1	1
9-1-0967	3	67	A-A-59272 TYPE III-2	1	1
9-1-0968	3	74	AS21919WDF24	1	16
9-1-0970	1	13	AS21919WDG40	1	17
9-1-0971-1	5	1	BRNL906	3	32
9-1-0973-1	3	82	CPFAC2600P	6	1
9-1-1010-1	3	39	DMW232ARMVOLTGEB10IS	2	1
9-1-1016-1	3	86	EPDM7257-300150	3	68
9-1-1017-1	3	100	F0381737-00	4	43
9-1-1051	5	37	F32T8/TL841	2	4
9-1-1057-1	4	21	F380632	4	40
9-1-1061-1	6	2	F800619	4	65
9-1-1075	2	30	GL2120(-1)	2	17
9-1-1080	3	96	GL2120(-2)	2	17
9-1-1081-1	3	110	H28SS	3	56
9-1-1082-1	4	23	H28SS	3	91
9-1-1083-1	4	26	H28SS	3	105
9-1-1084-1	4	24	HBL2310	2	24
9-1-1084-2	4	25	HBL2311	2	28

PART NUMBER	FIG.	ITEM
HBL4560	2	20
HBL4570C	4	33
HBL4710	2	22
HBL7425WOA-1	1	11
HBL7425WOA-2	1	11
M400003	5	7
M400086P	5	31
M400541	5	5
M400712	5	3
M400944	5	2
M401223	5	6
M40902	5	4
M409433	5	18
M410542	5	17
M410940P	5	25
M412090	5	27
M412519P	5	28
M412981	5	26
M413118	5	10
M413544	5	9
M413614	5	11
M413615	5	12
M413616	5	13
M414103	5	21
M414228	5	8
M414565	5	29
M414704	5	15
M59	3	85
MODEL #98	3	99
MS90564-7C-1	1	12
MS90564-7C-2	1	12
PS20AC1-I	2	11
QOB115	2	6
QOB120	2	7
QOB215	2	8
QOB320	2	9
QOB340	2	10
RL-01802	2	13
S-1	2	12
S-7	2	21
S-7	2	23
SED1512	2	29
T225X000YK1	99	9
T425X000YK1	99	10
U075301	2	2

CHAPTER 10

SUPPORTING INFORMATION
FOR
FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY
(FP-CBL)

OPERATOR AND FIELD MAINTENANCE**REFERENCES****SCOPE**

This work package lists all field manuals, forms, technical manuals and miscellaneous publications referenced throughout this manual.

DA PAMPHLETS

DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual
DA PAM 738-751	Functional Users Manual For The Army Maintenance Management System--(TAMMS-A)

FIELD MANUALS

FM 10-280	Mobile Field Laundry Clothing Exchange and Bath Operations
FM 21-10	Field Hygiene and Sanitation
FM 21-11	First Aid for Soldiers
FM 3-3	Chemical and Biological Contamination Avoidance
FM 3-5	NBC Decontamination
FM 38-701	Packaging of Materials, Packing
FM 42-424	Quartermaster Force Provider Company

FORMS

DA Form 2028-2	Recommended Changes to Equipment Technical Publications
DA Form 2404	Equipment Inspection & Maintenance Worksheet
DD 361	Transportation Discrepancy Report
SF 362	Report of Packaging and Handling Deficiencies
SF 364	Report of Discrepancy (ROD)
SF 368	Product Quality Deficiency Report (PQDR)

TECHNICAL BULLETINS

TB MED 577	Sanitary Control and Surveillance of Field Water Supplies
TB 43-0002-30	Maintenance Expenditure Limits For FSC Group 35

MISCELLANEOUS

CTA 50-970	Expendable/Durable Items
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TECHNICAL MANUALS**Commercial Manuals**

MAN 354	Cissell 75 lb. Laundry Dryer Owners Manual
P/N 230509	Unimac UF 35, 50, & 85 Free Standing Washer/Extractor Parts Manual
P/N 230510	Unimac Microcomputer Controlled Free Standing Washer/Extractor Technical Manual
P/N 230525	Unimac WE-6 Microcomputer Programming Manual for UF Freestanding Models

TECHNICAL MANUALS - CONTINUED**Military Manuals**

TM 10-4520-259-13&P	Operator's Maintenance Manual for Water Heater, M80
TM 10-4630-206-13&P	Operator's, Unit, and Direct Support Maintenance Manual (including RPSTL) for Sewage Ejection Pump (SEP)
TM 10-8340-224-13	Operator, Unit, and Direct Support Maintenance Manual for Tent, Extendable, Modular, Personnel (TEMPER)
TM 38-230-2	Preservation, Packaging, and Packing of Military Supplies and Equipment
TM 55-8115-204-23&P	Unit and Direct Support Maintenance Manual (including Repair Parts and Special Tools List), General Cargo Container
TM 740-90-1	Administrative Storage of Equipment
TM 750-244-3	Destruction of Army Materiel to Prevent Enemy Use
TM 9-6150-226-13	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, M 100, M 100 A/P, M40, M40 A/P, M60, M60 A/P and Electrical Utility Assembly M46
TM 10-5419-206-13	Operator's, Unit, And Direct Support Maintenance Manual for Force Provider
TM 10-5419-206-23P	Operator's, Unit, And Direct Support Maintenance Manual for Force Provider, Repair Parts and Special Tools List (RPSTL)
TM 9-4120-411-14	Operator, Unit, and Direct Support Maintenance Manual for Field Deployable Environmental Control Unit (FDECU)

MILITARY HANDBOOKS

MIL-HDBK-419A	Grounding, Bonding, And Shielding For Electronic Equipments And Facilities
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END OF WORK PACKAGE

CREW AND FIELD MAINTENANCE**MAINTENANCE ALLOCATION CHART (MAC)**

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.

The 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 shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field – includes three subcolumns, Crew maintenance (C), Service maintenance (O), and Field maintenance (F).

Sustainment – includes two subcolumns, Below Depot (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 are limited to and 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:
 - a. 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.
5. 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 (Ammunition Only). 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 Functional Group Code (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 item 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 manhours 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 symbol designations for the various maintenance levels are as follows:

Field:

- C Crew maintenance
- O Service maintenance
- F Field maintenance

Sustainment:

- L Specialized Repair Activity
- H Below Depot maintenance
- D Depot maintenance

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 the 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.

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.

CREW AND FIELD MAINTENANCE

MAINTENANCE ALLOCATION CHART (MAC)

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL).

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT		
			C	O	F	H	D		
00	FORCE PROVIDER, LAUNDRY, CONTAINERIZED BATCH (FP-CBL)								
01	CONTAINER, SPECIAL							A	
0101	PANEL, SUPPLY WATER INLET	INSPECT SERVICE REPAIR	.1	.1 .7				3	
0102	PANEL, WASTE WATER OUTLET	INSPECT SERVICE REPAIR	.1	.1 .7				3	
0103	PANEL, POWER INLET/OUTLET (WASHER END)	INSPECT SERVICE REPAIR	.1	.1 .7				3	
0104	PANEL, POWER INLET (DRYER END)	INSPECT SERVICE REPAIR	.1	.3 .7				3	
0105	RAMP, ENTRY	INSPECT REPAIR REPLACE	.1 .1		.5			2,4	
0106	ENDWALL, MODIFIED TEMPER	INSPECT REPLACE	.1 1.0						
0107	HANDGRIP, FOLDING	INSPECT SERVICE REPLACE	.1	.2 .4					
02	SYSTEM, ELECTRICAL							B	
0201	LIGHT FIXTURE, FLUORESCENT	INSPECT SERVICE REPAIR	.1	.1 .5				3	
0202	BREAKERS, CIRCUIT	INSPECT TEST REPLACE	.1	.5 .5				3 3	
0203	SWITCH, WALL	INSPECT TEST REPLACE	.1	.3 .4				3 3	

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL)–Continued.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE	
			FIELD			SUSTAINMENT				
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT			
C	O	F	H	D						
0204	REACTOR, LINE	INSPECT		.1					3	
		TEST		.5					3	
		REPLACE		1.0					3	
0205	RECEPTACLES, POWER INPUT	INSPECT	.1							
		TEST		.5					3	
		REPLACE		1.0					3	
0206	RECEPTACLES, POWER OUTPUT	INSPECT	.1							
		TEST		.5					3	
		REPLACE		1.0					3	
0207	RECEPTACLES, WALL	INSPECT	.1							
		TEST	.1	.3					3	
		REPLACE		.4					3	
0208	RECEPTACLES, PUMP	INSPECT	.1							
		TEST		.3					3	
		REPLACE		.3					3	
0209	RECEPTACLE, WASHER	INSPECT	.1							
		TEST		.3					3	
		REPLACE		.3					3	
0210	FAN, EXHAUST	INSPECT	.1	.1						
		TEST		.5					3	
		SERVICE		.5					3	
		REPLACE		.4					3	
0211	HEATER, SPACE, ELECTRIC WALL MOUNTED	INSPECT		.1						
		TEST		.4					3	
		REPLACE		.5					3	
0212	CABLE, POWER OUTPUT TEE	INSPECT	.1							
0213	CABLES, POWER	INSPECT	.1							
03	SYSTEM, WATER									C
0301	PIPES AND FITTINGS, NONMETALLIC	INSPECT	.1							
		REPAIR		1.0					3	
0302	VALVES, BALL	INSPECT	.1							
		REPAIR		.6					3	
		REPLACE		1.0					3	

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL)– Continued.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT		
			C	O	F	H	D		
0303	VALVES, GATE	INSPECT	.1						
		SERVICE		.5				3	
		REPLACE		1.0				3	
0304	PIPES AND FITTINGS, METALLIC	INSPECT	.1						
		REPAIR		.7				3	
0305	VALVES, BRASS BALL	INSPECT	.1						
		REPLACE		1.0				3	
0306	VALVES, BRASS CHECK	INSPECT	.1						
		REPLACE		1.0				3	
0307	HOSES, INTERNAL	INSPECT	.1						
		REPLACE		.3				3	
0308	HOSES, EXTERNAL	INSPECT	.1						
		REPLACE		.3				3	
0309	TANKS, DRAINAGE	INSPECT	.1						
		SERVICE		.5					
		REPAIR		2.0				3	
		REPLACE		2.0				3	
0310	PUMP, WATER REUSE TRANSFER TANK	TEST		.5				3	
		REPLACE		.5				3	
0311	PUMP, WASTE TANK	TEST		.5				3	
		REPLACE		.5				3	
0312	SCREEN, STRAINER	INSPECT		.1					
		SERVICE		.2				3	
		REPLACE		.5				3	
04	WASHER/ EXTRACTOR, LAUNDRY	INSPECT	.1						
		SERVICE	.2						
		REMOVE		.4				2,3	
		INSTALL		.4				2,3	
		REPLACE			4.0			1,3	
0401	ASSEMBLY, DOOR LOCK	INSPECT	.1						
		TEST	.1	.4				3	
		REPAIR		.4				3	
0402	VALVE, MAIN DRAIN	TEST		.8				3	
		REPLACE		1.5				3	

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL)– Continued.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT		
			C	O	F	H	D		
0403	VALVE, REUSE DRAIN	TEST		.8				3	
		REPLACE		1.5				3	
0404	CONTROLS, WASHER	INSPECT	.1						
		TEST		.4				3	
		REPAIR		.8				3	
0405	TUBE, LEVEL SENSING	INSPECT		.8				3	
		SERVICE		.8				3	
		REPLACE		.8				3	
0406	SENSOR, TEMPERATURE	REPLACE		.8				3	
0407	DETECTOR, SPEED	REPLACE		.8				3	
0408	SWITCH, BALANCE	TEST		.5				3	
		ADJUST		.8				3	
		REPLACE		.8				3	
0409	SWITCH, EMERGENCY STOP	TEST		.4				3	
		REPLACE		.4				3	
0410	DRIVE, VARIABLE FREQUENCY	TEST		.5				3	
		REPLACE		.8				3	
0411	ABSORBERS, SHOCK	INSPECT		.8				3	
		REPLACE		1.5				3	
0412	SPRINGS	INSPECT		.8				3	
		REPLACE		1.5				3	
0413	BELT, DRIVE	INSPECT		.3				2	
		ADJUST		.8				2	
		REPLACE		.8				2	
0414	FAN, VARIABLE FREQUENCY DRIVE	TEST		.1				3	
		SERVICE		.1				3	
		REPLACE		.4				3	
0415	MOTOR	TEST		.8				3	
		REPLACE		1.5				3	
0416	FITTINGS, WASHER QD	INSPECT	.1						
		REPLACE		.4				3	

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL)–Continued.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT		
			C	O	F	H	D		
05	DRYER	INSPECT	.1						
		SERVICE	.5					3	
		REPLACE			4.0			3,5	
0501	SWITCH, AIRFLOW	INSPECT	.1						
		TEST		.4				3	
		ADJUST		.4				3	
		REPAIR		.6				3	
0502	ASSEMBLY, LOADING DOOR CATCH	INSPECT	.1						
		ADJUST		.4				3	
		REPLACE		.4				2	
0503	CONTACTOR, FAN	TEST		.5				3	
		REPLACE		.5				3	
0504	CONTACTOR, REVERSING	TEST		.5				3	
		REPLACE		.5				3	
0505	TRANSFORMER, POWER	TEST		.5				3	
		REPLACE		.5				3	
0506	CONTACTOR, HEAT	TEST		.5				3	
		REPLACE		.5				3	
0507	SWITCH, LINT PANEL	TEST	.1	.2				3	
		REPLACE		.3				3	
0508	THERMISTOR, LINT COMPARTMENT	TEST		.4				3	
		REPLACE		.4				3	
0509	SCREEN, LINT	INSPECT	.1						
		SERVICE	.1						
		REPLACE	.1						
0510	THERMOSTATS	TEST		.4				3	
		REPLACE		.4				3	
0511	CONTROLS, DRYER	INSPECT	.1						
		TEST		.4				3	
		REPLACE		.8				3	
0512	FUSE, CONTROL PANEL	TEST		.2				3	
		REPLACE		.2				3	
0513	SWITCH, EMERGENCY STOP	INSPECT	.1						
		TEST	.1	.4				3	
		REPLACE		.4				3	

Table 1. Maintenance Allocation Chart for Force Provider Containerized Batch Laundry (FP-CBL)– Continued.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			CREW	SERVICE	FIELD	BELOW DEPOT	DEPOT		
			C	O	F	H	D		
0514	SWITCH, DOOR	TEST	.1	.4				3	
		REPLACE		.3				3	
0515	ELEMENTS, HEATING	TEST		.3				3	
		REPLACE		.5				3	
0516	BELTS, DRIVE	INSPECT		.4				3	
		ADJUST		.4				3	
		REPLACE		.5				3	
0517	MOTOR, AC CYLINDER DRIVE	TEST		.3				3	
		REPLACE		.5				3	
0518	MOTOR, AC FAN	TEST		.3				3	
		REPLACE		.5				3	
0519	DUCT	INSPECT	.1					3	
		SERVICE		.3				3	
		REPAIR	.1						
		REPLACE		.2				3	
0520	VENT	INSPECT	.1						
		SERVICE		.2					
06	COMPRESSOR, AIR	INSPECT	.1						
		SERVICE	.1						
		REPLACE		.2				3	
07	HEATER, M-80 WATER								C

Table 2. Tools and Test Equipment for Force Provider Containerized Batch Laundry (FP-CBL).

TOOL OR TEST EQUIPMENT	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	F	Unspecified lifting equipment, 15000-lb maximum capacity (forklift, hoist)		
2	O, F	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No.1	4910-00-754-0654	SC4910-95CLA74
3	O	Tool Kit, General Mechanic's	5180-01-483-0249	5180-95-B47

Table 3. Remarks for Force Provider Containerized Batch Laundry (FP-CBL).

REMARKS CODE	REMARKS
A	For Container maintenance procedures refer to TM 55-8115-204-23&P.
B	For Power Cable maintenance procedures refer to TM 9-6150-226-13 and TM 9-6150-226-23P.
C	Refer to TM 10-4520-259-13&P for maintenance requirements.

END OF WORK PACKAGE

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

INTRODUCTION**Scope**

This work package lists COEI and BII for the Force Provider Containerized Batch Laundry (FP-CBL) 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 Force Provider Containerized Batch Laundry. As part of the end item, these items 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 Force Provider Containerized Batch Laundry (FP-CBL) in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the Force Provider Containerized Batch Laundry (FP-CBL) 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) Illus Number. Gives you the number of the item illustrated.

Column (2) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) Description, Part Number/(CAGEC). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (Commercial and Government Entity Code) (in parentheses) and the part number.

Column (4) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

<u>Code</u>	<u>Used on</u>
FSV	FP-CBL, Green
FTQ	FP-CBL, Tan

Column (5) Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) Qty Rqr. Indicates the quantity required.

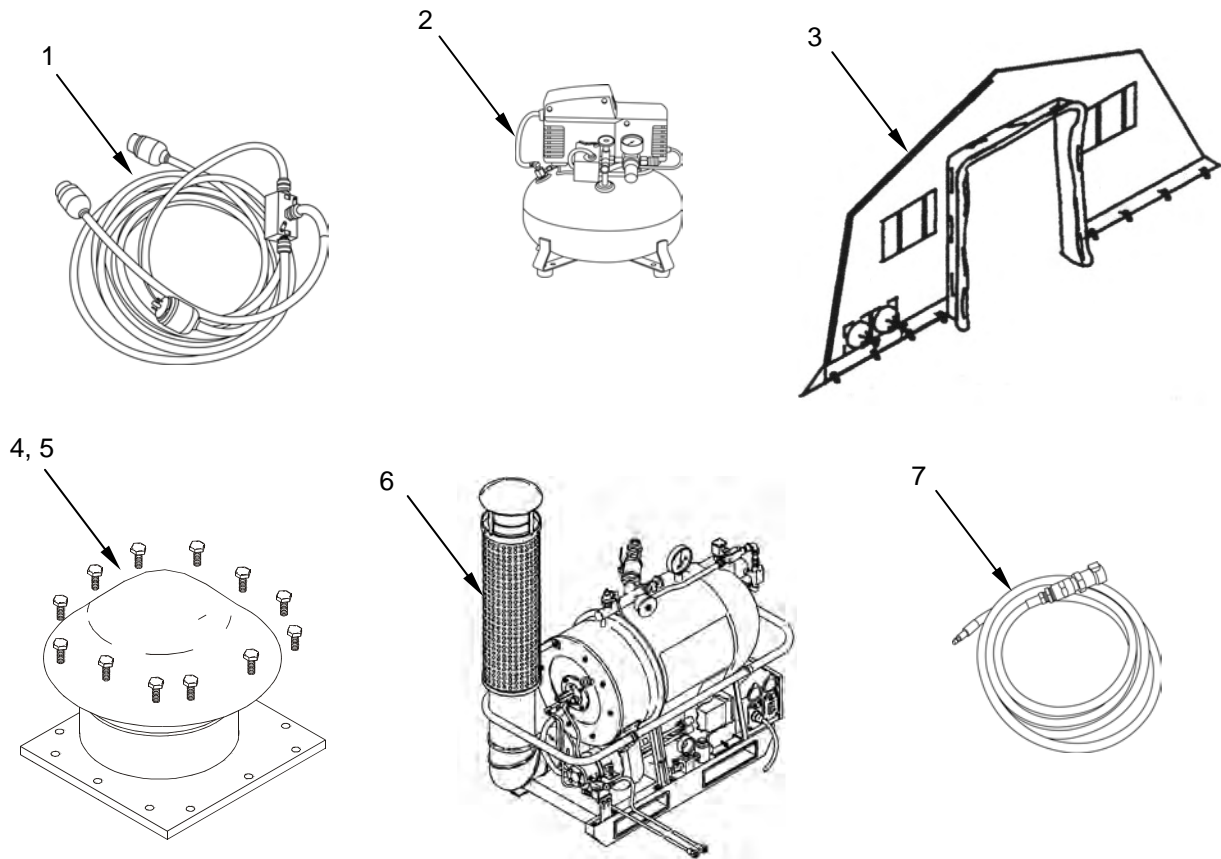


Table 1. Components Of End Item (COEI) List.

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
1	6150-01-214-0135	CABLE ASSEMBLY, POWER, CABLE, BRANCHED (Power Output Tee) (packed in TRICON 2B) 6-1-6222-1 (81337)		EA	1
2	4310-01-531-0626	COMPRESSOR UNIT, RECIPROCATING CPFAC2600P (68821)		EA	1
3		END SECTION, MODIFIED 9-1-0586 (81337)		EA	1
4		EXHAUST FAN ASSEMBLY, GREEN 34241364-1 (0U5N7)	FSV	EA	1
5		EXHAUST FAN ASSEMBLY, TAN 34241364-2 (0U5N7)	FTQ	EA	1
6	4520-01-162-0285	HEATER, WATER, LIQUID FUEL (M-80) 6-1-6200 (81337)		EA	1
7		HOSE ASSEMBLY, NONMETALLIC (Air Compressor Hose) 34241387 (0U5N7)		EA	1

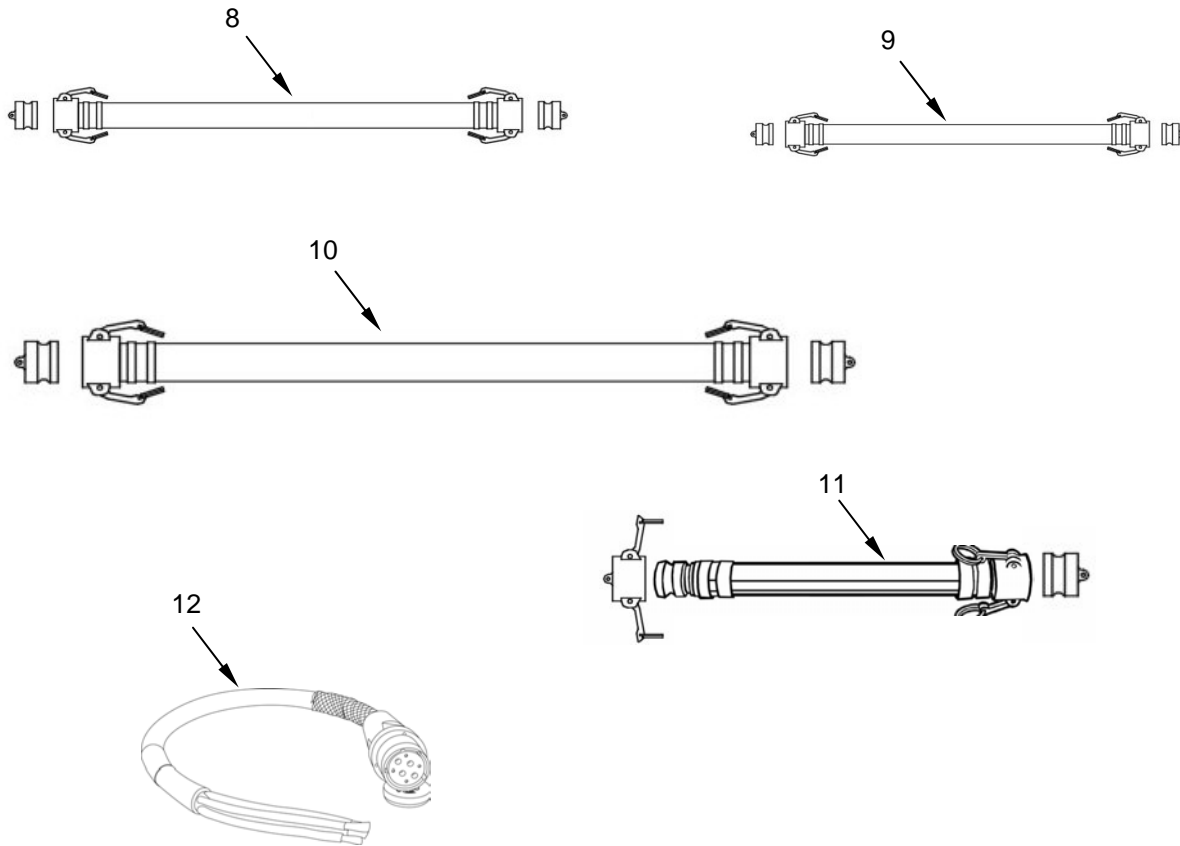


Table 1. Components Of End Item (COEI) List - Continued.

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
8	6150-01-256-6300	HOSE ASSEMBLY, NONMETALLIC, Cold Water, 1.5 in X 20 ft 34241379 (0U5N7)		EA	1
9		HOSE ASSEMBLY, NONMETALLIC, Hot Water, 1 in x 25 ft 34241377 (0U5N7)		EA	1
10		HOSE ASSEMBLY, NONMETALLIC, Waste Water, 3 in x 10 ft 34241378 (0U5N7)		EA	1
11		HOSE ASSEMBLY, NONMETALLIC, Water Heater Supply, 1.5 in x 5 ft 34241380 (0U5N7)		EA	1
12		PIGTAIL CABLE, 100 A, 4-ft length (packed in TRICON 2B) 13226E7020 (97403)		EA	3

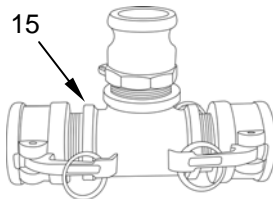
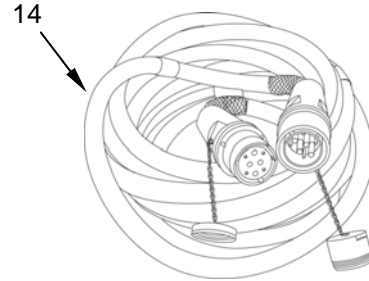
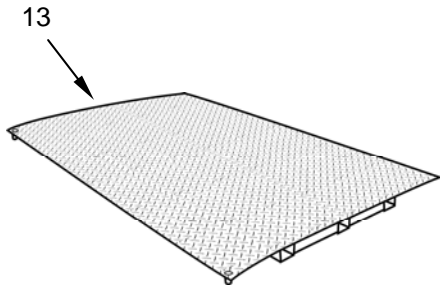


Table 1. Components Of End Item (COEI) List - Continued.

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
13	6150-01-256-6304	RAMP, PERSONNEL (packed in TRICON 2B) 34241381 (0U5N7)		EA	1
14		SERVICE FEEDER, 100 A, 50-ft length (packed in TRICON 2B) 13226E7024 (97403)		EA	6
15		TEE ASSEMBLY, COLD WATER 34241376 (0U5N7)		EA	1

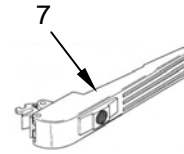
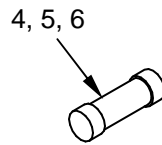
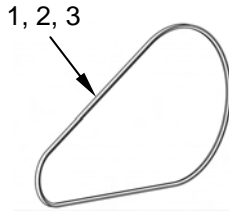


Table 2. Basic Issue Items (BII)

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
1	3030-01-533-8799	BELT, V, DRYER CYLINDER (packed in TRICON 11C) M412090 (59618)		EA	2
2	3030-01-534-0810	BELT, V, DRYER DRIVE (packed in TRICON 11C) M412981 (59618)		EA	1
3	3030-01-533-9370	BELT, V, WASHER BASKET/MOTOR (packed in TRICON 11C) 9001569 (59618)		EA	2
4	5920-01-533-8881	FUSE, CARTRIDGE, 1.25 A (packed in TRICON 2B) M414103 (59618)		EA	2
5	5920-00-280-5062	FUSE, CARTRIDGE, 250 V, 2 A (packed in TRICON 2B) AGC2A (71400)		EA	2
6		FUSE, CARTRIDGE, 3.5 A (packed in TRICON 2B) M414232 (59618)		EA	2
7		HANDLE, DOOR (packed in TRICON 2B) 9001481 (59618)		EA	1

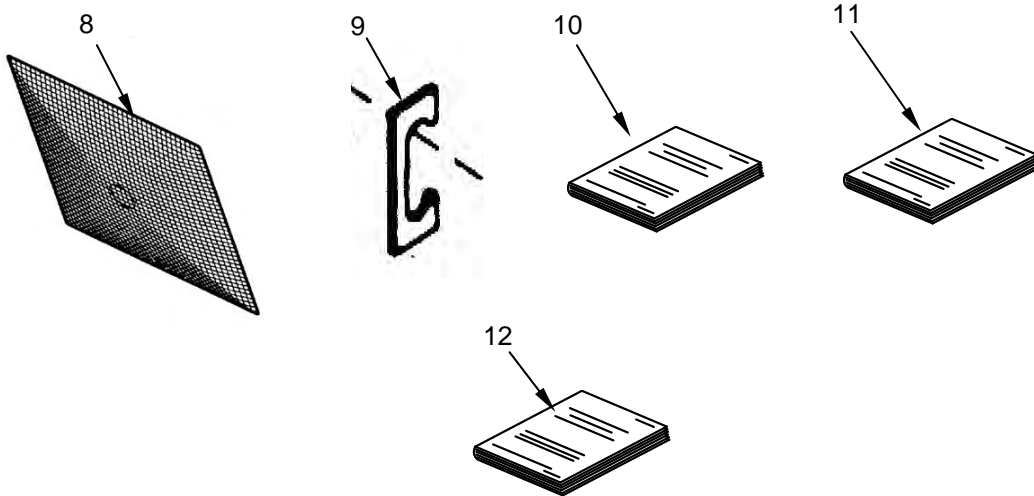


Table 2. Basic Issue Items (BII) -(Cont'd)

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
8	3510-01-534-1346	LINT SCREEN 44063601 (59618)		EA	2
9	5340-01-533-8671	STOP, DOOR HANDLE (packed in TRICON 11C) 9001467 (59618)		EA	1
10		TECHNICAL MANUAL, FORCE PROVIDER CONTAINERIZED BATCH LAUNDRY TM 10-3510-225-13&P		EA	1
11		TECHNICAL MANUAL, FORCE PROVIDER SYSTEM (MAINTAINER) (packed in TRICON 2B) TM 10-5419-206-23P		EA	1
12		TECHNICAL MANUAL, FORCE PROVIDER SYSTEM (OPERATOR) (packed in TRICON 2B) TM 10-5419-206-13		EA	1

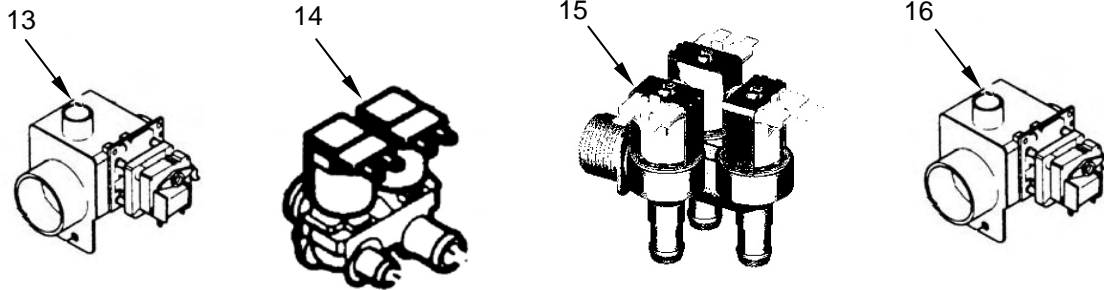


Table 2. Basic Issue Items (BII) -(Cont'd)

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/CAGEC	(4) Usable On Code	(5) Unit of Issue (U/I)	(6) Qty Rqr.
13	4820-01-534-0440	VALVE, DRAIN (packed in TRICON 11C) F380619 (58619)		EA	1
14	4810-01-533-8257	VALVE, INLET, 2-WAY (packed in TRICON 2B) 9001377 (58619)		EA	1
15	4820-01-533-8213	VALVE, INLET, 3-WAY (packed in TRICON 2B) F0381737-00 (59618)		EA	1
16	4820-01-533-8667	VALVE, REUSE FILL/DRAIN (packed in TRICON 2B) F380632 (58619)		EA	1

**OPERATOR AND FIELD MAINTENANCE
EXPENDABLE AND DURABLE ITEMS LIST**

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the Force Provider Containerized Batch Laundry (FP-CBL). 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), CTA 50-909, Field and Garrison Furnishings and Equipment, or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanations of Columns in Expendable/Durable Items List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0101, Item 5)).

Column (2) Level. This column includes the lowest level of maintenance that requires the listed item (C=Operator/Crew, O=Service, F=Field).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Commercial and Government Entity Code (CAGE), and Part Number (P/N). This column provides the other information you need to identify the item.

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.				
(1)	(2)	(3)	(4)	(5)
Item Number	Level	National Stock Number (NSN)	Item name, Description, Part Number/(CAGEC)	U/I
1	C	7920-01-339-6928	ABSORBENT MATERIAL, SPILL CLEANUP F91D248 (66735)	EA
2	O	8040-00-573-1502	ADHESIVE ASTM D2564(81346)	PT
3	C	8415-00-082-6108	APRON, UTILITY A-A-55063 (58536)	EA
4	C	8105-01-221-3239	BAG, PLASTIC, CONTAMINATED WASTE, SIZE 3 A-A-2299 (58536)	RL
5	O	5110-00-277-4588	BLADE, HACKSAW, 10 IN. GGG-B-451 TY1CL2GRA (80244)	PK
6	C		BLEACH SOLID STAINAWAY 13649 (85884)	CS
7	C	6810-00-598-7316	BLEACH, LAUNDRY, SODIUM HYPOCHLORITE, 1 GAL SANI-CLOR 6% BLEACH (0E7P7)	GL
8	O	7920-00-514-2417	BRUSH, ACID SWABBING 7920-00-514-2417 (80244)	BX
9	C	9150-01-054-6453	CLEANER, LUBRICANT, AND PRESERVATIVE, 1 PT. ROYCO 634 (07950)	PT

Table 1. Expendable and Durable Items List.				
(1)	(2)	(3)	(4)	(5)
Item Number	Level	National Stock Number (NSN)	Item name, Description, Part Number/(CAGEC)	U/I
10	C	6850-00-105-3084	CLEANER, SOLVENT CLASS I ODS/CFC-113 (13873)	PT
11	O	8030-01-166-0675	COMPOUND, SEALER PIPE 56747 (05972)	CN
12	O	5940-00-143-4780	CONNECTOR, #10 STUD, #14-16 MIL-T-7928 (81349)	EA
13	O	5940-00-168-3382	CONNECTOR, BUTT, #14-16 – BLUE B4071 (60592)	EA
14	O	5940-00-665-7317	CONNECTOR, BUTT, #18-22 1-34070-1 (00779)	EA
15	O	5940-00-283-5280	CONNECTOR, FORK, #14-16 MIL-T-7928 (81349)	EA
16	O	5940-01-008-6728	CONNECTOR, FORK, #18-22 SS20912 (14726)	EA
17	O	5940-00-283-5281	CONNECTOR, LUG, #14 MIL-T-7928 (81349)	EA
18	O	5940-00-230-0515	CONNECTOR, LUG, #16 MIL-T-7928 (81349)	EA
19	O	5940-00-113-3137	CONNECTOR, LUG, UNINSULATED A18-6 (02929)	EA
20	O	5940-00-143-4794	CONNECTOR, LUG, YELLOW MIL-T-7928 (81349)	EA
21	O	5935-01-076-9464	CONNECTOR, PLUG MIL-C-26482 (81349)	EA
22	O	5940-01-079-1936	CONNECTOR, SPLICE, YELLOW 58A15-5 (53553)	EA
23	C		DETERGENT SOLID ULTRA 13011 (85884)	CS
24	C	7930-00-929-1220	DETERGENT, LAUNDRY, LOW-PHOSPHATE (TYPE I), 50 LB P-D-245 (81348)	DR
25	C	7930-00-252-6797	DETERGENT, LAUNDRY, NONPHOSPHATE (TYPE II), 50 LB P-D-245 TY2 (80244)	DR
26	C	6810-00-006-4205	ETHYLENE GLYCOL, TECHNICAL ASTM E1119 (81346)	GL
27	C	6545-00-656-1093	FIRST AID KIT, GENERAL PURPOSE 6170-008 (04024)	EA
28	O	3439-00-009-8808	FLUX, SOLDERING ALPHA 100 FLUX 1QT (96613)	QT
29	C	8415-00-009-1900	GLOVES, CHEMICAL AND OIL PROTECTIVE 35 (05963)N	PR
30	C	4240-00-190-6432	GOGGLES, INDUSTRIAL A-A-1110 (58536)	PR
31	C	8520-00-782-2183	HAND CLEANER A-A-279 (58536)	CN
32	O	5970-00-815-1295	INSULATION SLEEVING, HEAT SHRINK, 1/4 IN. MIL-I-23053/2 (81349)	PK
33	O	5970-00-990-9912	INSULATION SLEEVING, HEAT SHRINK, 1/8 IN. MIL-I-23053/2 (81349)	PK
34	O	5970-00-954-1622	INSULATION SLEEVING, HEAT SHRINK, 3/16 IN. MIL-I-23053/5 (81349)	PK

Table 1. Expendable and Durable Items List.				
(1)	(2)	(3)	(4)	(5)
Item Number	Level	National Stock Number (NSN)	Item name, Description, Part Number/(CAGEC)	U/I
35	O	5970-00-903-8733	INSULATION SLEEVING, HEAT SHRINK, 3/36 IN. MIL-I-23053/5 (81349)	PK
36	O	5970-00-954-1624	INSULATION SLEEVING, HEAT SHRINK, 3/8 IN. MIL-I-23053/5 (81349)	PK
37	C	6240-00-152-2987	LAMP, FLUORESCENT, 120V, 40W F40CW (08805)	EA
38	C	9150-00-261-8146	LUBRICATING OIL, GENERAL PURPOSE MIL-PRF-32033 (81349)	OZ
39	O	5975-01-102-1587	MOUNTING BASE, TIEDOWN, ELECTRICAL ABM-4 (26863)	HD
40	C		NUT, STAINLESS STEEL 1/4-20 (LOCAL PURCHASE)	HD
41	C	7520-01-368-7771	PEN, BALL-POINT A-A-2905 (58536)	DZ
42	C		PLATE, 1/8" ALUMINUM SHEET/DIAMOND	SH
43	O	8040-01-004-2705	PRIMER, ADHESIVE ASTM F656-80 (81346)	PT
44	C	7920-00-148-9666	RAG, WIPING A-A-2522 (58536)	BL
45	C	5320-00-001-5162	RIVET, BLIND PLT 254-5-7 (06950)	EA
46	F	3439-00-268-9652	ROD, WELDING QQ-RR-566 (81348)	CO
47	O	8040-01-331-8047	SEALANT, RTV MIL-A-46106 TYPE 1 GROUP 1 (80244)	EA
48	O	6850-00-702-4297	SILICONE COMPOUND DC 6 COMPOUND (71984)	TB
49	O	3439-01-019-9100	SOLDER, TIN ALLOY ASTM B32 (81346)	BR
50	C		SOUR NAVISOUR SOLID 2/6# 16005 (85884)	CS
51	C	7930-00-291-8321	SOUR, LAUNDRY A-A-1374 (58536)	DR
52	C		SCREW, MACHINE, STAINLESS STEEL 1/4-20 X 1 (LOCAL PURCHASE)	HD
53	C		SHEET, ALUMINUM 1/8-INCH (LOCAL PURCHASE)	SH
54	C		SHEET, PLASTIC (LOCAL PURCHASE)	SH
55	C		SHEET, RUBBER 1/8-INCH (LOCAL PURCHASE)	SH
56	O	5975-00-727-5153	STRAP, TIEDOWN, ELECTRICAL COMPONENT, 2.5 IN. MIL-S-23190 (81349)	PK
57	O	5975-00-074-2072	STRAP, TIEDOWN, ELECTRICAL COMPONENT, 6.3 IN. TY-25M (56501)	PK
58	O	5975-00-838-7450	STRAP, TIEDOWN, ELECTRICAL COMPONENT, LARGE - 14 IN. AS40144 (56501)	PK
59	C	5975-00-984-6582	STRAP, TIEDOWN, ELECTRICAL COMPONENT, MEDIUM - 6 IN. MIL-S-23190 (81349)	PK

Table 1. Expendable and Durable Items List.				
(1)	(2)	(3)	(4)	(5)
Item Number	Level	National Stock Number (NSN)	Item name, Description, Part Number/(CAGEC)	U/I
60	C	8030-00-889-3535	TAPE, ANTISIEZE, 1/2 IN WIDE X 260 IN LONG MIL-T-27730, SIZE II (80244)	RL
61	C	5640-01-152-8458	TAPE, DUCT FSK (79130)	RL
62	C	5970-00-644-3167	TAPE, ELECTRICAL INSULATION, 3/4 INCH WIDTH A-A-2094 (58536)	RL
63	O	5940-00-926-0085	TERMINAL, QUICK CONNECT, FEMALE - BLUE - 14 AWG MAX 5010 (83330)	EA
64	C	7690-00-689-5212	WIRE MARKERS WM-A-33 (56501)	PK
65	C	5310-00-868-6924	WIRE NUT 8735997 (19207)	EA

OPERATOR AND FIELD MAINTENANCE

TOOL IDENTIFICATION LIST

INTRODUCTION

Scope

This work package lists all common tools and supplements and special tools/fixtures needed to maintain the Force Provider Containerized Batch Laundry (FP-CBL).

Explanation of Columns in the Tool Identification List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the initial setup to identify the item (e.g., "Basin Wrench (WP 0102, Item 1)").

Column (2) Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g., "Basin Wrench").

Column (3) National Stock Number (NSN). This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

Column (4) Part Number/(CAGEC). Indicates the primary number used by the manufacturer (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. The manufacturer's Commercial and Government Entity Code (CAGEC) is also included.

Column (5) Reference. This column identifies the authorizing supply catalog or RPSTL for items listed in this work package.

Table 1. Force Provider Containerized Batch Laundry (FP-CBL) Tool Identification List.

(1) Item No.	(2) Item Name	(3) National Stock Number	(4) Part Number/ (CAGEC)	(5) Reference
1	Unspecified lifting equipment, 15000-lb maximum capacity (forklift, hoist)			
2	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No.1	4910-00-754-0654	SC4910-95CLA74	TM 10-3510-225-13&P
3	Tool Kit, General Mechanic's	5180-01-483-0249	5180-95-B47	TM 10-3510-225-13&P

END OF WORK PACKAGE

OPERATOR AND FIELD MAINTENANCE**MANDATORY REPLACEMENT PARTS**

MANDATORY REPLACEMENT PARTS LIST

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.

Table 1. Mandatory Replacement Parts List

Item No.	Part Number/CAGEC	NSN	Nomenclature	Qty
1	96525433/3GJM5		O-ring kit	1

END OF WORK PACKAGE

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Balance Switch Test, Adjust, Replace	WP 0061
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Care, Handling, and Safety	WP 0001
Checks and Services (PMCS):	
Common Checks and Cleaning	WP 0026
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TM 10-3510-225-13&P

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:


JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
0805801

Distribution: To be distributed in accordance with initial distribution number (IDN) 256951 requirements for TM 10-3510-225-13&P.

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@avma27.army.mil>
To: soldier.pubs@us.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.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE 21 October 2003
TO: (Forward to proponent of publication or form) (Include ZIP Code) US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS ST NATICK, MA 01760-5052						FROM: (Activity and location) (Include ZIP Code) PFC JANE DOE Co A 3 RD Engineer Br. Ft Leonard Wood, MO 63108	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 10-1670-296-23&P						DATE 30 October 2002	TITLE Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
	0036 00-2				1	<i>In Table 1, Sewing Machine Code Symbols, the second sewing machine code symbol should be MDZZ not MD22</i> <i>Change the manual to show Sewing Machine, Industrial: Zig-Zag; 308 stitch; medium-duty; NSN 3530-01-181-1421 as a MDZZ code symbol.</i>	
*Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE Jane Doe, PFC				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION (508) 233-4141 DSN 256-4141		SIGNATURE Jane Doe <i>Jane Doe</i>	

TO: <i>(Forward direct to addressee listed in publication)</i> US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS ST NATICK, MA 01760-5052	FROM: <i>(Activity and location) (Include ZIP Code)</i> PFC JANE DOE Co A 3 RD Engineer Br. Ft Leonard Wood, MO 63108	DATE 21 October 2003
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 10-1670-296-23&P	DATE 30 October 2002	TITLE Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
0066 00-1					4			<i>Callout 16 in figure 4 is pointed to a <u>D-Ring</u>. In the Repair Part List key for Figure 4, item 16 is called a <u>Snap Hook</u>. Please correct one or the other.</i>

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: (Forward to proponent of publication or form) (Include ZIP Code) COMMANDER U.S. ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS STREET NATICK, MA 01760-5052						FROM: (Activity and location) (Include ZIP Code)	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 10-3510-225-13&P						DATE 12 MARCH 2008	TITLE Force Provider Containerized Batch Laundry (FP-CBL)
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON <i>(Provide exact wording of recommended changes, if possible).</i>	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

TO: <i>(Forward direct to addressee listed in publication)</i> COMMANDER U.S. ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS STREET NATICK, MA 01760-5052	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 10-3510-225-13&P				DATE 12 MARCH 2008			TITLE Force Provider Containerized Batch Laundry (FP-CBL)	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

Empty space for remarks

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: (Forward to proponent of publication or form) (Include ZIP Code) COMMANDER U.S. ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS STREET NATICK, MA 01760-5052						FROM: (Activity and location) (Include ZIP Code)	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 10-3510-225-13&P						DATE 12 MARCH 2008	TITLE Force Provider Containerized Batch Laundry (FP-CBL)
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON <i>(Provide exact wording of recommended changes, if possible).</i>	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE	

TO: <i>(Forward direct to addressee listed in publication)</i> COMMANDER U.S. ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS STREET NATICK, MA 01760-5052	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 10-3510-225-13&P				DATE 12 MARCH 2008			TITLE Force Provider Containerized Batch Laundry (FP-CBL)	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

